

A New Financial Market Structure for East Asia

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A New Financial Market Structure for East Asia

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1. Introduction: A new financial market structure for East Asia

**Takatoshi Ito, Yung Chul Park
and Yunjong Wang**

A general consensus is that East Asia's rapidly growing economies ran into crisis because of the vulnerability of their financial sectors. A frequently cited cause of the crisis was East Asia's heavy reliance on short-term capital borrowing for long-term domestic investment together with unhedged borrowing in foreign currency set off a double mismatch (maturity mismatch and currency mismatch). This double mismatch problem was in essence born out of the financial sector vulnerability. The East Asian financial structure in general lacks proper infrastructure, which leads to the inefficient allocation of high savings and the excessive short-term debt market.

Accordingly, discussion on building an efficient financial system in East Asia is taking two main directions. The first direction suggests enhancing appropriate prudential supervision and regulation of the banking sector. The second direction advocates creating stable sources for the long-term capital market. To that end, a plan to invigorate the domestic bond market has been suggested. Development of a domestic bond market will resolve the double mismatch problem by reducing the excessive dependency of East Asian economies on the advanced financial market centers.

Despite high savings, East Asia's dependency on other financial centers outside the region is relatively high. Both capital exporters, such as Japan, and capital importers coexist in East Asia: however, at the regional level, the financial centers have not properly played their intermediary role. Furthermore, there is no strong region-wide network to connect various financial centers in East Asia such as Tokyo, Hong Kong, Singapore and many others. The East Asian financial centers are basically linked to the financial hubs such as London and New York. There is no clear mechanism to recycle East Asian savings through the hub and spoke network in East Asia. Construction of a region-wide network interconnecting financial hubs and spokes in East Asia will create more stable capital flows for countries in the region and largely contribute to upgrading the financial system across the region.

Against this background, this edited volume seeks to set out means of effective and stable capital recycling in East Asia. Further, the financial intermediary function of the regional financial centers – Hong Kong, Singapore and Tokyo – was evaluated. Discussions are provided on the issues of building an organic network between the financial markets of major economies in the region and enhancing the future role and function of those regional financial centers. Finally, this volume explores policy implications and suggestions for the development of regional financial markets – based on regional financial networks – that can act as intermediaries between the high savings and productive sectors in East Asia.

The volume is the product of a group of experts conducting research on the East Asian financial market that has met twice in 2002 and 2003 under the auspices of the Korea Institute for International Economic Policy (KIEP), with the sponsorship of the Ford Foundation. The book is divided into three parts, corresponding to the three issues identified currently as central to building a new financial market structure in East Asia. First, the state of financial liberalization and integration in East Asia will be reviewed and examined. Second, competition and cooperation among financial centers in East Asia will be discussed country by country. Third, ways to mobilize regional saving into regional investment is considered.

FINANCIAL LIBERALIZATION AND INTEGRATION IN EAST ASIA

Capital account liberalization since the early 1990s turned out to be premature for many developing economies with an underdeveloped and inadequate financial infrastructure, in particular, a weak regulatory system and the poor risk management at financial institutions. For more advanced economies, the ordering of capital account liberalization was inappropriate in the sense that short-term financial markets were opened before long-term markets such as foreign direct investment.

The studies in Part I attempt to analyse structural changes in the East Asian financial sector. A special attempt will be made to identify the causal nexus between financial development and growth. Another point of interest is to examine what kind of, and how much of, financial market opening has contributed to regional financial integration.

In Chapter 2, Yung Chul Park, Wonho Song and Yunjong Wang analyse the three issues on finance and economic development that remain largely unresolved in the context of East Asia. In terms of the indicators of size, activity and efficiency of the financial system, Demirgüç-Kunt and Levine (2001) showed that with the exception of Indonesia and Japan, six East Asian

countries had developed a market-based system even before the 1997 crisis. However, using the same data and methodology, Park, Song, and Wang show that the countries Demirgüç-Kunt and Levine examine could be characterized as bank-based before the 1997 crisis. The results of Demirgüç-Kunt and Levine's estimation are sensitive to the ways of measuring the three indices.

The second issue they examine is the relationship between finance and growth in East Asia. They show that exogenous changes in private credit as a proxy for the financial development indicator have strong and positive effects on growth in seven East Asian countries whereas a negative relationship between the two variables is found for a sample of 12 Latin American countries. The causal nexus between finance and growth is extensively examined in terms of the data sets of different countries over different periods by many authors. While the East Asian experience provides a piece of evidence supporting the positive effect of financial development on growth, the casual nexus between finance and growth requires a further investigation.

Finally, a review of developments leading to and following the 1997 crisis, the authors argue, does not provide any evidence that a market-based financial system works better than a bank-based one or that the East Asian financial frailties were inherent in the intermediary-based system. The financial weaknesses were rather the consequences of the general lack of transparency and repressive financial policies.

Chapter 3 by Barry Eichengreen and Yung Chul Park assesses empirically whether financial market deregulation and liberalization have contributed to regional financial integration in East Asia. From the point of view of portfolio diversification, countries with asynchronous macroeconomic shocks would have stronger incentives to integrate their financial markets with one another than with other countries whose macroeconomic shocks are similar. For the past several decades intra-regional trade expansion in East Asia appears to have synchronized business cycles in the region. This growing similarity of business cycles may have encouraged diversification of their portfolio into the assets of European countries and the United States, thereby inducing financial market integration between East Asia on the one hand and Europe and the United States on the other. However, this global portfolio diversification will tend to lower business cycle correlations over time between the East Asian countries and major financial centers as it increases the scope of intertemporal specialization in production.

In order to examine this possibility, Eichengreen and Park decompose the forecast error variances of the two financial variables – the interest rate and stock return – into a world-common, a region-common, and a country-specific component. The authors find that, as far as the equity market index returns are concerned, the relative share of the global factor proxied by the shocks originating in the U.S. market has risen since the crisis. Unlike in the

stock markets, the effects of foreign market shocks on bond markets are very low in all East Asian sample countries. This result is not surprising in view of the fact that bond markets of East Asia are relatively undeveloped and in many countries in the region these markets are closed to foreign investors and borrowers.

In the European Union, one would expect the monetary unification to have led to regional integration of capital markets. Eichengreen and Park's analyses provide evidence of a higher degree of regional financial integration in Europe than in East Asia. This suggests that the dominance of the global factor in East Asia, compared to Europe cannot be explained by differences in the scope for risk sharing between the respective regions. In turn this result supports the prediction that Europe has gone further in integrating its financial markets regionally through development of its market-supporting infrastructure.

Chapter 4 by Barry Eichengreen and Yung Chul Park views Asian financial integration in a European mirror. Their starting point is the observation that cross-border bank claims in East Asia are smaller by an order of magnitude: they are 33.9 percent of regional GDP in Europe but only 3.5 percent in East Asia. But such bank claims are strongly increasing in per capita income. This fact suggests that the very different levels of economic development in East Asia and Europe, along with other differences in regional circumstance that are largely predetermined from the point of view of policy (the distance between countries, whether they share a common language, and whether they share a land border), explain a good deal of the difference in financial integration between the two regions.

The rest of the gap is explained by policy variables. Evidence that finance follows trade suggests that East Asia is less financially integrated than Europe in part because it has done less to promote the growth of intra-regional trade. Intra-regional exports as a share of GDP are still only a third what they are in Europe. The results also suggest that controls on capital account transactions can have a lingering effect on the volume of cross-border claims, and that their shadow is longest where those controls were maintained for the greatest number of years. The under-development of financial markets and institutions in some potential lending countries also appears to be an impediment to financial integration in the region; this too can be addressed by policy, in particular by initiatives designed to promote the growth of Asian financial markets.

In Chapter 5, Beate Reszat reviews the European monetary integration process and examines how it has contributed to regional financial market integration. She argues that European monetary integration is simply one element in the process of financial integration in Europe, and one that in and outside the region is easily overrated.

The integration effects of monetary union so far have differed across markets and institutions. The euro has been most successful in integrating the inter-bank market for very short-term unsecured deposits and the markets for bonds and derivatives. It had a big impact on volumes in fixed-income markets through the shift from government to non-government securities, both short-term and long-term, as a consequence of the rules of the Maastricht Treaty and the Stability and Growth Pact on public finance. Another remarkable effect was the contribution of the common currency to the explosion of trading in instruments such as interest rate swaps and credit derivatives, and the need it created for developing new strategies and techniques for hedging and trading in the euro area.

In many respects, despite its undeniable advantage of eliminating currency risks and reducing transaction costs for both financial and non-financial firms, the influence of the euro on financial integration in Europe should not be over-emphasized. Markets, regulations, and systems are still highly fragmented and without the further removal of institutional barriers, and a greater commitment to financial reform at the level where individual measures are adopted, Europe's citizens are denied its full benefits.

Soyoung Kim, Sunghyun H. Kim and Yunjong Wang, in Chapter 6, examine the international capital flows and business cycles in the Asia Pacific region. They identify the capital flow shocks and then examine their effects on cyclical movements of key macroeconomic variables in each country. Using the data of twelve Asia Pacific countries, the chapter finds that business cycles in the five Asian crisis countries are highly synchronized and follow business cycles in Japan, while they differ from cycles in Australia and New Zealand. On the other hand, greater China, including Hong Kong and Taiwan, show similar cyclical movements.

Kim, Kim and Wang also provide empirical evidence that positive capital flow shocks (capital inflows) affect output, consumption, and investment positively in most countries, which is consistent with the story of boom-bust cycles. In addition, capital flow shocks are highly correlated across the crisis countries. These two results imply that business cycle synchronization among Asian crisis countries in the 1990s can be at least partially explained by synchronization of capital flows and the ensuing boom-bust cycles after the financial market liberalization.

FINANCIAL CENTERS IN EAST ASIA

The financial markets of East Asian countries had recorded a remarkable growth before the Asian currency crisis of 1997–98. In many East Asian countries, banks expanded their balance sheets rapidly. They were willing

to lend to booming manufacturing sectors, commercial sectors, and real estate sectors. Stock markets in the region also enjoyed rising prices and widening participation of domestic and foreign investors. The Asian region attracted increasing capital flows – bank lending, stock investment, and direct investment – from advanced countries. From the 1980s to the mid-1990s, East Asia was the booming region of the world. The newly industrialized economies (NIEs) – Korea, Taiwan, Hong Kong, and Singapore – were the first to experience high economic growth that was reminiscent of Japan's experience in the 1950s and 1960s. The economic growth rate typically reached 10 percent per annum. Some of the ASEAN countries followed the lead of NIEs and embarked on high economic growth. In particular, Thailand, Indonesia, and Malaysia experienced 7 to 10 percent economic growth rates from the mid-1980s to mid-1990s. High economic growth was financed mostly by bank lending and equity issuance.

Liberalization in financial markets was also in progress. The interest rate ceiling, market entry restrictions, strict licensing and other restrictions were lifted or relaxed. Non-bank financial institutions, securities firms, and insurance companies were also expanding their businesses. Lending booms were observed from Bangkok to Jakarta, to Seoul. It was not clear at those times whether lending was excessive or justifiable from high economic growth. Several countries have also opened up their financial markets to capital flows across border. Both Thailand and Malaysia created offshore financial centers. Restrictions on foreign ownership were gradually relaxed.

The Asian currency crisis of 1997–98 set back the progress of the financial and capital markets. A rapid expansion of the financial markets came to a sudden halt in the summer of 1997. After the Thai baht flotation and depreciation, investors pulled capital out of Asia. Contagion of the financial crisis spread from Thailand to Indonesia, to Korea, and the rest. Domestic financial markets experienced a severe credit crunch, and many banks became insolvent due to non-performing loans to domestic firms, or losses from foreign-currency denominated liabilities.

Massive capital inflows made it possible to have both current account deficits and rising foreign reserves under the de facto fixed exchange rate. Just before the crisis, Thailand experienced current account deficits of 8 percent of GDP, and capital inflows amounting to 10 percent of GDP. The increase in the level of foreign reserves gave a false sense of security.

Foreign banks were willing to lend in US dollars to Asian banks and corporations, as risks in the region were considered to be minimal. Asian banks were willing to borrow in US dollars, because the exchange rate was de facto fixed, and the currency risk was considered to be small. Capital inflows to the banking sector caused local banks to develop currency

mismatch (borrow in US dollars and lend in the local currency) and maturity mismatch (borrow short and lend long).

There are many lessons from the Asian currency crisis. Among others, the following points have been recognized as important and urgent by many policy-makers and academics: (1) strengthening the banking system with good supervision, (2) developing a market for local-currency denominated bonds, and (3) integrating financial markets in the region.

There are some obstacles for developing financial markets. For developing a bond market, credit rating of corporations is important, but there is no region-wide credit rating agency. Also, there is no region-wide settlement system. Securities firms that can be making deals in the region are typically under-developed in Asia.

Eiji Ogawa surveys the Japanese market in Chapter 7. The Tokyo market has a deep, well-functioning money market, bond market, offshore market, and capital markets. Participation by foreign institutions has been increasing in recent years. With the Japanese big bang, rapid liberalization that took place from 1996 to 1998, most of the remaining restrictions on pricing, product development and offering, and participation were lifted. Japanese banks traditionally played an important role in providing long-term industrial financing as well as providing short-term financing.

The Japanese bond market had been repressed for a long time. The government did not issue bonds until 1965 and the outstanding balance remained reasonably low until 1990. Bank loans were preferred to corporate bonds. Issuance of government bonds started to increase sharply in 1998 as a result of large fiscal stimulus packages combating a business downturn.

In Chapter 8, Yiping Huang addresses the question of whether Hong Kong can survive as an international financial center. For the past few decades, it has been an important financial hub servicing the global markets, particularly the rapidly growing East Asian economies. That role was further strengthened when China began its open-door policy. According to recent data, Hong Kong is the seventh largest foreign exchange market and tenth largest stock market in the world. It is also one of the world's major banking centers.

However, doubts grew strongly in recent years about Hong Kong's ability to survive as a major international financial center. Difficulties of structural adjustments in the economy had constantly depressed confidence. Sustainability of the currency peg was frequently in question. Some political changes gave rise to concerns over continuation of political and economic freedom in Hong Kong. The rapid rise of Shanghai in the financial world also led many to believe that Hong Kong is playing a losing game.

Huang takes a glance at Hong Kong's financial markets and its future role on the international scene. Despite overblown concerns, he points to

Hong Kong's need to fight an uphill battle in maintaining its role as an international financial center. He emphasizes that challenges come mainly from within rather than from outside. The Hong Kong authorities need to maintain the tax incentives for the financial industry while attacking the fiscal deficit problem. The exchange rate policy is another important area in maintaining stable expectation and confidence. In addition, political and economic freedom, including free flow of information, form an important part of the foundation for efficient financial activities.

Will Hong Kong eventually lose out to Shanghai? Huang sees that it is possible in the very long run, but certainly does not see it as likely in the coming decade or so. While Shanghai is rapidly taking over businesses from Hong Kong, most of these are domestic-oriented businesses. Shanghai still lacks the necessary institutions to serve as an international financial center. For instance, the capital account control, which is unlikely to go away in the next 5–10 years, seriously constrains Shanghai's ability in financial services. The poor legal system, frequent government corruption and backward regulatory framework also work against Shanghai's role in the financial world. The only advantages Shanghai enjoys over Hong Kong at the moment are its location right at the center of the dynamic Yangtze River delta economy and its relatively low costs.

In Chapter 9, Kee Jin Ngiam provides a chapter on the role of Singapore as a financial center. Singapore has developed a financial hub in Southeast Asia. Singapore offers the most efficient offshore market in the region. Although the Singaporean domestic economy is small compared to other advanced countries, the per capita income is comparable to any developed countries.

The volume of foreign exchange transactions recorded in Singapore ranks fourth in the world, after London, New York, and Tokyo. The strength of the Singaporean market is its wide participation by foreign issuers, institutions and investors. Singapore takes advantage of benefits of operating an offshore market. Loan books and financial products that are traded in Singapore are mostly foreign (non-Singaporean) currency denominated and originated in foreign countries. Restricted license and offshore banks in Singapore can maintain a foreign currency denominated transactions book. This is called the Asian Currency Unit (ACU). The size of the ACU assets grew to a peak of US\$557 billion at end-1997, followed by a decline due to the financial crisis, to US\$471 billion at end-2001.

The Singapore Exchange (SGX), the result of the merger between the Stock Exchange of Singapore (SES) and the Singapore International Monetary Exchange (SIMEX), is a well functioning stock market. It is a fully electronic and floorless securities exchange. Out of about 500 companies listed on the SGX, about 100, with capitalization of one-third,

are foreign. The SGX has cooperation arrangement with exchanges in Australia, Tokyo, and Chicago, and the American Stock Exchange.

The Singapore government, although it is not necessary from the budgetary point of view, has increased issuance of government bonds to set the benchmark yield curve. Singapore also has a strong asset management industry. Funds managed in Singapore are predominantly invested in the region. The government helped the industry to develop by outsourcing some of the fund management, previously done by the government sector. The Monetary Authority of Singapore and the Government of Singapore Investment Corporation (GIC) have placed S\$35 billion with managers in the private sector. This encouraged the growth of the fund management industries. Moreover, liberalization of the rules regarding investment of the Central Provident Fund (CPF) has also aided the industry.

In Chapter 10, Jang-Yung Lee examines Korea's promise as a regional financial center by assessing the country's strengths and weaknesses in terms of the size of the domestic economy, legal and regulatory system, talent pool, infrastructure, taxation and the cost of doing business. He asserts that despite many things that need to improve, Korea has also some potential for an attractive financial sector. He provides a preliminary list of policy recommendations on what Korea's goals and strategic thrusts should be, and what specific actions it could take to achieve the goal.

Among others, Korea should globalize its regulatory framework; further liberalize its foreign exchange system; and open its legal service market to foreign competition. Also he notes that a favorable living environment for expatriates, available talent pool, a strong base of English-speaking, open-minded population all provide a basis for a financial center. To become a financial center, he argues that Korea's strategy should be oriented towards building networks with other financial centers across the region. In other words, Korea should identify mutually complementary niches. He proposes three strategic niches that Korea should develop in the next 10 years. They are the bond, asset management, and equity markets.

In Chapter 11, Zainal Abidin Mahani and Chung Tin Fah provides a review of the Malaysian financial market. Malaysia has a high saving rate, partly due to the Employees Provident Fund (EPF). This holds RM 191.6 billion (or US\$50 billion). The Social Security Organization (SOCSSO) has also accumulated RM 6.7 billion. The insurance industry and the fund management industries are also expanding quickly.

The capitalization of the stock market relative to GDP is traditionally very high in Malaysia. At the height of the stock market boom before the crisis, the capitalization was above 300 percent of GDP. In 2001, the capitalization and bank loans were still larger than GDP. The total number of

listed companies grew from 285 in 1990 to 859 in 2002. Relatively speaking, the government bond market is behind.

Before the crisis, the offshore ringgit market and offshore equity market were active. Some of the trading, such as Malaysian equities in Singapore, and non-deliverable forward were curtailed after the financial crisis of 1997–98. The Labuan International Offshore Financial Centre was created in 1990 and has been active in trading various offshore financial products.

One unique feature of the Malaysian financial market is its strength in Islamic banking and financial products. An Islamic banking system is based on a principle that prohibits the payment of interest. The first successful Islamic bank was established in Dubai in 1975, while Malaysia established an Islamic bank in 1983. Now, Islamic financial products of Malaysia are promoted to other countries, in particular the Middle East.

In Chapter 12, Bhanupong Nidhiprabha provides a survey of the Thai financial sector. The financial and capital markets of Thailand had made progress in the 1990s and then suffered a severe setback in the 1997–98 crisis. The recovery has been slow, but stability had been achieved by 2002.

Total loans from banks increased sharply, about 1 trillion baht (50 percent of GDP) in 1990 to 4.7 trillion baht (100 percent of GDP) in 1997. However, it declined sharply in the wake of the financial crisis in 1997–98, to 3.3 trillion baht (62 percent) by 2002. The Thai banking system had been quite strong with several large banks dominating the market. However, banking became liberalized as the offshore market (BIBF) was created and foreign bank loans could be introduced through this market. The overheating in bank lending was partly due to this phenomenon.

The bond market was less developed than the banking or stock market. However, it was progressing rapidly in the first half of the 1990s. The Thai Rating and Information Agency (TRIS) has been a sole rating agency. Several companies successfully issued corporate bonds in 2001–02. The Thai Bond Dealing Center (TBDC) was established in 1998 to facilitate secondary market trading.

In Chapter 13, Titik Anas, Raymond Atje and Mari Pangestu give the overview on the Indonesian financial markets, which suffered a severe blow during the financial crisis of 1997–98. Many banks were closed, merged, and taken over by the state bank. When an agency for bank restructuring (Indonesian Bank Restructuring Agency, IBRA) was formed, the first task was to reform the banking system that was hard hit by the currency crisis. During the crisis, banks were categorized into three groups, category A with capital adequacy ratio (CAR) above 4 percent, category B with CAR between 4 percent and minus 25 percent, and category C with CAR below minus 25 percent. Category C banks were either recapitalized by the owner or taken over by the government. Category B banks were eligible for the

government recapitalization program. The fact that even insolvent banks were recapitalized by fiscal money tells the severity of the currency and economic crisis of Indonesia. However, the banking sector is now stabilized and the market is poised to start growth again.

Even with so many banks being closed and merged during and in the wake of the financial crisis, the number of banks in Indonesia is considered to be too many. There are 141 banks, of which 5 are state owned, 76 private domestic banks, and 34 foreign and joint venture banks. Most of them are small in size. The performances of government owned banks are mixed.

The loan to deposit ratios remains low among state owned and private banks. The corporate sector is not fully recovered from the crisis, and many banks are still low in the CAR. The Indonesian financial sectors are of a relatively small size. Even in the small market, there are many weak banks. The situation needs a lot of reform. Furthermore, the government does not seem to have a strategy to strengthen the Jakarta markets as a regional financial center. The settlement procedures for trading in the stock and bond markets are not yet fully compatible with international standards.

In Chapter 14, Hongzhong Liu and Changjiang Yang have written an overview of Chinese financial markets. The financial markets in China have rapidly grown in the 1990s. The capitalization ratio of stock markets to GDP rose from below 10 percent in 1995 to more than 50 percent in 2000. Since then, the ratio has declined, and stood at 27 percent in 2002.

China's banking sector is much more important than the stock market. The outstanding loans to GDP exceeded 100 percent in 1997, and the ratio rose to above 120 percent in 2002. The big four banks have dominated the banking market. The Shanghai Stock Exchange (SSE) was established in 1990. The number of stocks listed on it was 759 in 2002. It has a centralized bidding system with computer matching. Bonds are also traded on it. The value of total outstanding government bonds is 20 percent of GDP.

In Chapter 15, Gordon de Brouwer reviews the Australian financial market. The financial sector is an important part of the economy, accounting for 7.5 percent of GDP, employing 4 percent of the workforce in 2002. Australia plays a regional role in East Asian finance. First, it has strong domestic financial sectors so that foreign financial institutions use Australia as a base for their East Asian businesses as well as Australian businesses. Second, Australian financial institutions are sophisticated enough to offer financial products including infrastructure finance, privatization, pooled investments, securitization, and asset management. Third, many Australian professionals are working in financial centers, such as Hong Kong and Singapore, in the region.

Australia has a full set of financial markets – money markets (32 percent of GDP), equity markets, bond markets, foreign exchange markets and

derivative markets. The total size of money market is A\$233 billion, or 32 percent of GDP. The equity market totals A\$1110 billion (160 percent of GDP), of which A\$733 billion (106 percent of GDP) are domestic equities, and the rest being overseas-based. The foreign exchange market in Sydney has a comparative advantage in its time zone. It starts just after the New York market closes and continues until the London market opens. Although it mostly overlaps with the Tokyo market, the Sydney market opens a few hours before the Tokyo market. About 40 percent of Australian dollar trades are conducted onshore, while the rest are traded mostly in London and New York. The Continuous Linked Settlement (CLS) in the foreign exchange market is formed as gross real time settlement (RTGS) of foreign exchange transactions between seven major central banks (including the Reserve Bank of Australia).

The Australian financial markets have strong ties with East Asia. The currency and stock price correlations with East Asian counterparts are observed, although the degrees of correlation vary over time. The assets and liabilities of Australian banks are mostly domestic, with some overseas assets in the United States and Europe, but not East Asia. The reasons are twofold. First, most East Asian markets have different degrees of capital controls. Second, a number of Australian banks have experienced problems – both market risk and regulatory opaqueness – in East Asia. However, Australia is active in regional finance through derivative and investment banking services, inviting globally active foreign institutions to Australia, and providing professionals to the rest of the region. In conclusion, the government is keen on developing financial centers in Australia by building up infrastructure and by seeking international businesses. Australia is poised to increase its role in the regional financial markets.

In summary, the financial and capital markets in the region are still quite fragmented by borders and international or regional financial centers in the region, namely, Tokyo, Hong Kong, and Singapore, are not well coordinated. Each center has a strength in a particular line of products, but businesses among the three centers are not well coordinated.

MOBILIZING ASIAN SAVINGS WITHIN THE REGION

Many Asian domestic markets are too small to be really efficient, or allow many banks to flourish. Further reform and consolidation is clearly needed in Indonesia and Thailand. In many countries, banks were traditionally the strongest financial institution category. Commercial banking has been providing both short-term and long-term loans, providing necessary funds

to industries. The saving rate is relatively high in Malaysia and Singapore due to their respective pension programs. Those savings were mobilized to be invested domestically and externally. The fund management industry was encouraged to grow with the governments placing a part of funds with the private sector.

Table 1.1 shows the cross-country comparison of financial markets in the region by several indicators (normalized by the size of GDP).

Traditionally, Tokyo, Hong Kong, and Singapore played regional financial centers. The Tokyo market has expanded its market values, reflecting large domestic markets. The boom – in fact, a bubble – in the Japanese stock market in the late 1980s brought the market capitalization of the Tokyo market to being the largest in the world. Japanese banks were also among the largest in the world. In the early 1990s, between seven and nine of the top ten banks in terms of asset size were Japanese. The bond market was also expanding rapidly. Turnovers of the foreign exchanges in Tokyo increased and became the third largest, after London and New York. Offshore facilities in Tokyo, in the form of book entry, were similar to New York. Futures and derivatives markets were also developed.

The weakness of Tokyo was threefold. First, the market had been shrinking due to the bursting of the bubble. Second, the foreign exchange market was mostly specialized in the yen/dollar pairing. No regional currencies markets are developing in Tokyo. Third, costs of conducting businesses were quite high. The strength of Tokyo is obviously its large domestic

Table 1.1 Ratios of various financial indicators to GDP, 2002

	Bank loans/ GDP	Stock market capitalization/GDP	Government bond/ GDP
Japan ^(a)	0.80	0.46	1.05
Korea	0.78	0.43	0.01
Singapore	0.88	3.47	0.38
Malaysia	1.30	1.38	0.55
Thailand	0.62	0.38	
China	1.25	0.27	0.20
Indonesia ^(b)	0.24	0.18	0.006
Australia	1.26 ^(c)	1.06 ^(d)	0.15

Notes:

(a) 2003

(b) 2001

(c) Total liability of banks / GDP

(d) Includes domestic equities only

market. However, in the future, unless Tokyo moves aggressively to capture more international businesses, a stagnant macroeconomy will be quite an obstacle for it to overcome to be a stronger regional financial center.

The weakness of Hong Kong is its legal status. Although independent status is guaranteed for more than 40 years to come, decision-making in civil life is gradually shifting. More influence by Beijing is detected. There is a political risk and competition from Shanghai in the long run. Whether Hong Kong survives as a regional financial center in the long run will be determined partly by Beijing.

Singapore has benefited from pursuing efficient offshore center activity from very early on. A large market share in currency trading was captured, with fund management, and offshore financial products trading in a strategically important location among the ASEAN countries. Although the domestic economy is small in size, the financial markets are strong and growing.

Among the potential regional financial centers of the future, Sydney seems to be most robust and ready. The domestic market is relatively mature. Shanghai has a long way to go to become a regional financial center, but the high economic and financial growth of China may eventually make it a reality.

In conclusion, the financial markets in East Asia are still rapidly evolving, and the current financial centers may not survive as regional financial centers in the next ten to twenty years. Some middle-income ASEAN countries still need to make domestic financial markets and infrastructure strong enough to avoid another financial crisis. A challenge is to convince governments in the region of the benefits of coordination and cooperation in financial regulation and supervision. Also there is the challenge of promoting the capital markets rather than the banking sector. That will diversify a country's risk and encourage risk capital to be mobilized with investor's responsibility. Financial and capital markets of the East Asian region will flourish if and when the governments cooperate with each other so that financial institutions can raise and place funds in the region freely, taking advantage of economies of scale.

Gordon de Brouwer and Jenny Corbett, in Chapter 16, explore East Asian finance in two parts. The first part of the chapter provides an overview of the state of regional financial markets in East Asia. They observe that they are tiered. The developed markets of the region (Japan, Singapore, Hong Kong and Australia) perform well by international standards, most of the others (like Malaysia, South Korea, Taiwan and Thailand) are average, and a couple (like China, Indonesia and the Philippines) are poor performers.

Based on their assessment of the current state of regional financial markets in East Asia, de Brouwer and Corbett explore four issues. The first

is the need to integrate regional financial markets. The second is a discussion of the methods to pursue integration, including harmonization, mutual recognition, and private insurance. The third issue is the respective roles of Japan and China in regional financial integration. Finally, they look ahead at other issues to include in the policy and research agenda, such as an independent stocktaking of capacity building and cooperation in finance and a consideration of ways to involve the private sector more deeply in this program.

A recent trend of capital movement is likely to undermine capital market development in the region and have a negative impact on the East Asian economy. The characteristic of such movement raises the possibility of a currency crisis in East Asia. Investment of advanced economies in East Asia is concentrated on risky assets, which can respond sensitively to even a slight increase of risk.

Therefore, East Asia needs to adjust the current problems from unsustainable capital flows and to change vulnerable financial structures. The development of the bond market is important for dealing with the current problems in East Asia. It would turn the investment of advanced economies in risky assets to investment in safe assets, as well as contributing to the development of the East Asian capital market. In Chapter 17, Gyutaeg Oh, Dae Keun Park, Jaeha Park, and Doo Yong Yang assert that East Asian bond markets with quality and liquidity would surely promote more regional investment as well as investment from advanced countries.

Securitization is a scheme that is capable of narrowing the credit gap and the maturity gap between investors and issuers in the region. In this way, it is helpful in many ways to the development of the East Asian bond market and the increase of capital flows in the region. First of all, securitization allows the creditworthiness of the asset-backed securities (ABS) independent of the creditworthiness of the company that originally owned the underlying assets. The credit assessment of asset-backed securities is made solely on the basis of the cash flows created by underlying assets.

If credit rating for Asian bonds has increased by a securitization, the liquidity for Asian bonds would improve. Securitization can provide a way to resolve the problem of liquidity gap; that is to issue asset-backed commercial papers (ABCP) with short maturities. In addition, securitization can be also useful in raising funds for emerging market firms located in countries with very high levels of political risk. To promote securitization in East Asia, strategic agents are indispensable, but under the present circumstances, it is difficult to expect strategic agents to emerge from the private sector. In that respect, the East Asian governments should play the role of strategic agents to stimulate securitization in the region at this stage.

In the final chapter, Chapter 18, Choong Yong Ahn, Woosik Moon and Deok Ryong Yoon examine the role of regional development banks as a vehicle for financing development projects in East Asia. Their observations are as follows.

When a certain region intends to pursue cooperation at the regional level, a strong argument for regional DBs emerges as institutions that provide financing for development and solidarity, in the way that the European Union does through the Structural and Solidarity Funds and European Investment Bank. In this context, regional development banks are indispensable for regional economic integration because they help nourish regional identity and solidarity by supporting the economic growth of poorer countries in the region.

As the only multilateral DB in Asia, ADB has contributed much to economic and social development in this region. However, Asia is too big both geographically and in terms of population for one DB to be able to cover all the financial needs. Despite urgent needs for poverty alleviation in the region, many countries are overlooked.

Northeast Asia includes Japan, Korea and China, all of which hold current account surpluses and high foreign exchange reserves. Establishing a sub-regional development bank like a Northeast Asian Development Bank would be therefore a good instrument to develop Northeast Asia and to speed up the regional economic integration process. Such a sub-regional development bank could play a role as a regional financial institution to improve the underdeveloped capital markets because of the institution's potential to attract a good credit rating and its multiplier effect. More active efforts should be made to design a better functioning sub-regional bank.

PART I

Financial liberalization and integration in East Asia

2. Finance and economic development in East Asia

**Yung Chul Park, Wonho Song
and Yunjong Wang**

1. INTRODUCTION

Financial systems and their evolutionary development have been a fundamental component of the overall economic development process in East Asia. This process has been driven by real economic growth and the attendant growth and changes in demand for various types of financial services, by institutional development within the financial system, and by changes in government policies concerning finance.

Before the financial crisis broke out in 1997, East Asia's systems, which are often known as bank-based systems, had been characterized as 'repressive' in the sense that loan allocation was controlled and the interest rates on deposits and loans were set – often below market clearing rates – by the government. In many East Asian countries, financial repression was predicated on a development strategy that used finance as an instrument of industrial policy to achieve multiple objectives with considerable success: to promote exports; to build physical infrastructure; and to supply long-term finance at a low cost to firms in manufacturing.

In the early 1980s, many East Asian governments began to relax their control over the interest rates and lending policies of banks and other non-bank financial intermediaries, toward fostering capital markets, and gradually opening financial markets to foreign competition. The process of financial liberalization had been accelerated as the liberal ideology of the Washington consensus swept through the region before the crisis broke out in 1997. Since then, a large number of recent studies on the 1997–98 East Asian crisis have blamed the structural weaknesses of the East Asian financial systems as being one of the major causes of the crisis. Some of these studies even go so far as to assert that the crisis is proof that the market-oriented Anglo-American financial system works better than the intermediary-based East Asian system (Frankel and Roubini 2000).

The purpose of this chapter is to analyse the role of finance in East Asian economic development from the 1970s to the 1990s. More specifically, this chapter focuses on the three issues on finance and growth that remain controversial in the context of East Asia.

Many writers claim that East Asia's financial systems, except for those of Singapore and Hong Kong, have been quintessentially intermediary or bank-based systems. Others argue that by the early 1990s, most of the East Asian countries had established market-based financial systems. One issue is therefore to analyse structural changes in East Asia's financial systems to determine whether these systems have evolved to market-based systems starting from bank-based systems during the 1970s to the 1990s when East Asian economies had succeeded in sustaining rapid growth before succumbing to devastating financial crises in 1997–98.

Another issue is to examine the extent to which financial development has contributed to economic growth. For this examination, this chapter conducts a series of empirical analyses to gauge the effects of changes in the exogenous component of financial development on economic growth. These analyses may throw some light on the question of whether the repressive financial policy had been effective in spurring economic growth before the 1997–98 crisis.

A third issue is related to the controversy on whether inherent weaknesses of and the cumulative effects of government control over the financial systems had made East Asian economies highly susceptible to currency speculation and banking crisis by the time the entire East Asia was thrown into financial turmoil in 1997.

The rest of the chapter is organized as follows. Section 2 discusses changes in East Asia's financial structure since the early 1970s. Section 3 examines empirically the relationship between finance and growth using the panel data of seven East Asian countries. Section 4 analyses whether structural weaknesses of East Asia's financial systems were responsible for the 1997–98 crisis. Concluding remarks are found in the final section.

2. CHANGES IN EAST ASIA'S FINANCIAL STRUCTURE

Historical experience shows that financial development in general proceeds from simple lending and borrowing arrangements to a system dominated by commercial banking and eventually to a broader system complemented by a variety of non-bank financial institutions and money and capital markets. Thus, in most developing countries, largely because of problems related to lack of information and inefficient legal systems, capital markets

for primary securities such as stocks, bonds, mortgages, and commercial bills are insignificant channels for mobilizing and allocating savings. Therefore, for all practical purposes, the banking system – broadly defined to include a variety of depository institutions – dominates the financial system and is usually the only organized credit market available.

Since most of the East Asian countries except for Japan are either emerging market or developing economies, this evolutionary process of financial development suggests that East Asia's financial systems were, and still are, dominated by banks and other financial intermediaries. In fact, many authors claim that East Asian financial systems that can be characterized as a bank-based system (Eichengreen 1999). It is also widely accepted that for more than three decades preceding the 1997 crisis, most East Asian countries had relied on the banking system as instruments of industrial policy – as the means of mobilizing savings and allocating them to strategic industries and favored projects (Haggard 2000, Chapter 1).

This notion of bank dominance has been challenged in a series of recent studies on finance and growth. These studies argue that it may not be appropriate to characterize East Asian financial systems as a bank-based one, because by the mid-1990s equity markets had become an important source of financing for business investment in many of these countries. Demirgüç-Kunt and Levine (2001) constructed a conglomerate financial structure index in the 1990s, in terms of size, activity and efficiency of the financial system to gauge the relative importance of banks and capital markets. Specifically, the index is a simple average of three indicator series, of which means are removed. The three series are: the ratio of market capitalization to bank assets (size), the ratio of total value of equities traded to bank credit (activity), and total value of equities traded/GDP multiplied by overhead cost (efficiency).

The indices of the eight East Asian countries in Table 2.1 show that except for Indonesia and Japan, all had developed a market-based system prior to the 1997 crisis. The high values of the conglomerate index for the six East Asian countries (excluding Indonesia and Japan) may be explained by a sharp increase in the total value of equities traded as a share of GDP as a result of aggressive policies for the development of equity markets in these countries in the first half of 1990s. Both the market capitalization and the total value of equities traded as a share of GDP remained relatively small in the 1970s and 1980s in all countries except for a few high-income countries. In terms of the size, even the United States can be classified as bank-based in the 1980s when the size of the equity market was relatively small.¹ In addition, both variables reflecting the size and activity of the stock market are highly volatile. For instance, market values of stocks as a percentage of GDP fell dramatically, whereas a similar ratio for money plus

Table 2.1 Classification of financial structure in East Asia

	Financial structure index	Classification
Indonesia	-0.50	Bank-based
Korea	0.89	Market-based
Malaysia	2.93	Market-based
Philippines	0.71	Market-based
Thailand	0.39	Market-based
Hong Kong	2.10	Market-based
Singapore	1.18	Market-based
Japan	-0.19	Bank-based
Great Britain	0.92	Market-based
United States	1.96	Market-based

Source: Demirgüç-Kunt and Levine (2001, p. 118)

quasi money did not in 1997 and has not returned to the pre-crisis level in Indonesia, Malaysia, and Thailand (see Table 2.2). The stock market capitalization in all countries has been highly unstable compared to the banking indicator that includes money and quasi-money. The market capitalization appears to vary a great deal with cyclical fluctuations of income and output. In contrast, the banking sector indicator tends to be much less sensitive to the business cycle.

Once the cyclical component is removed from both indicators, it is clear that the market capitalization as a proportion of GDP declines substantially, whereas a similar change is not observed in the case of the banking indicator. Investors in the stock market tends to be influenced by their expectations of economic prospects: when they perceive an economic downturn, they would move out of the market en masse and vice versa. In a relationship banking that is a salient feature of East Asian banking, bank lending tends to be less cyclical. Taking a period average of the market capitalization will reduce the cyclical bias of the indicator depending on the period chosen to some extent, but not completely. For this reason, changes in the stock market capitalization do not necessarily reflect the corresponding structural changes in the deepening of the stock market and hence is not a good indicator for financial development. Using the capitalization data adjusted for the business cycle, one could argue that East Asian financial systems were bank- or financial intermediary-based ones during much of the period under discussion.

Table 2.2 Monetary aggregate and stock market capitalization

	1990		1996		1997		1998		1999	
	Stock market cap. (% of GDP)	Money plus quasi-money (% of GDP)	Stock market cap. (% of GDP)	Money plus quasi-money (% of GDP)	Stock market cap. (% of GDP)	Money plus quasi-money (% of GDP)	Stock market cap. (% of GDP)	Money plus quasi-money (% of GDP)	Stock market cap. (% of GDP)	Money plus quasi-money (% of GDP)
Indonesia	7.1	40.1	40.3	52.2	13.5	55.4	22.2	59.5	45.4	57.6
Korea	43.8	38.4	28.6	42.6	8.8	44.9	36.1	58.2	76.0	68.2
Malaysia	110.4	64.4	309.6	92.3	93.4	97.6	148.3	95.3	184.1	105.7
Philippines	13.4	34.2		56.3	38.1	62.2	53.9	61.1	63.1	64.2
Thailand	28.0	70.0	53.9	80.6	15.6	91.6	31.2	102.9	47.8	108.7
Hong Kong	111.5			176.0	262.8	172.3	254.2	201.3	384.8	223.5
Japan	98.2	115.1		112.2	71.6	113.5	56.2	120.8	100.9	125.7
Singapore	93.6	93.1		87.0	158.8	87.9	128.4	116.1	236.8	122.8

Source: IFS, various issues and World Bank, *World Development Report* (1997, 1998/99, 1999/2000, 2000/01).

Table 2.3 Trend measure of financial structures in terms of size (standard deviations in parentheses)

	1975–79	1980–84	1985–89	1990–94	1995–97
Advanced					
United Kingdom	1.050(0.012)	1.076(0.004)	1.024(0.035)	0.975(0.018)	1.063(0.032)
United States	0.590(0.005)	0.621(0.015)	0.705(0.045)	0.968(0.124)	1.340(0.106)
Germany	0.118(0.002)	0.135(0.011)	0.177(0.012)	0.199(0.004)	0.211(0.004)
East Asia					
Indonesia	0.001(0.001)	0.001(0.003)	0.042(0.037)	0.254(0.096)	0.522(0.070)
Japan	0.279(0.043)	0.454(0.072)	0.674(0.053)	0.679(0.042)	0.556(0.033)
Korea	0.241(0.013)	0.251(0.034)	0.487(0.103)	0.686(0.017)	0.648(0.025)
Malaysia	0.764(0.021)	0.857(0.041)	1.159(0.188)	2.084(0.364)	2.909(0.171)
Philippines	0.226(0.023)	0.199(0.023)	0.477(0.161)	1.116(0.224)	1.621(0.105)
Singapore	n.a.	1.728(0.263)	1.143(0.085)	1.254(0.115)	1.538(0.062)
Thailand	0.079(0.004)	0.108(0.022)	0.274(0.088)	0.587(0.094)	0.754(0.022)
Latin America					
Argentina	0.102(0.005)	0.089(0.004)	0.166(0.052)	0.410(0.095)	0.644(0.056)
Brazil	n.a.	0.445(0.041)	0.494(0.010)	0.536(0.045)	0.678(0.040)
Chile	0.766(0.000)	0.561(0.083)	0.676(0.167)	1.446(0.282)	2.084(0.136)
Mexico	0.313(0.019)	0.249(0.016)	0.434(0.136)	1.067(0.254)	1.761(0.188)
Uruguay	n.a.	0.010(0.000)	0.017(0.005)	0.037(0.007)	0.050(0.002)

Notes:

The measure is constructed based on the data collected by Demirgüç-Kunt and Levine (2001), by using the Hodrick-Prescott filter. n.a. = not available.

By using the Hodrick-Prescott filter, we construct the trend measure of financial structure based on the data collected by Demirgüç-Kunt and Levine (2001). As shown in Table 2.3, the UK can be classified as a country of a market-based financial system in the 1970s and 1980s. But, again the US cannot be classified as a country of a market-based financial system. In East Asia, Malaysia and Singapore can be said to have had market-based financial systems in the 1980s. But in the second half of the 1980s, Japan has a comparable figure to the US. In sum, this relative measure of financial structure in terms of the size cannot be said to be a reliable indicator. Furthermore, the measure of financial structure in terms of the activity is more problematic, as shown in Table 2.4. Almost all East Asian countries except for Japan show an increasing trend. And figures are quite high, reflecting that in the first half of 1990s, Korea, Malaysia, and Singapore had much higher market activities vis-à-vis banking activity than the UK. In this regard, there are no universally reliable indicators for measuring the structure of the financial system.

*Table 2.4 Trend measure of financial structures in terms of activity
(standard deviations in parentheses)*

	1975–79	1980–84	1985–89	1990–94	1995–97
Advanced					
United Kingdom	0.277(0.001)	0.316(0.030)	0.429(0.030)	0.504(0.029)	0.581(0.017)
United States	0.161(0.033)	0.287(0.049)	0.463(0.065)	0.808(0.170)	1.349(0.161)
Germany	0.013(0.018)	0.100(0.041)	0.247(0.043)	0.313(0.005)	0.334(0.009)
East Asia					
Indonesia	0.001(0.000)	0.001(0.001)	0.017(0.016)	0.108(0.043)	0.237(0.037)
Japan	0.150(0.039)	0.304(0.061)	0.465(0.025)	0.371(0.063)	0.219(0.035)
Korea	0.130(0.003)	0.202(0.057)	0.518(0.131)	0.829(0.057)	0.881(0.008)
Malaysia	0.162(0.007)	0.143(0.008)	0.352(0.156)	1.159(0.328)	1.920(0.168)
Philippines	0.094(0.019)	0.064(0.009)	0.168(0.058)	0.408(0.092)	0.635(0.052)
Singapore	0.260(0.018)	0.308(0.013)	0.438(0.080)	0.749(0.097)	0.909(0.019)
Thailand	0.119(0.013)	0.102(0.016)	0.265(0.085)	0.490(0.037)	0.465(0.030)
Latin America					
Argentina	0.056(0.003)	0.048(0.002)	0.092(0.029)	0.201(0.033)	0.271(0.017)
Brazil	n.a.	0.377(0.047)	0.424(0.019)	0.455(0.053)	0.645(0.060)
Chile	0.132(0.039)	0.039(0.017)	0.048(0.020)	0.144(0.038)	0.238(0.022)
Costa Rica	n.a.	0.001(0.000)	0.003(0.002)	0.009(0.002)	0.012(0.001)
Mexico	0.071(0.035)	0.223(0.068)	0.461(0.064)	0.596(0.037)	0.715(0.038)
Peru	0.034(0.004)	0.047(0.007)	0.113(0.038)	0.291(0.071)	0.453(0.034)
Uruguay	n.a.	0.001(0.000)	0.001(0.000)	0.002(0.000)	0.002(0.000)
Venezuela	0.001(0.000)	0.005(0.009)	0.073(0.036)	0.207(0.043)	0.324(0.034)

Notes:

The measure is constructed based on the data collected by Demirgüç-Kunt and Levine (2001), by using the Hodrick-Prescott filter. n.a. = not available

Empirical studies also support this evolutionary process of financial development. According to Demirgüç-Kunt and Levine (2001), national financial systems tend to become more market oriented, as countries become richer. In higher income countries, they show that financial systems are more developed with stock markets becoming more active and efficient relative to banks.

What then are the economic, institutional, and social changes that lie behind the observed causal nexus between sophistication and diversification of finance on the one hand and economic growth on the other? One plausible explanation is provided by a legal approach to the determination of financial structure and financial development. According to the legal-based view, financial contracts are defined and effected by legal rights and enforcement mechanisms. Therefore, it follows that a well-functioning legal system facilitates and improves the operation of both financial institutions

and markets (La Porta et al., 1999).² Levine (2000) shows that the legal rights and effectiveness of contract enforcement is strongly associated with long-run growth: the legal system is a crucial determinant of financial development. In another empirical paper on the legal-based view, Levine et al. (2000) show that the legal rights of investors, the efficiency of contract enforcement, and accounting systems help explain the cross-country differences in the level of financial development.

One important implication of the legal approach to finance is that countries with the English common law tradition tend to have market-based financial systems as they stress the rights of minority stockholders. Other legal origins such as the French civil law and German civil law systems are associated with under-developed and bank-based systems. For example, the German legal system that stresses creditor rights to a much greater degree than other systems generate beneficial repercussions for financial intermediary development. It is also shown that countries with weak accounting standards and explicit or implicit deposit insurance systems are likely to have bank-based financial systems. Among the advanced economies, Germany and Japan have a bank-based financial system. Japan's legal system was molded after the German system. Japan was not known for strong accounting standards comparable to Anglo-American ones and had not instituted a formal deposit insurance system until the early 1990s. These legal and other institutional features may explain in part the bank-based dominance of the Japanese financial system.

Related to the legal approach there is also the argument that the bank-based system is more efficient than the market-based system in monitoring corporate governance and performance of borrowers. The cross-country historical evidence, and the case of Japan, indicate that under certain conditions banks are better able than securities market institutions to evaluate the creditworthiness of borrowers and the viability of new projects, to monitor the ongoing performance of firms, and to rescue or liquidate firms in distress. There are several reasons for this relative superiority of the bank-based financial systems on corporate monitoring. Securities markets are ineffective devices for exerting corporate control. Insiders often do have more and better information about the corporation than outsiders largely because of a free-rider problem that dissuades individual investors from spending too much time and money on researching firms. When stock markets become deep and liquid, they encourage more diffuse ownership so that each owner has fewer incentives to oversee managers actively.

In many developing countries, developing efficient legal systems and strong accounting standards is costly and takes time. In the absence of a credible accounting standard and transparent corporate governance, nascent equity markets could hardly perform the role of monitoring corporate

behavior. In economies with a under-developed legal system, it would be relatively easier to protect the creditor rights such as the rights of depositors than those of stockholders. It is because protection of depositors could be provided by government control of banking institutions and provision of implicit deposit insurance whereas protection of stockholders requires an elaborate legal and regulatory systems and an effective mechanisms of contract enforcement.

Debates on the relative merits of bank-based and market-based financial systems remain inconclusive.³ Historically, empirical research on the bank-based versus market-based debate has centered on Germany and Japan as bank-based financial systems and the United States and Great Britain as market-based systems (Beck and Levine 2001, p. 1). These authors compiled a new, broad cross-country database with measures of financial structure and examined the impact of financial structure on industrial expansion, the creation of new establishments, and the efficiency of capital allocation across industries. In sum, they found that evidence was inconclusive for the market-based or the bank-based hypothesis. Instead, their empirical results support the financial services view. According to the financial services view argued by Levine (1997), the bank-based versus market-based debate is of second-order importance. The first-order issue is the ability of the financial system to ameliorate information and transaction costs, not whether banks or markets provide these services. Furthermore, banks and markets might act as complements in providing financial services (Boyd and Smith 1998; Huybens and Smith 1999).

The financial service view may be right because of the disappearance of the traditional walls separating banking from securities and insurance business as a result of financial deregulation and market opening. Nevertheless, the relative importance of the banking sector to capital markets deserves further analyses because it is largely unknown whether differences in the financial structure have any bearing on financial markets' susceptibility to financial speculation, panic, and mania.

3. THE ROLE OF FINANCE IN ECONOMIC DEVELOPMENT IN EAST ASIA

Empirical studies on correlation between economic development and financial sophistication suggest financial institutions and markets play an important role in economic growth and development. However, it has been difficult to explain theoretically either the importance or the evolutionary process of financial structure.⁴ This difficulty stems largely from the lack of understanding of the mechanism of interactions between the financial

system on the one hand and the real sector of the economy on the other. As a result, both the quantitative and qualitative importance of the efficiency of financial structure remains controversial.

Since the early 1980s, most of the studies on the interaction between finance and real economic variables have been particularly concerned with informational asymmetries as determinants of the behavior of financial markets and institutions. This application of information theory shows that financial contracts and institutions are endogenously and simultaneously determined together with real variables. It shows that the spending decisions of individual consumers and firms are influenced by financial variables such as rationed credit, balance sheet positions and cash flows. By providing more accurate information about production technologies and by exerting corporate control, better banks can enhance resource allocation and accelerate growth.

Empirically, King and Levine (1993a) and Levine and Zervos (1998) show that the level of financial intermediation is a good predictor of long-run rates of economic growth, capital accumulation and productivity improvements. Beck et al. (2000) also find that higher levels of banking sector development produce faster rates of economic growth and total factor productivity growth. However, they do not find a robust relationship between banking sector development and either physical capital accumulation or private saving rates. From these empirical results, they infer that banks affect economic development primarily by influencing total factor productivity growth rather than capital accumulation.

The theory also implies that information asymmetries reduce the level of financial market activity and increase the market's sensitivity to exogenous disturbances, making the economy susceptible to financial crisis. The greater the degree of moral hazard and adverse selection problems, the greater the reduction in intermediation activity, and hence the lower the level of real investment and output.

With the sustained progress in financial market deregulation and opening, there has been a renewed interest in both theoretical and empirical research on the causal relationship between financial development and economic growth in recent years. Endogenous growth models use either capital externalities or capital goods produced using constant returns to scale but without the use of non-reproducible factors to generate steady-state per capita growth (Romer 1986; Lucas 1988; Rebelo 1991). Based on these models, financial intermediation permits an economy to reduce the fraction of its savings held in the form of unproductive liquid assets and to prevent misallocation of invested capital due to liquidity needs (Bencivenga and Smith 1991; Boyd and Prescott 1986; Greenwood and Jovanovic 1990; King and Levin 1993b; Beck et al. 2000). Thus, the functions performed by

the financial system affect steady-state growth by influencing the rate of capital formation.⁵

Many researchers have provided empirical findings on the finance-growth relationship and have offered a much bolder appraisal of the causal relationship: firm-level, industry-level, and cross-country studies all suggest that the level of financial development exerts a large, positive impact on economic growth. However, in the context of East Asia, there have been only a few empirical studies. In explaining the superb growth performance of the East Asian countries, the role of financial development has hardly been mentioned.⁶

In this section, we will investigate the relationship between finance and growth in East Asian countries. For the sake of comparison, we will also examine Latin American countries. Most previous studies including the ones mentioned earlier conclude that there is a strong and positive relationship between finance and growth. In contrast to this 'conventional wisdom', Favara (2003) shows that the relationship is weak or ambiguous. De Gregorio and Guidotti (1995) found that for Latin American countries there exists a strong negative relationship between financial intermediation and long-run growth.⁷ They obtained this result using as the financial development indicator 'credit' that is the ratio of domestic credit by the central bank and commercial banks to the private sector to GDP. Our analysis differs from theirs in two aspects: First, we use as the financial development indicator 'private credit' which is the credit by deposit money banks and other financial institutions to the private sector divided by GDP.⁸ Second, we use a more efficient GMM panel estimator, while they use the traditional random effect model.

Arellano and Bond (1991) developed the generalized method of moments (GMM) estimator specifically for dynamic panel data models. This estimator improves upon cross-section analysis that was frequently used in the empirical growth literature. Cross-section regression estimates have at least three drawbacks: First, they do not utilize the time-series variation of the data. Second, these estimates may be biased due to the omission of country-specific effects. Third, they do not control for the endogeneity of all the regressors. An additional disadvantage of cross-section analysis is that suitable instruments needed to cure endogeneity of the regressors are not easy to obtain. The GMM dynamic panel data methods can solve all these problems. That is, they exploit the information from the time-series dimension, allow for individual effects, and use lagged values of the regressors as instruments for the endogenous variables including the lagged dependent variable. Applications of this method to the study of economic growth in relation to financial development are found in Levine et al. (2000), Beck et al. (2000), and Favara (2003), among others.

More specifically, we consider the following dynamic panel data version of the traditional growth regression:

$$y_{it} - y_{i,t-1} = \alpha y_{i,t-1} + \beta x_{it} + \gamma FIN_{it} + \mu_i + \varepsilon_{it}$$

where y_{it} is the logarithm of income per capita in country i in period t , x_{it} is a vector of conditioning set, FIN_{it} is a financial development indicator, μ_i is a country-specific unobservable effect, and ε_{it} is an idiosyncratic disturbance. Lagged dependent variable is included to control for convergence.

We estimate the coefficients using the difference GMM dynamic panel estimator of Arellano and Bond (1991).⁹ The estimation is carried out as follows. First, we take first differences of all the variables. Then the right-hand side variables are instrumented using lagged values of the regressors. Under the assumption that the errors are serially uncorrelated, levels of the series lagged more than two periods are valid instruments for the equations in first difference. Hence, the consistency of the GMM estimator depends both on the validity of the instruments and on the validity of the assumption that the error term does not display serial correlation. For the first condition, we use the Sargan test of over-identifying restrictions, and for the second we test whether the differenced residuals ($\varepsilon_{it} - \varepsilon_{i,t-1}$), which are probably first-order serially correlated by construction, exhibit second-order serial correlation. Failure to reject both tests gives support to our specifications.

For this GMM method, two estimators, one-step and two-step GMM estimators, are available. In the one-step estimator, the error term is assumed independent and homoskedastic across countries and time; in the two-step estimator, the residuals of the first step are used to estimate consistently the variance-covariance matrix of the residuals, relaxing the assumption of homoskedasticity. Although the two-step GMM estimator is asymptotically more efficient in the presence of heteroskedasticity errors, standard errors associated with the two-step estimator are known to be downward biased and thus may be inaccurate.¹⁰

Hence, a one-step GMM estimator with standard errors corrected for heteroskedasticity is a better choice. Below, we report results from both one-step and two-step GMM estimators for comparison. To run the regressions, the GAUSS program DPD98, which was written by Arellano and Bond (1998), was used.

As mentioned above, the empirical framework to evaluate the independent effect of financial development on economic growth is the one based on growth equation. The dependent variable is the growth rate of the real per capita gross domestic product (GDP). The independent variables include the financial development indicator, along with the conditioning

information set. In the conditioning information set, we include inflation rate and government spending as indicators of macroeconomic stability, openness to trade to measure the degree of openness of a country, and average years of secondary schooling as an indicator of the human capital stock in the economy. As a financial development indicator, we use 'private credit'. We average data over non-overlapping five-year periods, so that data permits six to eight observations per country (see Appendix, section 1, for more details).

The data used in our analysis cover the period of 1960–97, although the sample periods are different across the countries. Sample periods used for each country are reported in the Appendix, section 2. East Asia includes seven countries (Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, and Thailand) and Latin America covers 12 countries (Argentina, Barbados, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Peru, Uruguay, and Venezuela). Tables 2.5 and 2.6 provide summary statistics for all variables used in the estimation. These statistics refer to a panel with yearly observations. There are many differences between East Asian and Latin American countries especially in growth rate, inflation rate, and the degree of financial development.

Table 2.5 Summary statistics for East Asian countries

	Growth	Initial	Inflation	Govern.	Openness	Schooling	Private-credit
Mean	4.75	7255	7.05	11.18	95.64	1.56	63.09
Median	4.82	2362	4.86	10.66	55.03	1.46	48.44
Max	12.51	42186	46.67	18.77	439.03	4.65	207.89
Min	-9.54	298	-1.84	6.65	15.92	0.32	3.90
Stan. dev.	3.43	10491	7.13	2.27	102.46	0.99	47.82

Table 2.6 Summary statistics for Latin American countries

	Growth	Initial	Inflation	Govern.	Openness	Schooling	Private-credit
Mean	1.51	3006	105.04	11.06	45.91	1.30	22.07
Median	1.77	2399	16.49	10.76	40.15	1.29	18.13
Max	20.46	7785	11750	22.42	142.97	4.28	68.16
Min	-14.19	766	-0.80	2.98	10.34	0.16	1.86
Stan. dev.	4.21	1871	711.28	3.18	26.59	0.76	13.04

The estimation results are shown in Tables 2.7 and 2.8 for East Asian and Latin American countries, respectively, showing both one-step and two-step estimates together with p-values of coefficient estimates. P-values for the Sargan test and the second order serial correlation test are also reported. High p-values for these two tests give support to the validity of the instruments and hence the consistency of the GMM estimates.

Notice first that all our models pass the specification tests. In Table 2.7, two-step results show that initial income per capita, inflation, and openness are significant at the usual 5 percent level. Government and schooling variables have less power in explaining the variation of economic growth. Our focus is on the coefficient of private credit. It has a positive sign and is

Table 2.7 Estimation results for East Asian countries

Variables	Coefficient (p-values)	
	Two-step	One-step
Constant	0.0175 (0.563)	0.0240 (0.003)
Initial income	-0.2580 (0.003)	-0.1800 (0.001)
Inflation	0.1044 (0.023)	0.0267 (0.261)
Government	-0.1019 (0.249)	-0.1155 (0.001)
Openness	-0.2133 (0.048)	-0.0295 (0.222)
Schooling	0.9412 (0.144)	0.1057 (0.376)
Private credit	0.0737 (0.039)	0.0395 (0.002)
Sargan test	1.000	0.782
Serial correlation test	0.404	0.448

Table 2.8 Estimation results for Latin American countries

Variables	Coefficient (p-values)	
	Two-step	One-step
Constant	0.0118 (0.300)	0.0133 (0.052)
Initial income	-0.2138 (0.029)	-0.0817 (0.001)
Inflation	-0.0417 (0.001)	-0.0210 (0.003)
Government	-0.0732 (0.160)	-0.0659 (0.057)
Openness	-0.1838 (0.092)	-0.0582 (0.152)
Schooling	0.0459 (0.751)	-0.0295 (0.828)
Private credit	-0.0470 (0.004)	-0.0186 (0.223)
Sargan test	0.683	0.485
Serial correlation test	0.712	0.687

significant at the 5 percent level. This implies that exogenous changes of financial development have a strong and positive impact on the growth rates, as argued by Levine et al. (2000) and Beck et al. (2000).

As noted earlier, one-step results are more reliable in finite samples, while two-step results are asymptotically more efficient. The results show that the signs of the coefficients do not change compared with those from two-step results, although their magnitude and significance change somewhat. Notice that private credit becomes even more significant, now at the 1 percent level. From both results, we conclude that the exogenous component of financial development exerted a positive and significant impact on economic growth in the case of the East Asian countries.

The results for Latin American countries show different pictures from those of East Asian countries. Two-step estimates show that private credit has a strong and negative relationship with economic growth. This result is consistent with that of De Gregorio and Guidotti (1995). However, its significance becomes reduced to the 22 percent level with the more reliable one-step estimator. From this observation, we conclude that there is weak evidence of negative relationship between finance and growth for Latin American countries.

4. WHAT WENT WRONG IN EAST ASIAN FINANCIAL SYSTEMS?

On the effects of financial development on the allocation of capital, there was a general consensus before the 1997 crisis that East Asian financial systems, which were often characterized as repressive bank-based systems, were effective in allocating external funds to the manufacturing sector, which was the engine of growth. In this way, the East Asian financial systems sustained rapid growth for almost three decades before the outbreak of the crisis. The most comprehensive analysis of finance and growth from the early 1960s to the late 1980s is found in a study on the East Asian miracle by the World Bank (1993). The study appraises and justifies the repressive financial policies of East Asian countries, asserting that such policies ameliorated the adverse consequences of financial market imperfections. In managing the financial systems, the study attributes the East Asian success to the efforts of policy authorities to duplicate the market outcomes. While the East Asian financial systems may have been effective in providing financing to the business sector, which has been export-oriented, it is not clear whether financial growth and sophistication have been associated with improvements in the efficiency of the economy. A number of TFP studies show that economic growth in East Asia was driven by input

growth rather than efficiency improvements (Kim and Lau 1994; Young 1994, 1995).¹¹ These studies imply that expansion and diversification of financial instruments, institutions, and markets may have had limited effects on improving the efficiency of capital allocation.

However, the previous studies implicitly assume that the economies are producing on their frontiers and there are no gaps between actual and potential outputs. This further implies that the economies have been allocating the resources (both labor and capital) most efficiently. However, in reality, some economies may be producing not on but inside the frontiers. Han, Kalirajan, and Singh (2002) decompose the TFP growth of four East Asian countries (Japan, Hong Kong, Korea and Singapore) into technical progress and technical efficiency improvement.¹² Their empirical results support some evidence for positive technical efficiency change, while there is little or no support for the role of pure technological progress. One interpretation of this empirical finding is that if financial development means improved capital allocation and provides a more effective system of governing a better practice of corporate management, the technical efficiency can be improved.

The alleged or perceived superiority of the bank-based system in allocating capital and monitoring the behavior and performance of firms in the context of East Asia was questioned even before the crisis broke out in 1997 (Yusuf 2001). In particular, financial liberalization and market opening weakened considerably the monitoring capacity of banks, although such financial deregulation was expected to improve the allocative efficiency in the long run. Consequently, such transition without proper institutions led to difficulties in preventing moral hazard and eventual financial crisis when banks and regulators lack the relevant human capital and resources. Indeed, the structural weakness of East Asia's bank-based system was manifested in the crisis. To many critics of East Asia's development strategies, the bank system, which was either heavily controlled by the government or captured by large businesses, provoked and exacerbated the crisis.

One weakness was that banks became 'too big to fail.' The moral hazard syndrome associated with this implicit government guarantee led to poor risk management, which in turn caused a massive deterioration in the quality of assets held by the banks. This problem undoubtedly stems from the failure to 'monitor the monitor.' Another weakness was that direct government control over the management and credit allocation at banks and other financial institutions left little room and few incentives for the regulatory authorities to develop and improve their capacity for prudential supervision and regulation. It also meant that the banks and other financial institutions did not develop their own risk management capacities. The absence of rigorous auditing and accounting requirements made

bank balance sheets non-transparent. A lack of transparency and disclosure created a fertile ground for corruption. The cumulative effect of corruption together with the inefficient allocation of credit, in part due to government intervention in asset management, eventually manifested in poor economic performance.

A third problem was that the dominant position of banks interfered with and delayed the diversification of financial assets, institutions, and markets. In particular, the dominance of bank intermediaries impeded the development of capital markets. In order to develop capital markets, detailed information on the financial position and legal structures of firms are needed to protect minority shareholders. Financing through capital markets rather than banks, including the greater use of financial derivatives, and liberalizing the capital account all require a reliable disclosure system. Insofar as East Asian countries relied on banks for financial intermediation, they were less inclined to improve accounting, auditing and disclosure standards.

Of all probable structural weaknesses, the absence of vibrant bond markets never fails to make the long list of the causes of the 1997–98 Asian financial crisis. A year after the financial crisis, Donald Tsang, financial secretary of Hong Kong, citing the failure to establish a strong and robust Asian bond market as one of the reasons of the financial turmoil in East Asia, was deploring ‘how is that we in Asia have never been able to replicate the Eurobond market success in this part of the world’ (Tsang 1998). International financial institutions such as the IMF and the World Bank invariably pointed to the absence of efficient domestic bond markets as one of the major causes of the 1997 financial crisis.

More cautious observers would argue that the absence of domestic and regional bond markets deepened the crisis in terms of output losses and dislocation of the financial sector as it precipitated a massive outflow of foreign capital. As these observers saw it, foreign bank lenders and equity holders were not able to shift into bonds with the build up of the crisis. Had there been efficient domestic bond markets, foreign investors locked in bonds could not have left East Asia as banks and other investors hurriedly did. This argument does not appear to be convincing, however. When the future prospects of East Asian economies were as bleak as they were at the beginning of the crisis, it is hard to believe that foreign investors would have held domestic bonds instead of dumping them on domestic bond markets.

A recent report by the Independent Evaluation Office of the IMF (2003) argues that underdevelopment and closedness of bond and short-term money markets exacerbated the 1997–98 crisis. Because the long-term bond market and the short-term money market were shallow, illiquid and closed to foreign investors, high interest rate policy was not effective in arresting the decline of the exchange rate and stabilizing the market. Foreign entities

did not have many investments through which to invest in local currency denominated assets. Therefore a higher interest policy could not stabilize the local currencies by increasing the cost of speculation against them, given that there was no evidence that speculators were taking large short positions in the local currencies. The crisis-hit countries were facing increased demand for liquidation of foreign currency claims rather than a speculative currency attack. At the height of the crisis, however, it was not clear whether any level of interest rates offered by East Asian borrowers would have been high enough to induce foreign banks to roll over their loans. The absence of local bond markets open to foreign investors was not a serious cause of the crisis.

Finally, the government control of banks created opportunities for collusion between bank owners and managers on the one hand and politicians and large business groups who were the banks' favored borrowers on the other.

During the early period of economic development, Eichengreen (1999) argues, when high-return investments were abundant in East Asia, the industrial policy of using banks as instrumental channels of resource allocation did not pose any serious efficiency problems. Once these opportunities were exhausted, sustaining rapid growth required a more efficient allocation of resources, which in turn, dictated the liberalization and opening of domestic financial markets. The East Asian governments, however, stuck to the old strategy of bank-dominated control. The government directed credit allocation in a way that disregarded market signals. Eventually, non-performing loans began to pile up at banks and brought the solvency of these institutions to risky levels.

Krugman (1994) was the first to point out that East Asia was running into diminishing returns and that rapid growth was only being sustained by a massive infusion of capital, much of which came from abroad in the form of short-term credit. Supporting this line of argument, Eichengreen (1999) also claims that the East Asian governments decided to liberalize their capital accounts to facilitate borrowing from abroad, not to improve the efficiency of their economies. Unfortunately, as he argues, they did it backward by deregulating short-term borrowing first.

Accordingly, a large number of recent studies on the 1997–98 East Asian crisis have identified the structural weakness of East Asia's bank-based financial system as being one of the major causes of the crisis. However, there is no theory or empirical evidence suggesting that bank-based financial systems per se are more vulnerable to financial crises than market-based ones. Without due consideration of the level of financial market development, a simple dichotomy between banks and markets may not help much in assessing financial vulnerability to crises. Although the higher

the level of income, the more likely that mixture will be weighted toward equity, there is a diverse spectrum of financial structures after controlling for income levels. There are no known structural flaws inherent in East Asian financial systems that make them more susceptible to financial crises. The problem was that East Asian policymakers abused their financial systems as a means of industrial policy before the crisis. That abuse, rather than any structural characteristics of East Asian financial systems, may therefore have been responsible for the 1997–98 crisis.

There is also no clear evidence that by the mid-1990s the East Asian policy regime was crumbling under the inefficiencies of crony capitalism, bringing the period of rapid growth to an end. For example, a World Bank (2000) report suggests that the East Asian countries managed to invest their savings productively, so that the return on capital investment remained higher than in most other developing countries, at least until the mid-1990s. Even before capital account transactions were liberalized and increasing volumes of foreign capital began to flow into East Asia, most East Asian countries were already growing at rates much higher than the rest of the world. In fact, it is this success and the potential for future success that had attracted foreign capital into the region. Not only had there been both rapid growth and domestic stability, but the rates of return on capital had been high before the crisis.

Since the mid-1980s, all of the countries in the region had pursued policies of trade and financial liberalization. Given these sound fundamentals and the region's commitment to liberalization, foreign investors saw enormous opportunities for profit and moved vast sums of money into the region. Because of this massive inflow, investment as a proportion of the GDP in all of these countries was significantly higher than it had been in the 1980s. At the same time, savings rates were stable, resulting in large increases in the current account deficits.

Therefore, it may not be correct to argue that East Asian countries were intent on borrowing heavily from abroad despite the losses in efficiency that were slowing economic growth. Certainly, the assertion that these countries began liberalizing their capital accounts to facilitate capital inflows is at variance with the facts.¹³

Prior to the crisis, foreign lenders gained access to much of the information needed for their investment decisions, including information that the balance sheets of banks and corporations in East Asia were not reliable. Foreign market participants either ignored or were not able to process the available information. If the lack of transparency and inadequate disclosure of information made East Asia vulnerable to financial crises, how serious was the problem? Furman and Stiglitz (1998) show that increased transparency in the form of disclosure requirements is not needed, since

markets can and do provide optimal incentives for disclosure. They also argue that under certain circumstances, information disclosure could exacerbate fluctuations in the financial markets and precipitate a financial crisis (you do not cry fire in a full theater). As far as the flow of information was concerned, many small foreign lenders had limited capability or found it too costly to analyse macroeconomic and financial as well as borrower-specific information. These small lenders assumed that if large and reputable banks were lending, then it must be safe for them to lend as well. Consequently, these lenders immediately left the East Asian financial markets when they saw their leader banks making a hurried exit, creating confusion and panic in the financial systems.

The seriousness of crony capitalism, or widespread corruption in East Asia, was also well known among foreign investors. But according to several measures of corruption, the risk of corruption had declined or remained unchanged before the crisis (Furman and Stiglitz 1998). It is also instructive to note that the Nordic countries like Sweden, Norway, and Finland, which did not suffer from the non-transparency problem nearly as much as the East Asian countries, could not fend off a crisis in the early 1990s (Rodrik 1999).

Foreign investors knew quite well that East Asian firms, both small and large, relied almost exclusively on banks to finance their investments and working capital requirements. In such a bank-based financial system, the debt-equity ratios of these firms are expected to be much higher than those of the firms operating in a well-developed capital market-based system. However, the dichotomy between banks and markets does not closely correspond to the dichotomy between debt and equity. According to Demirgüç-Kunt and Levine (1999), the mean debt-to-equity ratio for 30 countries is only loosely correlated with the financial structure index. Apparently before the crisis, foreign lenders did not believe that the weaknesses in the balance sheets would pose any serious default and liquidity risks or that the weaknesses were serious enough to discourage their lending to those highly leveraged firms. Once the crisis erupted, however, the lending problem was suddenly brought up as one of the major vulnerabilities of East Asian economies.

5. CONCLUDING REMARKS

That the structural frailties of financial systems increased the susceptibility of the East Asian countries to financial crisis is not disputed. However, it is not altogether clear whether those frailties directly caused the crisis. Moreover, the crisis does not provide any evidence suggesting that the

Anglo-American market-based system works better than the bank-based system. The East Asian financial frailties were by no means inherent in the intermediary-based financial system; they were the consequences of its general lack of transparency and the repressive financial policies which resulted in the inefficient allocation of resources and collusion between large businesses on the one hand and politicians and government policy-makers on the other. The moral hazard syndrome stemming from the implicit government guarantee that banks would never fail further compounded the balance sheet problems at the financial institutions.

Since the crisis, East Asian countries have introduced and enforced new rules for accounting and auditing that conform to international standards. Along with these institutional reforms, most East Asian countries have made impressive progress in deregulating and opening financial markets. As a result, financial institutions, markets, and government policies have been evolving to a competitive and market-oriented financial system. These developments are expected to overcome the inflexibility of the existing bank-based financial systems. However, the market-led strategy does not mean that East Asian governments have no important role to play and must blindly move toward becoming minimalist states. The challenge facing East Asia is, rather, to develop strong governments able both to resist political pressures from domestic financial establishments and to push forward market-led financial development along with necessary institutional reforms (Rajan and Zingales 2002). Within such a framework, the East Asian countries may have a better chance of converging with the advanced financial systems in the future.

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NOTES

1. Based on the data collected by Demirgüç-Kunt and Levine (2001), the size and activity of financial market structure of East Asian countries can be calculated, but the efficiency cannot be measured because the data are not available. In terms of the size and activity, all East Asian countries can be classified as bank-based in the 1970s and 1980s.
2. Specifically, La Porta et al. (1999) classify countries into those with civil and common law origin. They find that common law origin countries are characterized by higher efficiency in contract enforcement. Common law countries are also documented to offer stronger legal protection of outside investors' rights, for both shareholders and creditors. The legal decision process is also more predictable in common law systems. From these

observations, they assert that common law systems are inherently superior to civil code legal systems in encouraging financial and economic development. By contrast, Chan-Lee and Ahn (2001) suggest that better enforcement rather than legal origins are critical.

3. See Allen and Gale (1999), Beck and Levine (2001), and Boot and Thakor (1997) for more references regarding the relative merits of bank-based and market-based financial systems in fostering economic performance. In particular, Allen and Gale (1999) argue that banks and stock markets are fundamentally different in the way that they process information.
4. Robert Lucas (1988, p. 6) asserts that economists 'badly over-stress' the role of financial factors in economic growth, while development economists frequently express their skepticism about the role of the financial system by ignoring it (Levine 1997).
5. Levine (1997) discusses how specific market frictions motivate the emergence of financial instruments, markets, and institutions and how these financial arrangements provide various financial functions that affect saving and allocations decisions in ways that influence economic growth.
6. See Choe and Moosa (1999) for the case of Korea and Aziz and Duenwald (2002) for the case of China. Both country studies find that financial development in general leads economic growth and that financial intermediaries are more important than capital markets in this relationship.
7. Their empirical results were in sharp contrast with other cross-country studies in that there is a strong negative correlation between financial intermediation and growth during the 1970s and 1980s in Latin America. They explained this puzzling evidence by pointing out that financial markets in these sample countries were exposed to extreme conditions. After years of financial repression in Latin America, the 1970s witnessed substantial efforts to liberalize domestic capital markets in several of these countries. Many of these experiments collapsed in the early 1980s.
8. Since there are no such accurate and comparable indicators available for a large cross-country sample and over a longer time-span, most empirical studies rely on a proxy variable such as private capital. Although this proxy measures only part of the mobilized savings, it measures the part that is channeled to private firms. Although it is not a direct measure of efficiency, it captures part of it, since it excludes credit to the private sector by the central bank, assuming that the latter is less efficient than private intermediaries in allocating resources.
9. It is known that the system GMM estimator of Arellano and Bover (1995), which complements the difference specification with the original regression in levels, offers improvements in both efficiency and consistency over the difference GMM estimator. In this chapter, however, we do not report the results from the system GMM estimator because we encountered complex numbers in most runs. This may be because our sample size is limited and we use more instruments than cross-sections (seven countries for East Asia and 12 countries for Latin America). The problem is less serious with the difference GMM estimator. Also, we do not report the results from cross-section analysis due to lack of cross-sectional units.
10. See Arellano and Bond (1991) and Blundell and Bond (1998) for more details.
11. In comparison, Drysdale and Huang (1997) find that TFP growth and factor accumulation are equally important to output growth for Hong Kong, Japan, Taiwan, Korea, Indonesia and Thailand, but less important in Singapore and Malaysia. Liang (2002) also finds that TFP was the major sources of economic growth in Taiwan during 1982–93.
12. Chang and Luh (2000) also find that Hong Kong and Singapore (the most developed financial centers in East Asia) are good at moving towards the frontier.
13. Chan-Lee and Ahn (2001) stressed that Asian countries did not draw the crucial policy lessons from the earlier, very costly banking crises in Latin America and elsewhere and the regulatory authorities were either complacent or ignorant of how capital account liberalization had undermined financial stability. They pointed to opaque and inadequate prudential regulations as banks' excessive risk-taking behavior before the crisis. This assessment is partly true. For instance, when Korea joined the OECD in 1996,

the Korean government maintained many controls on capital account transactions. However, the absence of regulatory vigilance does not mean the Korean government was strongly intent on attracting international capital through capital market opening. Putting in place an adequate set of prudential and regulatory standards and institutions to prevent moral hazard and excessive risk-taking in the domestic banking system is a lot easier said than done (Rodrik 1998).

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APPENDIX

1. Data Description*Table A1. Data definitions*

Variables	Definition	Sources
Initial income	Log of real per capita GDP in the first year of the respective time period	WDI
Inflation	Log of one plus the inflation rate	IFS
Government	Log of real general government consumption as share of real GDP	WDI
Openness	Log of the sum of real exports and imports of goods and services as share of real GDP	WDI
Schooling	Log of one plus average years of secondary schooling in the total population over 15	Barro and Lee (1996)
Private credit	Log of credit by deposit money banks and other financial institutions to the private sector divided by GDP	Demirgüç-Kunt and Levine (2001)

Sources:

1. World Development Indicators 2002 CD-ROM
2. CD-ROM data provided by Demirgüç-Kunt and Levine (2001)
3. Barro and Lee (1996)

2. Country List

The data used in this chapter covers the period of 1960–97, although the sample periods are different for each country. Sample periods for each country are listed below. Number of observations averaged over five-year period is in parentheses.

Table A2. Country list (Number of observations in parentheses)

East Asia		Latin America	
Indonesia	1970–97 (6)	Argentina	1961–97 (8)
Japan	1961–97 (8)	Barbados	1967–97 (7)
Korea	1971–97 (6)	Bolivia	1961–97 (8)
Malaysia	1961–97 (8)	Chile	1961–97 (8)
Philippines	1961–97 (8)	Colombia	1961–96 (8)
Singapore	1965–97 (7)	Costa Rica	1961–97 (8)
Thailand	1966–97 (7)	Ecuador	1961–97 (8)
		Guatemala	1961–97 (8)
		Mexico	1961–97 (8)
		Peru	1961–97 (8)
		Uruguay	1961–97 (8)
		Venezuela	1961–97 (8)
Total observations	50	Total observations	95

3. Financial liberalization and capital market integration in East Asia

Barry Eichengreen and Yung Chul Park

1. INTRODUCTION

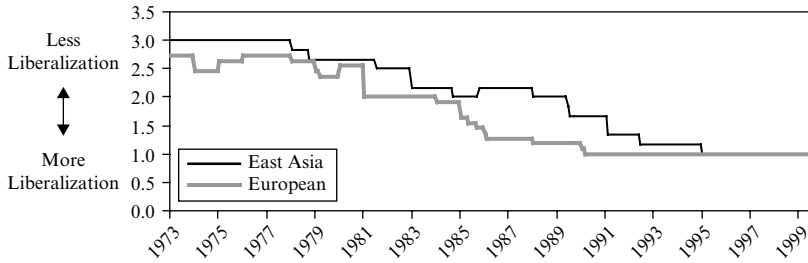
Since the early 1990s East Asian countries have been relaxing their restrictions on capital account transactions and their barriers to the entry of foreign institutions. They have been removing controls and ceilings on interest rates and eliminating other restrictions on the operation of domestic financial markets. By the mid-1990s, it is fair to say, this process of financial liberalization had gathered considerable momentum. Following the crisis of 1997–98, the speed and scope of these policy adjustments, if anything, accelerated still further (with the notable exception of Malaysia).

How far has East Asian financial liberalization proceeded as a result? Kaminsky and Schmukler (2002) construct a monthly index designed to capture three essential aspects of the financial liberalization process: the decontrol of interest rates, the removal of restrictions on capital account transactions, and opening the financial services industry to foreign competition. Their index takes on values from 1 to 3, where 1 means fully liberalized, 2 means partially liberalized, and 3 means repressed. The authors track the evolution of the regulatory regime from 1973 through 1999.¹ As shown in Figure 3.1, the Kaminsky-Schmukler index suggests that by the mid-1990s the seven East Asian economies had achieved, on average, roughly the same level of domestic financial liberalization as the nine European countries in the sample.²

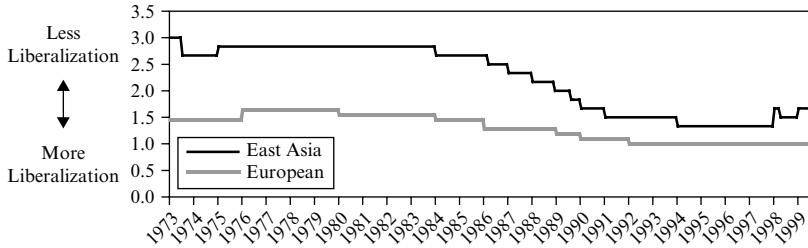
This chapter analyses this experience with financial liberalization with a view to assessing the extent to which these policies have encouraged financial integration in the East Asia region. In Section 2 it considers three forms of evidence: the pattern of intraregional capital flows, the co-movement across countries of stock returns and interest rates, and the penetration of East Asian financial markets by foreign financial institutions.

All three sources of evidence suggest that the East Asian countries have in fact developed stronger financial ties with advanced countries than with one another as a result of their policies of financial liberalization

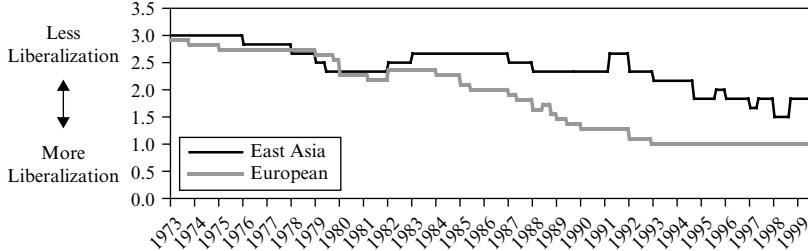
Domestic financial sector



Stock market



Capital account



Notes:

- 1 = full liberalization
- 2 = partial liberalization
- 3 = High restrictions

European countries include: Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Spain, Sweden. East Asian emerging market economies include: Hong Kong, Indonesia, Korea, Malaysia, Philippines, Taiwan, and Thailand.

Source: Kaminsky and Schmukler (2002)

Figure 3.1 Indices of financial liberalization by sector

and opening. Regional financial links appear to be significantly weaker in the East Asian countries than in the comparison group of European countries. Section 3 therefore turns to the question of why. It develops two explanations for the closer integration of East Asian countries into global than regional financial markets: differential opportunities for risk sharing, and the underdevelopment of market-supporting infrastructure in the region.

Finally, the chapter focuses on the contrast with Europe as a way of attempting to distinguish between these competing explanations for the slow pace of financial integration in East Asia. The comparison suggests that the under-development of market-supporting infrastructure may have been the more important obstacle to regional financial integration in East Asia. This finding has obvious policy implications, which we draw out in Section 4.

2. EVIDENCE ON REGIONAL AND GLOBAL FINANCIAL INTEGRATION

Does the evidence suggest that, with financial liberalization, the East Asian economies have succeeded in developing stronger financial links with one another? Or is the main consequence of financial liberalization to more closely integrate East Asian economies into global financial markets, heightening their dependence on financial institutions headquartered in the international financial centers (London and New York)? In this section we consider three sources of evidence that address to this question: the pattern of capital flows, the co-movement of equity market returns and interest rates, and the penetration of the East Asia region by foreign financial institutions.

A. The Pattern of Capital Flows

Direct evidence on the pattern of capital flows is scarce. However several bits of indirect evidence suggest a substantial increase in inter-regional capital flows since the early 1990s (leaving aside, of course, the crisis period 1997–98).

An obvious piece of evidence is the massive increase in capital inflows into East Asian emerging market economies during the lead-up to the 1997–98 crisis. As shown in Table 3.1, private capital inflows excluding loans by bank and non-bank intermediaries into four East Asian crisis countries plus the Philippines jumped from US\$40.3 billion in 1998–90 to US\$265 billion in 1994–96 (before plummeting to a net outflow of US\$30.4

billion in the three years beginning with the crisis). Some of this increase no doubt came from Japan. However, in view of the fact that Japan's investment in East Asian capital market instruments is relatively small, it is surely the case that a large share of the increase was accounted for by European and North American banks and financial investors.

Capital inflows in the form of loans by commercial banks and non-bank financial intermediaries more than quadrupled between 1994–96 and the preceding three-year period. Largely because of the prevalence of bank-dominated financial systems in East Asia, the bulk of intra-regional financial transactions took the form of lending and borrowing through banks and other financial intermediaries. Prior to the crisis, much of the increase in bank lending came from Japan; hence, the subsequent retreat of Japanese banks from other East Asian countries has been largely responsible for the reversal in loan flows (see Table 3.2).

Since the early 1990s, foreign direct investment (FDI) has been a growing component of capital inflows toward Asia, with much of the increase directed toward China. Furthermore, the total amounts of FDI destined for East Asian countries (including China) from Japan, South Korea, Singapore and Taiwan have declined since the crisis (see Table 3.3).³ These developments imply that the bulk of inward FDI in ASEAN, China, Korea, Singapore and Taiwan must have come from outside the region. Another piece of evidence for East Asia's integration with global financial markets is the increase in foreign reserve holdings of ASEAN + 3. Between 1998 and 2001, the nine East Asian economies (including Hong Kong and Taipei, China) ran US\$400 billion of current account surpluses. Much of this increase was added to foreign reserves, which swelled to US\$731 billion in 2001 from less than US\$482 billion in 1997. Although reliable data on the composition of these reserves are not available, there is indirect evidence suggesting that the bulk of them are in U.S. government and government agency bonds. Purchases of U.S. bonds by China jumped to \$91 billion in 2000 from \$18 billion in 1994, by Korea to \$38 billion from \$6 billion, and by Hong Kong to \$58 billion from \$15 billion. Together, the nine East Asian countries accounted for 30 percent of total U.S. bonds held by foreign investors in 2000. China, Korea and Thailand placed more than 97 percent of their financial investment in the U.S. in U.S. treasury and government agency bonds. In 2000, similar figures for Indonesia, the Philippines and Hong Kong were 90, 80 and 73 percent respectively.⁴

In contrast, East Asia's demand for Japanese bonds and equities has not been particularly strong (perhaps understandably, given Japanese economic problems). In 2001, the amount of non-Japanese East Asian portfolio investment in Japanese equities stood at 2.3 trillion yen, which was less

Table 3.1 Five East Asian economies^(a): external financing (billions of dollars)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Current account balance	-6	-7.9	-8.9	-15.5	-17.6	-18.4	-8.7	-5.3	1.0	9.3
External financing, net	3.4	10.6	11.3	18.1	23.4	21.2	12.8	10.2	-3.9	-6.5
Private flows, net	1.7	7.3	7.7	11.8	14.5	14.8	8.7	6.4	-5.5	-7.1
Equity investment, net	0.2	0.4	0.5	1.1	0.6	0.9	1.0	1.0	2.2	1.2
Direct investment, net										
Portfolio investment, net										
Private creditors, net	1.5	6.9	7.2	10.7	13.8	13.9	7.7	5.5	-9.3	-6.6
Commercial banks, net	1.5	6.1	5.5	9.9	11.8	8.3	6.1	1.9	-8.9	-6.8
Non-banks, net	0.1	0.8	1.7	0.8	2.0	5.5	1.6	3.6	-0.4	0.2
Official flows, net	1.7	3.3	3.7	6.3	9.0	6.4	4.1	3.7	1.6	0.6
International financial institutions	1.4	1.3	1.9	3.2	2.1	4.0	1.7	1.3	0.7	0.9
Bilateral creditors	0.3	2.0	1.8	3.0	6.8	2.4	2.3	2.4	-0.1	0.7
Resident lending/other, net ^(b)	-0.7	0.5	0.8	-3.3	-8.4	-1.6	-0.5	-4.3	2.4	0.9
Reserves (- = increase)	-0.6	-3.2	-3.3	0.6	2.6	-1.2	-3.6	-0.6	0.4	-3.7

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1997	1998	1999	2000e	2001f	2002f
	12.1	-0.5	-16.8	-25.4	-16.1	-13.6	-22.3	-39.3	-54.6	-27.3	-27.3	69.9	62.7	47.1	32	28.3
	1.8	17.2	26.9	29.8	33.9	55.3	54.8	98.3	119.8	42.2	42.2	-13.8	2.7	13.6	-2.4	7.6
	3	15.2	22.1	27.7	25.2	49.4	48.4	94.8	121.7	6.6	6.6	-38.3	1.3	10.8	2.7	9
	4.4	7.6	5.5	4.1	11.3	24.6	15	16.1	20	6.2	6.2	16.6	37.1	25.5	18.9	19.6
			2.7	4.5	4.5	4.2	4.8	4.1	4.8	6.8	6.8	13.3	16.6	14.1	8.6	7.8
			0.7	-0.3	6.9	20.4	10.2	12	15.2	-0.7	-0.7	3.3	20.5	11.4	10.2	11.8
	-1.4	7.6	16.6	23.6	13.9	24.7	33.4	78.7	101.7	0.5	0.5	-54.9	-35.8	-14.6	-16.2	-10.5
	-1.5	5.7	18.4	19.4	7.2	13.7	30	64.7	69.4	-16.9	-16.9	-48.4	-32.2	-15.5	-9.1	-7
	0.1	1.9	-1.8	4.2	6.7	11	3.4	14	32.3	17.4	17.4	-6.5	-3.6	0.9	-7.1	-3.6
	-1.2	2	4.8	2.1	8.7	5.9	6.4	3.4	-1.9	35.6	35.6	24.5	1.3	2.8	-5.1	-1.5
	-0.8	0.7	-0.7	0.6	2.2	1.1	-0.6	-0.4	-2.1	22.5	22.5	19.7	-5.2	1.9	-8.7	-4
	-0.4	1.4	5.5	1.5	6.4	4.9	6.9	3.8	0.2	13	13	4.9	6.6	0.9	3.6	2.5
	-4	-7.7	-3.7	5.3	1.2	-21.8	-27.9	-44.8	-46.8	-47	-47	-16.7	-28.6	-31.7	-18.2	-19.8
	-9.9	-9	-6.4	-9.6	-19	-19.9	-4.6	-14.1	-18.4	32.1	32.1	-39.4	-36.8	-28.9	-11.4	-16

Notes:

e= estimate

f= forecast

Sources:

Institute for International Finance (IIF) Data

(a) Indonesia, Malaysia, Philippines, South Korea and Thailand.

(b) Including net lending, monetary gold, and errors and omissions.

Table 3.2 *Japan's international bank lending (unit: million dollars)*

	1995.6		1996.6		1999.12		2001.6	
	Amount	Share	Amount	Share	Amount	Share	Amount	Share
Developed countries	30 308	0.182	26 526	0.159	528 335	0.667	728 725	0.752
Asia	107 976	0.649	115 471	0.693	65 050	0.082	51 934	0.054
Indonesia	20 512	0.123	21 622	0.130	12 491	0.016	9 626	0.010
Korea	20 874	0.125	22 512	0.135	12 592	0.016	10 110	0.010
Malaysia	6 091	0.037	8 131	0.049	6 029	0.008	5 843	0.006
Philippines	1 147	0.007	1 402	0.008	2 921	0.004	3 066	0.003
Thailand	32 628	0.196	37 552	0.225	13 075	0.016	7 979	0.008
Sub-total	81 252	0.488	91 219	0.547	47 108	0.059	36 624	0.038
Total	166 368		166 701		792 676		969 425	

Source: Bank for International Settlement, *BIS Consolidated International Banking Statistics*, various issues

Table 3.3 Overseas direct investment of East Asian countries by region
(numbers in brackets are percentage share) (unit: US million dollars)

	1997	1998	1999	2000	2001
Japan					
Asia	12 181 (22.57)	6 528 (16.02)	7 162 (10.74)	5 931 (12.21)	2 762 (20.16)
North America	21 389 (39.63)	10 943 (26.86)	24 770 (37.14)	12 271 (25.26)	3 223 (23.53)
Latin America	6 336 (11.74)	6 463 (15.86)	7 437 (11.15)	5 232 (10.77)	2 245 (16.39)
Europe	11 204 (20.76)	14 010 (34.38)	25 804 (38.69)	24 406 (50.24)	4 966 (36.25)
Total	51 110	37 944	65 173	47 840	13 196
Korea					
Asia	1 575 (47.89)	1 531 (41.67)	857 (38.33)	849 (23.03)	-317 (-16.83)
Latin America	251 (7.63)	224 (6.10)	183 (8.18)	1 411 (38.28)	76 (4.04)
Europe	357 (10.85)	1 033 (28.12)	204 (9.12)	139 (3.77)	1 741 (92.46)
Total	2 183	2 788	1 244	2 399	1 505
Taiwan					
Asia	819 (28.30)	581 (17.63)	836 (25.57)	851 (16.76)	815 (18.56)
America	1 916 (66.21)	2 637 (80.01)	2 268 (69.38)	3 946 (77.72)	3 461 (78.82)
Europe	59 (2.04)	34 (1.03)	61 (1.87)	62 (1.22)	46 (1.05)
Total	2 794	2 252	3 165	4 858	4 322
Singapore					
Asia	33 987 (44.83)	32 949 (43.57)	33 421 (39.68)	37 217 (40.48)	
Total	75 807	75 622	84 219	91 949	

than 5 percent of total foreign holdings of Japanese stocks (see Table 3.4). In the same year, East Asia's holdings of Japanese bonds amounted to 5.8 trillion yen, which was 18 percent of total foreign holdings of the Japanese paper. Excluding Singapore's holdings, the share of other East Asian countries was only about 10 percent in 2001.

Table 3.4 Foreign holdings of Japanese equities and bonds by region (unit: trillion yen)

	1996	1997	1998	1999	2000	2001
Equity						
United States	12.3(36.6%)	11.75(32.36%)	12.79(36.37%)	30.83(36.2%)	20.13(31.84%)	14.07(28.39%)
Europe	19.6(55.6%)	20.54(56.55%)	19(54.02%)	47.24(55.46%)	36.29(57.41%)	28.85(58.21%)
Asia	1.9(5.19%)	1.43(3.95%)	0.98(2.79%)	1.79(2.1%)	2.75(4.36%)	2.3(4.64%)
Latin America	1.15(3.14%)	1.07(2.97%)	0.87(2.5%)	1.39(1.63%)	1.28(2.03%)	1.89(3.82%)
Bond						
United States	2.66(12.04%)	4.08(12.8%)	4.3(15.5%)	5.54(20.04%)	4.32(13.12%)	4.67(13.92%)
Europe	15.58(70.48%)	20.22(63.56%)	17.83(64.17%)	15.12(54.64%)	19.74(59.87%)	19.45(57.98%)
Asia	1.98(8.99%)	5.17(16.26%)	2.49(8.95%)	4.24(15.35%)	5.94(18.03%)	5.8(17.4%)
Latin America	0.92(4.18%)	1.03(3.26%)	2.13(7.66%)	1.39(5.02%)	1.72(5.22%)	1.82(5.43%)

Source: Bank of Japan, *Quarterly Bulletin*, various issues

It is reasonable to assume that East Asian governments, corporations and households also invest in bonds issued by East Asian borrowers. McCauley et al. (2002) show that the aggregate value of bonds issued by East Asian borrowers over the three-year period from April 1999 to August 2002 amounted to \$41.2 billion; 46 percent of these primary issues were then bought up by East Asian investors. More than 40 percent of these bonds were issued by East Asian governments and government agencies.

The authors themselves present the East Asian share of the primary market as evidence of a relatively high degree of integration among East Asian capital markets (Crockett (2002), makes a similar argument). But, in gathering these data, they acknowledge that 'we solely rely on second hand reports from underwriters that are at best approximation' (p. 84). The problem with these data is that they cannot identify the final purchasers of the bonds. Specifically, it is possible that some of these bonds were purchased by East Asian financial institutions and by the subsidiaries of foreign investment banks and brokerage houses located in Hong Kong, Singapore and Tokyo for their investors from America and Europe. Consistent with this possibility, Japan, which is the largest exporter of capital of the world, has acquired more Latin American than Asian bonds in recent years.⁵

Crockett (2002) argues that East Asia has been importing safe assets while exporting risky ones. American and European investors have been acquiring foreign direct investments, portfolio equity, bad loans and bonds from East Asia, all of which are risky; East Asian investors, on the other hand, have been importing relatively safe securities such as U.S. Treasury bonds, U.S. agency paper and interbank deposits. But if East Asia has been importing safe assets and there has been a limited variety and quantity of safe bonds issued by East Asian borrowers, then it is difficult to accept the data provided by McCauley et al. or Crockett's argument that East Asian accounts take almost half of East Asian issues which are relatively higher risk than U.S. bonds.

East Asian investors have been more risk-averse than their U.S. and European counterparts partly because they have not developed more sophisticated risk management techniques. Many East Asian financial institutions became vulnerable to financial crisis, and some went bankrupt, as a consequence of poor risk management, which led specifically to large investments in risky bonds issued by other emerging market economies' borrowers. The 1997 crisis thus made East Asian investors more conservative in managing their asset portfolios.

This risk aversion can be gleaned from the increase in East Asia's demand for U.S. government and government agency bonds in recent years and the

reduced share of Asian securities in Japanese investment portfolios. While the percentage of East Asian equities and bonds in the Japanese aggregate portfolio declined substantially, the share of capital market instruments issued by U.S. and European entities rose to 90 percent of total foreign assets held by Japan in 2000 and 2001.

In sum, indirect evidence on the direction of capital flows is consistent with the hypothesis that East Asian financial markets have grown more integrated with global financial markets rather than with one another.

B. Econometric Analysis

A second source of evidence comes from the co-movement of interest rates and stock returns. The question at hand is whether asset prices in East Asia react more sharply to shocks originating in global or regional financial markets. To essay an answer, this section analyses the behavior of asset prices in Asia, and compares the findings with analogous results for Europe.

For this exercise, the error variances of the interest rate and stock returns of each country are decomposed into a common-world component, a common-regional component, and a country-specific component. The decomposition is carried out by estimating a trivariate VAR model, details of which are described further in the Appendix. For stock prices, we use weekly indices for seven East Asian and 11 European countries plus Japan and the U.S. from Datastream for the period from 1/3/90 to 8/21/02 for East Asia and 1/3/85 to 8/21/02 for Europe. Weekly data are used because daily price data suffer from market frictions such as the bid-ask bounce and non-synchronous trading hours between the East Asian countries and the U.S.⁶ For interest rates, we use daily instead of weekly data (also from Datastream).⁷ The sample period is 1/1/94 to 8/31/02 for East Asia and 1/3/85 to 8/21/02 for Europe.⁸ In order to examine whether there has been any change in the relative importance of the regional and global factors, the sample period is divided into two sub-periods before and after the 1997–98 crisis in East Asia and before and after the Maastricht Treaty in Europe.

Table 3.5 decomposes the error variance of the stock market return, expressed in U.S. dollars, of each East Asian country for one through four-week-ahead forecast intervals. The first column is the forecast period. The second through fourth columns are the shares of the forecast error variance explained by innovations or shocks in the market returns of the US (the global factor), Japan (the regional factor), and the East Asian country itself (the local factor) respectively before the 1997–98 crisis (1/3/90–4/30/97). The fifth through seventh columns present the same results for the period following the crisis (1/6/99–8/21/02).

Table 3.5 Vector autoregression decomposition of East Asian stock prices (weekly US dollar index)

Forecast period	1/3/90 ~ 4/30/97			1/6/99 ~ 8/21/02		
	Global shock	Regional shock	Local shock	Global shock	Regional shock	Local shock
Hong Kong						
3	11.74604	0.640663	87.61330	30.90170	7.222633	61.87567
4	11.74676	0.647848	87.60540	30.89759	7.236009	61.86640
Indonesia						
3	0.852544	1.201549	97.94591	0.188271	1.331859	98.47987
4	0.869937	1.309453	97.82061	0.189255	1.336095	98.47465
Korea						
3	2.043870	1.966944	95.98919	18.35919	13.33941	68.30140
4	2.045702	1.969084	95.98521	18.62073	13.29491	68.08436
Malaysia						
3	10.34695	1.991289	87.66176	6.577603	1.134615	92.28778
4	10.37380	2.013665	87.61254	6.578612	1.134506	92.28688
Philippines						
3	6.906731	0.961260	92.13201	11.71351	0.493182	87.79331
4	6.939220	0.960077	92.10070	11.75481	0.492699	87.75249
Singapore						
3	15.74236	8.755126	75.50251	20.67759	3.155843	76.16656
4	15.75407	8.771754	75.47417	20.67528	3.163149	76.16157
Thailand						
3	7.107116	2.721726	90.17116	10.79652	4.871466	84.33202
4	7.106599	2.728698	90.16470	10.81709	4.872960	84.30995
Average across countries in period 4						
	7.833727	2.628654	89.53762	14.21905	4.504333	81.27661

In all seven markets, the forecast error variances of the market index returns are largely explained by local markets' own innovations. This is not surprising, given the prevalence of capital account restrictions and other financial regulation at the beginning of the period. However, the dominance of the local market innovation was lower in the post-crisis period in every East Asian country except Malaysia (not surprisingly, since that country retained capital controls following the crisis). In both periods, shocks originating in the U.S. played a more significant role than shocks originating in Japan over the four-week horizon. To the extent

that international influences are evident, in other words, the global factor appears to have been more important than the regional factor.

Following the 1997–98 crisis, however, the relative importance of the three factors changed considerably. As noted above, the proportion of the error variance explained by the local factor fell, giving rise to the gains of both the global and regional factors. In all East Asian countries except Malaysia, the relative share of the U.S. factor rose.⁹ These results support our hypothesis that further progress in the direction of financial market opening led to growing integration of East Asian capital markets into global financial markets.

The regional factor might be expected to be more important than the U.S. factor in influencing stock prices in Europe, given the latter's long process of economic and monetary integration. In order to capture the effect of monetary integration, we examine the relative importance of the global and regional factors in the sub periods before (1/3/85–12/28/90) and after (1/3/91–8/21/02) the Maastricht Treaty. The period when the Maastricht Treaty was negotiated coincided with the removal of most of Europe's residual capital controls. (Indeed, it can be argued that the Treaty itself, and the forced march to monetary union, were responses to removal of controls mandated by the Single Market program.) Thus, the comparison of the pre- and post-Maastricht periods provides a test of the effects of financial opening.

In all European countries considered, the share of the local factor is much smaller than in East Asia (Table 3.6). This supports our hypothesis that Europe has gone further in integrating its stock markets regionally as well as globally. There is also evidence of the effects of monetary integration in the deepening of regional stock market integration since Maastricht. Except for Ireland, Finland, Sweden, and the U.K., regional shocks measured by the German stock return index account for relatively more of error variances of the stock returns of the sample European countries in the post-Maastricht period than before. (The U.K. and Ireland may be different because of long-standing commercial ties with the U.S.; Finland and Sweden may be different because of the high-technology intensiveness of their industries.) Before Maastricht, the regional factor was more important than the global factor in five of 11 European countries; after the treaty it was more important in seven of those countries.

Turning to the interest rate decomposition, we use a vector error correction model appropriate for decomposing the error variances of non-stationary time series data.¹⁰ The results for East Asian interest rates are in Table 3.7. In contrast to stock markets, the influence of foreign shocks on interest rates is very low in all East Asian countries. Except in Hong Kong and Singapore (the two Asian financial centers), the local factor accounts for

Table 3.6 *Vector autoregression decomposition of EU stock prices*
(weekly US dollar index)

Forecast period	1/3/85 ~ 12/28/90			1/3/91 ~ 8/21/02		
	Global shock	Regional shock	Local shock	Global shock	Regional shock	Local shock
Austria						
3	1.575946	17.00041	81.42364	7.651368	30.21123	62.13740
4	1.645072	17.11992	81.23501	7.662284	30.20744	62.13028
Belgium						
3	16.57455	10.43623	72.98922	17.00623	31.23234	51.76143
4	16.56899	10.44033	72.99068	17.01284	31.24285	51.74431
Denmark						
3	7.313079	12.97107	79.71585	11.15272	28.32830	60.51899
4	7.319651	12.98948	79.69087	11.15388	28.33072	60.51540
Finland						
3	2.381977	7.700768	89.91725	21.75110	9.277214	68.97169
4	2.391883	7.712449	89.89567	21.75473	9.276826	68.96845
France						
3	16.87465	19.75690	63.36845	29.99420	35.57160	34.43419
4	16.88095	19.75285	63.36620	29.99783	35.57052	34.43165
Ireland						
3	25.15427	9.067712	65.77802	21.34174	14.98786	63.67040
4	25.19034	9.065372	65.74429	21.37273	14.99167	63.63560
Italy						
3	4.255610	12.38443	83.35996	15.68038	22.54473	61.77489
4	4.277745	12.48025	83.24200	15.68088	22.54582	61.77329
Netherlands						
3	33.56747	25.95629	40.47623	32.38757	33.63495	33.97749
4	33.56900	25.95838	40.47262	32.41309	33.61782	33.96909
Spain						
3	23.75038	13.20722	63.04239	21.81389	28.55891	49.62720
4	23.73997	13.21231	63.04772	21.81436	28.55825	49.62739
Sweden						
3	19.17795	11.18382	69.63824	33.50238	19.03231	47.46531
4	19.15175	11.17781	69.67043	33.50690	19.03486	47.45825
UK						
3	23.91827	9.738823	66.34291	33.50411	17.22412	49.27177
4	23.91398	9.747977	66.33804	33.51150	17.23283	49.25567
Average across countries in period 4						
	15.87721	13.60519	70.51759	22.35282	24.60087	53.04631

Table 3.7 Vector autoregression decomposition of the East Asian interest rates

Forecast period	1/1/94 ~ 4/31/97			1/1/99 ~ 8/31/02		
	Global shock	Regional shock	Country shock	Global shock	Regional shock	Country shock
Hong Kong						
15	21.050	0.423	78.527	24.827	0.1253	75.046
20	24.761	0.367	74.872	26.123	0.2224	73.653
Indonesia						
15	8.366	0.076	91.558	1.098	2.184	96.717
20	11.450	0.119	88.431	1.039	3.489	95.47
Korea						
15	0.124	0.347	99.529	0.749	0.279	98.971
20	0.185	0.663	99.152	0.749	0.279	98.971
Malaysia						
15	0.629	0.076	99.296	0.009	1.886	98.103
20	0.875	0.082	99.043	0.015	3.425	96.559
Philippines						
15	0.091	0.528	99.381	0.264	4.520	95.216
20	0.071	0.585	99.344	0.218	4.765	95.015
Singapore						
15	2.060	0.657	97.282	7.230	0.643	92.125
20	2.149	0.698	97.154	8.616	1.174	90.209
Thailand						
15	0.491	0.031	99.478	0.063	1.922	98.013
20	0.474	0.043	99.483	0.077	3.459	96.468
Average across countries at the end of the fourth week (20th day)						
	5.709	0.365	93.925	5.262	2.402	92.335

at least 90 percent of forecast error variance in both sub-periods at the end of the sixth week. Except for Hong Kong, Singapore, and the Philippines (where the change is negligible), the influence of the U.S. factor appears to have declined after the crisis, whereas the share of the regional factor rose.

The Japanese factor has become more important source of external shocks to ASEAN interest rates since the 1997 crisis. This is not surprising, since interest rates in this grouping together since the 1997–98 crisis. East Asian bond markets are fragmented, narrow in terms of maturity and variety and more closed to foreign investors than the region's equity

markets. Short-term interest rates, which are intermediate targets of monetary policy, are frequently adjusted for macroeconomic management. Observed co-movements may be related to the fact that these countries have been major recipients of Japanese bank loans and FDI, but the share increase in the regional factor is not large enough to have any implications for ASEAN-wide financial integration.

For Europe, our results in Table 3.8 show that the local factor, although not as important as in East Asia, also dominates local interest rates. As expected, the global factor is less important than the regional one in Europe.¹¹

Variance decompositions are sometimes sensitive to the ordering of the variables.¹² Here, however, when the ordering of variables is altered so that the Japanese market is placed to play a more important role, the importance of the U.S market does not decline appreciably in East Asia.¹³ Nor does the new ordering significantly alter the results of the decompositions of interest rates for the European countries before the Maastricht Treaty. After Maastricht, there is a slight increase in the relative importance of global and regional factors.¹⁴

To summarize, these variance decompositions suggest that regional factors dominate the movement of asset prices in Europe, whereas global factors are more important in East Asia. It is as if Asian countries have become more tightly integrated with global rather than regional capital markets as a result of the liberalization of their capital account and decontrol of domestic interest rates, while the opposite has been true in Europe. We will return to potential explanations for this contrast below.

C. Penetration of Asian Markets by Extra-Regional Financial Institutions

Due largely to restrictions on entry, foreign bank penetration had traditionally been low in East Asia. However, this has changed since the 1997–98 crisis. On average, foreign bank control in Korea, Malaysia and Thailand shot up to 6 percent in 1999 from 1.6 percent five years earlier (see IMF 2000, Table 4.1).

A similar pattern is evident in the lending behavior of BIS-reporting foreign banks. Between 1991 and 2001, foreign banks' credit as a share of total bank credit more than doubled in Malaysia: it rose to more than 40 percent after the 1997 crisis from an average of less than 20 percent over the 1990–96 period (see BIS *Quarterly Review*, various issues). In the Philippines the share jumped to 35.5 percent in 2001 after a sustained decline during the first half of the 1990s. In Thailand the increase in foreign banks share has been more gradual but still pronounced. Only in Korea has it declined.

Table 3.8 *Vector autoregression decomposition of the European interest rates before and after the Maastricht Treaty*

Forecast period	1/1/85 ~ 12/31/89			1/1/94 ~ 8/30/02		
	Global shock	Regional shock	Country shock	Global shock	Regional shock	Country shock
Austria						
15	0.092	10.811	89.098	1.559	7.801	90.640
20	0.228	15.202	84.570	1.891	11.478	86.631
Belgium						
15	2.701	1.032	96.267	2.754	21.281	75.965
20	3.946	1.024	95.030	3.119	24.172	72.709
Denmark						
15	2.161	3.674	94.166	0.930	3.288	95.782
20	2.409	4.014	93.577	1.135	3.918	94.947
France						
15	1.268	11.539	87.193	2.080	3.688	94.231
20	0.997	13.601	85.402	2.259	3.989	93.752
Ireland						
15	0.264	1.820	97.916	1.426	1.752	96.822
20	0.565	2.070	97.365	1.426	1.752	96.822
Italy						
15	2.712	0.111	97.177	0.074	0.099	99.826
20	3.529	0.098	96.373	0.074	0.099	99.826
Netherlands						
15	0.562	4.851	94.588	6.858	31.141	62.001
20	0.643	5.162	94.195	6.897	31.178	61.926
Norway						
15	12.496	0.216	87.289	0.470	0.319	99.210
20	18.336	0.207	81.457	0.475	0.332	99.192
Sweden						
15	1.343	0.333	98.323	1.235	0.961	97.803
20	1.495	0.356	98.148	1.238	1.150	97.611
Switzerland						
15	1.708	20.958	77.334	1.368	2.582	96.050
20	1.755	21.026	77.219	1.368	2.582	96.050
UK						
15	2.890	2.926	94.184	0.382	0.063	99.554
20	3.970	4.813	91.217	0.382	0.063	99.554
Average across countries at the end of the fourth week (20th day)						
	3.443	6.143	92.414	1.842	7.338	90.820

Foreign banks have been successful in enlarging their shares in East Asian local loan markets; only Taiwan and Korea have been exceptions. Much of the increase in the market share of foreign banks in the Southeast Asian countries has come from large increases in their local currency lending. Except for Malaysia, the international claims of the foreign banks have declined, thereby lifting the ratios of local currency to international claims.

While foreign bank penetration in East Asia is still lagging other emerging market economies, Western investment banks have established a monopoly position in providing two major capital markets services: underwriting in the primary market and trading and consulting in the secondary market. Although there are many areas of financial services other than securities underwriting and trading, it is hard to quantify the value of financial services provided and in many cases relevant data are difficult to find. For these reasons, we focus on investment banking.

Since the 1997–98 crisis, the major East Asian crisis countries have all generated large current account surpluses. In managing their growing reserves, East Asian governments have preferred holding liquid and safe foreign securities such as U.S. Treasury bills in addition to deposits at major international money center banks. However, some of these governments, notably Singapore, Hong Kong, and Japan, have in recent years sought to diversify their reserve portfolios by adding short-term European government bonds and even private bonds and equities. With this diversification of their reserve portfolios, East Asian monetary authorities have required more sophisticated financial services than before and relied for this on western financial institutions operating out of New York and London much more than they did before the crisis. These institutions have a global reach and networks and are more efficient in providing investment services.

East Asian corporations, financial institutions, and households have begun to diversify their portfolios to include bonds and equities issued by other East Asian corporations and financial institutions, although the quantity of East Asian securities demanded by private investors in the region is still relatively small. In acquiring these assets they too have relied on the capital market services of western financial institutions.

Since countries deregulated and opened their capital markets in the early 1990s, East Asian equity markets have been growing in terms of market capitalization and the number of stocks listed, and the demand for East Asian equities from foreigners has continued to increase. This increase in the participation of foreign investors – mostly western investors – is corroborated by the increase in the number and size of money market and investment funds specializing in East Asian securities that operate out of

Table 3.9 The top 20 investment banks by parent country (Numbers in parentheses are percentages)

Function	Overall results		Underwriting		Trading		Advisory	
	1996	2002	1996	2002	1996	2002	1996	2002
Parent country of investment banks								
USA	8 (40)	11 (55)	8 (40)	9 (45)	8 (40)	10 (50)	8 (40)	10 (50)
UK	3 (15)	3 (15)	2 (10)	3 (15)	5 (25)	3 (15)	6 (30)	3 (15)
Europe	7 (35)	5 (25)	7 (35)	6 (30)	6 (30)	7 (35)	6 (30)	7 (35)
Japan	2 (10)	1 (5)	3 (15)	2 (10)	1 (5)	0 (0)	0 (0)	0 (0)
Total no. of investment banks	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)

Source: *Euromoney*, January 1996 and 2002

New York and London. Not surprisingly, the bulk of trading, consulting, and other services for these foreign investors has been supplied by western financial institutions.

That Western financial institutions, in particular American ones, are by far the largest providers of financial services in global investment banking was confirmed by *Euromoney's* 1996 poll of polls, which selects the top 20 investment banks on the basis of 70 *Euromoney* polls and league tables produced in 1995: almost all of the selected investment banks were either American or European. Six years later, this dominance remained unchanged; only one Japanese investment bank made the list (see Table 3.9). American and European institutions dominated the entire range of financial services. U.S.-based financial institutions led in every category of services, followed by British-based ones. Not one leading financial institution was based in Asia with the exception of Japan, and even then, Japanese institutions were ranked dead last. According to the *Euromoney* polls in 2002, American investment banks have solidified their dominance, and Japanese investment banks have largely been driven out of the market for capital market services.

From the perspective of East Asia, a more pertinent issue is the domin-

ance of western investment banks in international financing. The amount of international financing secured by the six East Asian countries soared before the crisis, but it was American and European financial institutions that controlled the market in underwriting and distributing the new issues. Lead managers and book-runners sponsoring new issues are listed by nationality in Table 3.10. It can be seen that out of US\$32 billion that was financed through capital markets in the 1998–2001 period by six Asian countries, 74 percent was undertaken by American and European investment banks, and only 6 percent by Japanese institutions. The cumulative figures for the 1991–97 period show that western institutions managed 70 percent of the capital market financing. In contrast, however, East Asian banks from Japan, Hong Kong, and Singapore took a lion's share (72 percent) of syndicated loans secured by the six countries between 1991 and 1997.

As shown in Table 3.11, the distribution of lead managers by parent country during the 1991–2001 period is also lopsided: American and European institutions accounted for more than 70 percent of all capital market financing, while Japanese institutions provided only 9 percent. Table 3.12, which lists top 20 lead managers or book runners in the management of debt and equity issues, tells a similar story. The total amount underwritten again shows a pattern of western dominance, with American and European institutions representing 90 percent and East Asian institutions only 10 percent. Table 3.13 shows the top 20 lead managers both before and after the crisis; it confirms that there was little change in the dominance of western managers.

American and European institutions also dominate markets in financial derivatives. This is so even in the transaction of East Asian derivatives including Asian interest rate swaps, currency swaps, and currency options, as well as derivative products traded in more developed markets. According to *Risk Magazine* (November 1996), most first-tier derivative brokers and dealers were either American or European institutions. In fact, no local financial institution was ranked as an active broker or dealer of Asian derivatives. Similarly, the role of providing tailor-made derivative products, which requires highly developed financial expertise and sophisticated financial technology and is an increasingly important area of financial service industry, is entirely played by American and European institutions.

All this confirms the dominance of Western as opposed to Asian institutions in investment banking in East Asia.

Table 3.10 *Distribution of lead managers by their parent countries*

	1991	1992	1993	1994	1995	1996	1997	1991– 1997	1998	1999	2000	2001	1998– 2001	Total
Capital market financing														
US	100	0	756	412	2589	4614	5230	13700	1665	3469	4299	1396	10829	24529
UK	576	1790	2460	6102	8009	4298	8656	31890	1595	1668	3068	2995	9327	41217
Swiss	108	83	129	359	153	50	356	1238	18	0	0	0	18	1256
Other Europe	70	533	911	185	867	2412	1027	6005	252	543	556	2117	3468	9473
West total	854	2406	4256	7058	11618	11374	15269	52833	3530	5680	7923	6508	23642	76475
(Percentage)	(34.65)	(83.08)	(63.31)	(65.41)	(59.02)	(71.34)	(82.34)	(68.58)	(63.77)	(68.35)	(80.72)	(78.40)	(73.97)	(70.16)
Japan	114	0	1592	494	2528	1616	1832	8177	100	781	200	919	2001	10177
Singapore	15	0	102	179	698	943	150	2087	317	385	1211	224	2137	4223
Hong Kong	724	406	722	2327	2115	1194	819	8308	231	692	259	175	1356	9664
Other Asia	758	84	50	732	2725	815	473	5637	1357	772	222	475	2825	8462
Asia total	1611	490	2466	3732	8066	4568	3274	24209	2005	2630	1892	1793	8319	32526
(Percentage)	(65.35)	(16.92)	(36.69)	(34.59)	(40.98)	(28.66)	(17.66)	(31.42)	(36.23)	(31.65)	(19.28)	(21.60)	(26.03)	(29.84)
Total	2465	2896	6722	10790	19684	15942	18542	77042	5535	8310	9815	8301	31960	109002
(Percentage)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

	1991	1992	1993	1994	1995	1996	1997	1991-97
Loan Financing								
US	597	458	2556	1047	253	932	1371	7213
UK	2342	183	655	1211	1004	1298	697	7391
Swiss	0	80	25	220	291	2451	0	3068
Other Europe	556	663	1053	3046	4297	3227	3685	16 526
West total	3495 (38.36)	1384 (14.51)	4289 (32.32)	5524 (34.66)	5845 (29.04)	7908 (30.63)	5753 (21.79)	34 198 (28.45)
Japan	630	3081	4496	879	1172	2317	2864	15 440
Singapore	1200	2150	1186	2080	3047	3228	2181	15 072
Hong Kong	1385	1664	2511	4461	3128	2904	2114	18 167
Other Asia	2400	1259	786	2998	6935	9457	13 492	37 328
Asia total	5615 (61.64)	8154 (85.49)	8980 (67.68)	10 418 (65.34)	14 282 (70.96)	17 907 (69.37)	20 651 (78.21)	86 007 (71.55)
Total	9110 (100.00)	9538 (100.00)	13 268 (100.00)	15 943 (100.00)	20 127 (100.00)	25 814 (100.00)	26 404 (100.00)	120 204 (100.00)

Notes: Distribution of international financing proceeds financed by six Asian countries during the period of 1991-2001 by parent country. Financing schemes are categorized into capital market financing and loan financing. Capital market financing instruments include (1) Bond (bond with warrants, convertible bond, plain bond); (2) Medium-term note, and (3) Equity (ordinary shares, preference shares, warrants). The loan-financing instrument is syndicate loans. Data on syndicated loans are not available after 1998.

Source: Thomson Financial SDC database

Table 3.11 *Distribution of lead managers by their parent country and financial instrument (unit: million US dollars)*

	Capital market financing				Loan financing	
	Bond	Equity	MTN	Total	Loan	Total
US	12 234	7 795	4 500	24 529	7 213	31 742
UK	18 268	9 849	13 100	41 217	7 391	48 608
Swiss	1 019	237	0	1 256	3 068	4 324
Other Europe	3 864	1 691	3 917	9 472	16 526	25 998
West total	35 385 (67.20)	19 572 (57.19)	21 517 (97.26)	76 474 (70.16)	34 198 (28.05)	110 672 (47.92)
Japan	8 841	1 337	0	10 178	15 440	25 618
Singapore	1 209	3 015	0	4 224	15 072	19 296
Hong Kong	5 207	3 908	550	9 665	18 167	27 832
Other Asia	2 014	6 390	57	8 461	39 052	47 513
Asia total	17 271 (32.80)	14 650 (42.81)	607 (2.74)	32 528 (29.84)	87 731 (71.95)	120 259 (52.08)
Total	52 656 (100.00)	34 222 (100.00)	22 124 (100.00)	109 003	121 928 (100.00)	230 930 (100.00)

Notes: The distribution of international financing proceeds financed in six Asian countries during the period of 1991–2001 by the parent country of a lead manager. The financing schemes are categorized into capital market financing and loan financing. Capital market financing instruments include (1) Bond (bond with warrants, convertible bond, plain bond); (2) Medium-term note, and (3) Equity (ordinary shares, preference shares, warrants). Loan financing instrument includes syndicate loans.

Source: Thomson Financial SDC database

3. EXPLANATIONS FOR THE PATTERNS

In this section we consider two reasons why financial integration in East Asia may have done more to encourage the integration of Asian financial markets with the financial ‘hubs’ of New York and London than with one another: opportunities for risk sharing within and across regions, and the under-development of financial-market-supporting infrastructure in the East Asia region.

A. Opportunities for Risk Sharing

With financial opening, investors have increased opportunities to diversify their portfolios internationally. This enables a country suffering an adverse

Table 3.12 List of top 20 lead managers (unit: million US dollars and percentage)*

Lead manager	Amount	Parent company
Merrill Lynch International Ltd	8741	US
Lehman Brothers	6050	US
JP Morgan Securities Ltd	3819	US
Morgan Stanley Dean Witter & Co	3606	US
Daiwa Securities Co Ltd	3414	Japan
Goldman Sachs (Asia)	2485	US
Salomon Brothers Inc	2464	US
SBC Warburg	2392	UK
Warburg Dillon Read	2382	UK
CS First Boston Ltd	2344	US
Nomura Securities Co Ltd	2300	Japan
JP Morgan & Co Inc	1965	US
Merrill Lynch & Co Inc	1941	US
Deutsche Morgan Grenfell	1739	Germany
Morgan Stanley International Ltd	1728	US
Goldman Sachs International	1649	US
Baring Brothers & Co Ltd	1543	UK
UBS Securities Inc	1515	Swiss
Credit Suisse First Boston Inc	1500	Swiss
Jardine Fleming	1325	UK

Country	Amount	No.	
US	36 792	11	(67.01)
UK	7642	4	(13.92)
Other Europe	4754	3	(8.66)
Japan	5714	2	(10.41)
Total	54 902	20	(100.00)

Notes: * The table presents the list of top 20 lead managers ranked by the issue proceeds financed in six Asian countries during the period 1991–2001. The financial instruments used include (1) Bond (bond with warrants, convertible bond, plain bond), (2) Medium-term note, and (3) Equity (ordinary shares, preference shares, warrants).

Source: Thomson Financial SDC database

terms-of-trade shock to share some of the resulting loss in real income with other countries, to the extent that it holds claims on their output, and vice versa. The amount of risk sharing will be greater to the extent that investors hold diversified portfolios of bonds and equities of countries with very

Table 3.13 List of top 20 lead managers before and after the East Asian currency crisis (unit: million US dollars)

Country	Amount	No.	%
1991–97			
US	23 780	10	50.00
UK	7733	5	25.00
Swiss	1515	1	5.00
Other Europe	1739	1	5.00
West total	34 767	17	85.00
Japan	5164	2	10.00
Singapore	0	0	0.00
Hong Kong	0	0	0.00
Other Asia	1186	1	5.00
Asia total	6359	3	15.00
Total	41 117	20	100.00
1998–2001			
US	16 026	12	60.00
UK	2086	3	15.00
Swiss	2322	2	10.00
Other Europe	500	1	5.00
West total	20 934	18	90.00
Japan	550	1	5.00
Singapore	0	0	0.00
Hong Kong	0	0	0.00
Other Asia	704	1	5.00
Asia total	1254	2	10.00
Total	22 188	20	100.00

Notes: The table presents the list of top 20 lead managers before and after Asian currency crisis. Lead managers are ranked by the issue proceeds financed in six Asian countries during the each period of 1991–97 and 1998–2001, respectively. The financial instruments used include (1) Bond (bond with warrants, convertible bond, plain bond), (2) Medium term note, and (3) Equity (ordinary shares, preference shares, warrants).

Source: Thomson Financial SDC database

different structural characteristics – that is, of different countries whose business cycles have a relatively low correlation with one another. The question is whether this opportunity for risk sharing does more to encourage intra- or extra-regional financial integration.

To fix ideas, consider the response of a group of economies with similar economic structures (and business cycle correlations) to an oil price increase. Because of the similarity of their structures, all of the countries in the group will experience a simultaneous slowdown. This group-wide slump leads a reduction in intra-group trade, reinforcing the initial deceleration in growth. The slump in one country thereby amplifies output contraction in other countries through the trade channel.¹⁵

Moreover, since all countries experience the same shock, they cannot supplement their output and income losses by liquidating claims on one another. Hence there is little scope for capital to move between countries to buffer the disturbance. The countries in question may all experience deterioration in their current accounts as a result of the increase in the cost of imported oil. But they will find it difficult to borrow from the other countries in the group since they are all in the same boat – they all need to run current account deficits. For the group as a whole, deficit financing must be secured from outside, that is, on global rather than regional financial markets.

This example suggests that the impact of the shock would be less severe and more manageable, other things equal, if the members of the group that borrow and lend to one another have different structural characteristics. The heterogeneity of the members would reduce the burden of adjustment to shocks by increasing the scope of factor mobility and easing deficit financing. This suggests that countries with different structures, subject to different shocks, and with low business cycle correlations will find it more attractive to develop closer financial links with one another. Emerging markets, like those of East Asia, might therefore find it more attractive to develop closer financial links with the advanced economics than with one another.

In turn, this diversification of risks will have implications for observed patterns of investment, output, and employment. Because households and firms are able to insure against country-specific risks through international financial markets, they will be more willing to specialize along lines of comparative advantage despite the lack of output diversification that such specialization implies. Global financial markets thus enhance the opportunities for intertemporal specialization in production, in turn contributing to lowering the correlation of factor supplies as globalization increases the scope of international portfolio diversification. Following this logic, Heathcote and Perri (2002) suggest that the decline in the correlations of output, investment, employment, and consumption between the United States and the rest of the world between 1972–86 and 1986–2000 can be explained in part by financial globalization. They show that a decline in the correlation of shocks can encourage international portfolio diversification, which then further reduces the international correlation of macroeconomic variables.

An implication of this analysis is that capital account liberalization could reduce the correlation of output, investment and employment between East Asia and other parts of the world. Another implication, which bears directly on our question, is that the growing similarity of business cycles among the East Asian countries resulting from trade expansion may in fact encourage them to diversify their portfolios to include claims on corporations and financial institutions headquartered in the advanced countries and to borrow on global rather than regional markets.

B. The Underdevelopment of Market-Supporting Infrastructure

Another potential cause of East Asia's heavy dependence on global rather than regional financial markets and institutions is the under-development of market-supporting infrastructure in the region. In particular, the lack of professional expertise in securities business, the inadequacy of the financial and legal infrastructure (including the regulatory system), low standards of auditing and accounting, and the weakness of corporate governance may have all slowed the development of regional capital markets.

Since the 1997–98 crisis, Asian countries have of course taken measures to strengthen and improve the efficiency of their market infrastructure and regulatory systems. However, this process of institutional reform has been difficult and protracted. Insofar as some East Asian economies are not large enough to support efficient capital markets, the cost of constructing the necessary financial, regulatory and legal infrastructure has been inflated further. Because of the cost, the inertia, and the receding fear of financial assets, institutional reform in many East Asian countries has been slow and incompletely successful at keeping abreast of rapid innovations in the financial industry, developing the necessary skills to analyse the complexity and potential risks associated with new financial services and in strengthening regulation of securities markets. The lack protection of shareholder and creditor rights implies a continued low priority on external reporting, which has in turn been responsible for relatively low standards of accounting and public disclosure.

Nor have these East Asian countries succeeded in developing credit rating agencies, clearing and settlement systems, and investment banking firms that constitute important institutional supports for the operation of efficient capital markets. The absence of reliable credit rating agencies has meant that a majority of East Asian borrowers have not been able to obtain reliable credit ratings for their bond financing. In the absence of efficient investment banking, there have been few financial institutions capable of assuming full responsibility for selling entire issues of new stocks and bonds of firms and financial institutions wishing to raise funds through

capital markets, thus bearing all the risks of potential price fluctuations. Markets in derivative financial instruments such as forwards, swaps, options, and bond future, which are important for facilitating risk management and enhancing market liquidity, are still in their early stages of development.

Until the late 1980s capital inflows in the forms of equity and bond finance did not exist in East Asia. Since then, of course, financing from international capital markets has been on the rise. Meanwhile, bank finance, after a surge over the 1994–96 period, has continued to decline. With this increase in the access to global capital markets, it is thus not surprising that large corporations with investment grade ratings have migrated to international financial hubs where they can tap into a wider investor base and obtain funds at lower cost and on better terms. Services offered by stock markets in New York and London are easily accessible, of course, from anywhere in the world.¹⁶ Various measures of the internationalization of stock market activities – the relative market capitalization of firms listed abroad, the value of shares traded abroad relative to GDP, and the ratio of value traded abroad to value traded domestically – all show the migration of issuance and trading of equities (Claessens et al. 2002).

But it is also true that only a small fraction of East Asian corporations have had access to international capital markets. While regional capital markets could have accommodated the financing needs of less creditworthy East Asian corporate borrowers, the region has yet to see the emergence of region-wide stock exchanges and bond markets to serve as a source of financing for major corporations.

The rapid growth of capital market financing has led to a large increase in the demand for capital market services such as underwriting, securities trading, financial consulting, asset management and mergers and acquisitions. Trade and financial liberalization have also stimulated the demand for new financial services and products such as instruments for hedging exposure to currency and commercial risks and derivative products – options, swaps, and futures – for portfolio diversification and risk management purposes.

However, a legacy of long periods of financial repression and bank-oriented finance, which did not leave much room for capital market development, was that East Asian economies did not have a comparative advantage in supplying any of these services. As a result, nascent capital market institutions have been overwhelmed by their counterparts from the West despite the fact that, in principle, they enjoy information advantages locally.

Even in commercial banking, where this home bias is a significant advantage, East Asian countries have seen their domestic market shares

chipped away by foreign financial institutions, albeit slowly, reflecting the failure of East Asian banks to move out of traditional deposit-taking and lending businesses into capital market services, insurance, and other new lines of business. In other words, East Asian banks have been slow to universalize. The financial services industry is intensive in information, communication, and computation. The ongoing IT revolution has formed the basis of innovations in financial technology; in turn, the cost of supplying financial services has declined dramatically, creating additional economies of scale and scope. In order to take advantage of these economics, financial institutions including banks and securities institutions have come under increasing competitive pressure to capture a large market share, leading them to diversify their activities geographically and also to move into new service areas. East Asian banks have been slow to capitalize on these opportunities. Except for Japanese banks, most East Asian banks have limited access to international capital markets, reflecting their inexperience in international corporate banking. They also have small regional branch networks in Asia itself. By and large their customer base is confined to domestic borrowers and lenders. Bond markets remain small in size and limited in terms of maturity. And markets for financial derivatives have only recently begun to emerge. Under these circumstances, it is no surprise that financial liberalization has opened new opportunities for western financial institutions to capture a large share of the East Asian financial services industry in a relatively short period of time.

Foreign financial institutions now receive national treatment when they enter the markets of East Asian countries. Many western banks have established branch networks and subsidiaries throughout the region, as have western securities firms, investment banks, insurance companies, and other non-bank financial institutions. There are numerous emerging market funds operating out of New York to invest in East Asian securities. There is little doubt that the hold of western financial institutions in East Asia has increased since the early 1990s. So long as the gap in financial technology and expertise between East Asian and Western financial institutions remains, borrowers and lenders from East Asia will have an incentive to go to the New York and London markets.

C. Which Explanation Matters More?

The comparison between East Asia and Europe may help us to determine which one of these explanations matters more. Is Europe more financially integrated because it finds links with global financial markets less advantageous, reflecting a greater ability to engage at efficient risk sharing

at the regional level, or because European financial markets are better regulated and developed?

By almost any measure, Europe's economies are less heterogeneous than East Asia's. The dispersion of per capita incomes is very much less, especially with the progress of convergence, reflecting the panoply of policies deployed by the European Union to promote economic 'cohesion' among its members.¹⁷ Economic structures are more similar; there is nothing approaching the structural diversity of, say, Japan, China and Indonesia.

In addition, Europe was earlier to proceed down the road of regional trade integration, starting with the European Payments Union and European Coal and Steel Community in the 1950s, the Common Market in the 1960s, and the Single Market in the 1980s. The result was a very considerable increase in intra-European trade and in the share of Europe's trade that stayed within the continent. Much of this trade was of the intra-industry variety, reflecting the broad similarity of the national economic structures. In turn, the rise of intra-regional trade led to a significant increase in business cycle correlations across European countries, according to the estimates of, *inter alia*, Frankel and Rose (1998).

This overview of Europe's history suggests that macroeconomic and structural similarities should have been greater in Europe than in East Asia. Business cycle correlations should have been higher. Insofar as such similarities limit the scope for efficient risk sharing within the region, the same risk-sharing incentives felt in Asia to develop financial links with other regions should have been evident in Europe as well. To some extent they were, of course: Europe's financial links with the United States deepened and intensified throughout the period covered by this chapter. Indeed, the timing and extent of trade liberalization measures suggests that, if anything, this tendency should have been even stronger in Europe than in Asia, other things equal.

In fact, however, there is evidence of a strikingly higher degree of regional financial integration in Europe than in East Asia, as we showed in Table 3.8 above. This suggests that the dominance of the global factor in East Asia, compared to Europe, cannot be explained by differences in the scope for risk sharing between the respective regions. In turn this implies that the dominant explanation for the limited role played by regional financial integration in Asia must be the under-development of its market-supporting financial infrastructure.

In fact, by the time Europe finally removed its interest rate ceilings and controls on capital account transactions in the late 1980s and early 1990s, its financial infrastructure was strikingly well developed in comparison with Asia's. Its big banks had universalized, internationalized, and

rationalized their operations. Except in the UK, its securities markets were less well developed than its banking systems, but it nonetheless had rating agencies, disclosure standards, internationally recognized auditing and accounting standards, and the other regulatory infrastructure needed to support the operation of active and competitive national financial markets. Hence, when remaining financial restrictions were lifted and capital accounts were opened, it was possible for Europe to integrate regionally as well as globally. This is not to say that extra-regional financial links, notably with New York, were by any means negligible, but there is nonetheless the very pronounced contrast with the situation in East Asia.

To be sure, a variety of special factors may have worked to promote regional financial integration in the European case. National financial regulation was harmonized by EU directives. The creation of the euro, by eliminating currency risk, did much to stimulate the growth of a pan-European corporate bond market. But the importance of the regional factor in asset price co-movements, documented in section 2 above, applies to a period that largely predates the EU financial directives and the advent of the euro. This suggests that it was the more advanced development of European capital markets and institutions in the period leading up to the removal of financial restrictions and capital controls that caused Europe to respond by developing deeper financial links within the region as well as globally. And it implies that the global financial integration of the East Asian economies has been faster than their regional financial integration because financial liberalization largely preceded, rather than following, the development of the relevant financial infrastructure.

4. CONCLUDING REMARKS

This chapter has analysed the response of East Asian countries to the lifting of restrictions on the operation of domestic capital markets and the removal of controls on capital account transactions. Specifically, it has asked whether this process of financial liberalization has resulted in greater regional financial integration the development of deeper links with global financial markets.

The evidence points strongly in the first direction, to the fact that financial liberalization has led to the tightening of global rather than regional financial links. Capital flows have been predominantly interregional rather than intra-regional, notwithstanding the rapid growth of foreign direct investment in China by a few of its East Asian neighbors. Interest rates and stock market returns depend more on global factors than regional

factors, both absolutely and in comparison with Europe. This chapter has considered two explanations for this contrast: that there may be less scope for efficient risk sharing through regional financial integration in East Asia than in Europe, and that regional financial integration in East Asia has been held back by the under-development of the relevant market-supporting infrastructure. The evidence strongly favors the second hypothesis.

For the proponents of regional integration, this points to an obvious policy agenda. Countries should build market and regulatory infrastructure at the national level by strengthening prudential supervision, disclosure requirements, and auditing and accounting standards, and by promoting the development of rating agencies and more efficient payments and settlement systems. They should harmonize regulation across countries as a way of attempting to emulate Europe's success in developing a truly regional capital market. They should at least contemplate the idea of a single currency in order to perhaps someday emulate the success with which the euro has stimulated bond market development by eliminating currency risk.

But there is also the question of whether initiatives of this sort, however desirable they may be in and of themselves, will in fact succeed in encouraging financial integration in East Asia now that the region's integration with global financial markets is so far advanced. The leading U.S. and European financial institutions already have a foothold in Asia. The same global financial institutions have already established their dominance as the lead managers for East Asian bond issues. If first-mover advantages are significant and this process is not reversible, then it is quite possible that financial market opening in East Asia may not in the end culminate in the creation of regional financial arrangements like an Asian Monetary Fund or a single Asian currency, even in the long run. East Asian countries may instead prefer to be part of a dollar bloc. In turn, this may explain why ASEAN + 3 has made only slow progress in negotiating bilateral swap arrangements, and why a regional currency is still not on the horizon.

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NOTES

1. The East Asian countries covered are Hong Kong, Indonesia, Malaysia, the Philippines, Korea, Taiwan, and Thailand.
2. Compared to Europe, however, they had been noticeably slower to deregulate their stock markets and to open their capital accounts.
3. The outward FDI of other East Asian economies is negligible.
4. These data on East Asian investment in U.S. bonds are from *Report on Foreign Holdings of U.S. Long-term Securities*, U.S. Department of the Treasury, 2002.
5. In 1996, the share of Asian bonds in total overseas portfolio investment of Japan was 3.2 percent as opposed to 8.3 percent for Latin America; by 2001, the Asian proportion fell to 1.3 percent (14.1 percent for Latin American bonds). Between 1999 and 2001, Japanese holdings of Asian bonds fell in an absolute amount by 250 billion yen (\$200 million) (see Table 3.4).
6. All price index series are adjusted for dividends and expressed in the U.S. dollar. Weekly compounded stock returns are then estimated by taking the log of price ratios.
7. This minimizes the impact of changes in the exchange rate on the interest rate. We use the following interest rates:

Austria	Discount 'dead' – middle rate
Belgium	Euro-franc 3 mth (LDN: FT) – middle rate
Denmark	Euro-krone 3 mth (LDN: FT) – middle rate
France	Money market 3 month 'dead' – middle rate
Germany	Euro-mark 3 mth (LDN: FT) – middle rate
Ireland	Interbank 3 mth – offered rate
Italy	Euro-lire 3 mth (LDN: FT) – middle rate
Holland	Neth. corp. yield (ECON) 'dead' – middle rate
Norway	Interbank T/N (nominal) – middle rate
Sweden	Bond yield corporate (ECON) – middle rate
Switzerland	Euro-frc 3 mth (LDN: FT) – middle rate
UK	Discount market overnight – middle rate
Hong Kong	Deposit call-3 mth – middle rate
Indonesia	Call money (pipu) – deposit 3 month – middle rate
Japan	Call overnight – 3 mth – middle rate
Korea	Corp. bond AA no guarantee 3 year – middle rate
Malaysia	Interbank 3 mth – middle rate
Philippines	Manilla treasury bill 91 D – middle rate
Singapore	Deposit call 3 mth – middle rate
Thailand	Interbank on call – middle rate
US	US federal funds – middle rate
8. The error variances of the stock market return (the U.S. dollarized total market return index) of each of the seven sample East Asian and 11 European countries for one through four-week-ahead forecasts are explained by domestic, regional, and global factors. For the interest rates, the error variances of the forecasts of every fifth day of the week through a six-week period are decomposed. Regional factors are represented by the shocks originating in the Japanese market for East Asia and for Europe by the German market. Global factors are the shocks emanating from the U.S. market.
9. In the case of Korea, the U.S. proportion jumped to 18.6 percent from 2.0 percent before the crisis. For Hong Kong, the increase was more pronounced as it rose to 30.9 percent from less than 12 percent. In contrast, however, the Japanese influence declined in Malaysia, the Philippines, and Singapore, although the region's average has risen as a result of the large increase in Hong Kong and Korea.
10. We do so because the time series data for many countries in our sample contain a unit vector. In the East Asian group, only the Korean data after the crisis are stationary. In Europe, the time series data for Ireland, Italy, Swiss and the U.K. are stationary during the post-Maastricht period.

11. It figured importantly in determining the interest rate only in Norway before the Maastricht Treaty. Since then, Netherlands is the only country where changes in the U.S. interest rate have had any measurable effect on the local interest rates (about 7 percent). Before the Maastricht Treaty, the shares of the regional factor were substantial in Austria (15.2 percent), France (13.6), and Switzerland (21.7), and moderate in Netherlands (5.16), U.K. (4.8), and Denmark (4.0). After Maastricht, the regional influence represented by changes in the German interest rates rose markedly, while an opposite development took place in France and Switzerland. On average, the share of the regional factor rose to 15.4 percent during the post-Maastricht period from 9.6 percent of the preceding period.
12. For example, the equations in the model can be ordered according to the vector of endogenous variables in the system that starts with the regional factor and ends with the local factor. Such an ordering of equations is equivalent to imposing a structure that the regional factor is not contemporaneously correlated with any other variables, the global factor is only correlated with the regional factor and the local factor is correlated with both the regional and global factor. The last variable in the sequence is contemporaneously correlated with the rest of the variables. Once the ordering is changed, the recursive relationship changes accordingly. See Hamilton (1994).
13. These results are available from the authors on request.
14. The new ordering for the stock return decomposition in which the German stock market influence precedes the global factor, however, changes substantially the relative influence of the global and regional factors. In the pre-Maastricht period, the ordering change does not affect the relative significance of both regional and global factors. However, in the post-Maastricht period, the effect of the global shocks plummets on average to 2.8 percent of the error variances of the European countries. This unrealistic result stems from a very high correlation of stock returns of Germany with those of the US. The high correlation implies that stock markets of European countries and the U.S. have become so closely integrated that it is difficult, and perhaps not meaningful, to differentiate regional shocks to the European markets from global ones.
15. The effects of the supply shock in one country could be much more contagious to other countries when they are more homogeneous (Park and Song 2001).
16. The global harmonization of accounting, auditing, disclosure, and corporate governance has also accelerated this migration.
17. There will of course be an increase in such dispersion with the accession to the EU of 10 new (mainly Central and Eastern European) members in 2004, but this event post-dates the period analysed in this chapter (and the econometric comparisons presented above).

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APPENDIX: A VECTOR AUTO REGRESSION (VAR) MODEL

Let $R_{j,t}$, $R_{US,t}$, and $R_{JP,t}$ be the weekly returns at time t of the market portfolios of an East Asian country j , US, and Japan, respectively. Then, for each East Asian market, the following trivariate VAR model is constructed:

$$Y(t) = D(T) + \sum_{s=1}^m B(s) Y(t-s) + u(t), \quad t = 1, \dots, T \quad (\text{A.1})$$

where $Y(t)$ is a 3×1 vector consisting of $R(t)$. $D(t)$ is a 3×1 vector of constants, $B(s)$ is a 3×3 coefficient matrix, and $u(t)$ is a 3×1 vector of serially uncorrelated random residuals with a zero mean and finite variance.

The VAR specification defines $u(t)$ as an innovation in $Y(t)$ in that it is the component of $Y(t)$ that cannot be predicted from the past values of variables in the system. The moving average representation (MAR) is obtained by successive substitutions on the right-hand side of equation (1) as:

$$Y(t) = F(t) + \sum_{s=0}^{\infty} A(s) u(t-s) \quad (\text{A.2})$$

where $F(t)$ is the corresponding 3×1 vector of constants and $A(s)$ is a 3×3 matrix of coefficients. The MAR represents $Y(t)$ as a linear combination of current and past one-step-ahead forecast errors.

While the estimated coefficients $B(s)$ of the VAR provide little insight into the dynamic interactions among the variables, equation (A.2) (MAR) presents the information equivalent to that contained in the original estimates, but in a form relatively easy to understand. That is:

$$\sum_{s=0}^{\infty} A(s) u(t-s) = \sum_{s=0}^{\infty} A(s) (HH^{-1}) u(t-s) = \sum_{s=0}^{\infty} C(s) e(t-s), \quad (\text{A.3})$$

where $C(s) = A(s)H$, $e(t) = H^{-1}u(t)$ and the matrix H is such that HH' is a factorization of the covariance matrix $u(t)$ by the Choleski decomposition method. With the weekly data, the k -week ahead forecast error of $Y(t+k)$ at time t is

$$\begin{aligned} & C(k-1)e(t+1) + C(k-2)e(t-2) + \dots + C(0)e(t+k) \\ &= \sum_{s=0}^{k-1} C(s)e(t+k-s). \end{aligned} \quad (\text{A.4})$$

The variance of the k -week ahead forecast error is

$$\sum_{j=1}^n \sum_{s=0}^{k-1} [C^{i,j}(s)]^2. \tag{A.5}$$

Then,

$$\frac{\sum_{s=0}^{k-1} [C^{i,j}(s)]^2}{\sum_{j=1}^n \sum_{s=0}^{k-1} [C^{i,j}(s)]^2} \tag{A.6}$$

is a component of the error variance of the k -week ahead forecast of Y^i which is accounted for by innovations in Y^i .

In the following analysis the MAR equation is used to compute the proportions of the forecasting error variance of an East Asian country index return, $R_{i,t}$ that can be attributed to shocks originating in the US, Japanese, and local market returns, $R_{US,t}$, $R_{JP,t}$, and $R_{i,t}$. Equation A.1 is estimated with two lags and a constant term for the deterministic part $D(t)$. In view of the cross-equation nature of the hypothesis, it is also estimated with alternative lags of one, three, and four. The results are qualitatively similar, however.

4. Why has there been less financial integration in Asia than in Europe?

Barry Eichengreen and Yung Chul Park

1. INTRODUCTION

One of the most striking aspects of Europe's recent development has been the growth and integration of financial markets. Bond markets have grown explosively since the advent of the euro. Cross-border transactions in government bonds have risen sharply with the emergence of the German bund as a benchmark asset, while the volume of corporate bond issues has grown even more dramatically.¹ Securities markets are consolidating around London and Frankfurt, which are competing for the mantle of Europe's dominant financial center. This rapid market integration has raised questions about the viability of Europe's traditional model of bank-based financial intermediation, causing commercial and investment banks to respond with a wave of mergers and acquisitions.²

In Asia, in contrast, there has been less progress in financial integration. Cross-border bank credit flows remain becalmed at low levels. There is no sign of the development of an integrated market in government and corporate bonds. Equity markets have not yet begun to consolidate. If anything, the countries of East Asia have developed stronger financial ties with Western Europe and the United States than with one another. This conclusion obtains whether one analyses the distribution of lead manager by nationality, the source of cross-border bank credit flows, or any of a number of other indicators of financial integration (Park and Bae 2002). These contrasts are perhaps not surprising, given that the broader process of integration is so different in the two regions. Europe has gone further than Asia in the integration of product and factor markets. While the EU has a true single market in goods and services, progress toward the creation of an Asian free trade area remains incomplete. While Europe has removed essentially all barriers to the free movement of capital and most barriers to the movement of labor, in Asia limits on factor mobility remain pervasive. In Europe regionalism is motivated in no little part by a desire for political integration that has no counterpart in East Asia. Where Europe has built institutions of transnational

governance (the European Commission, the European Parliament, the European Court of Justice, and now the European Central Bank), Asian integration is ‘weakly institutionalized.’ That is, it is predicated not on transnational institutions but on intergovernmental agreements that defer to the sovereignty of the participating states. Nor is integration in Asia driven by an alliance of key nations like France and Germany or by a single hegemonic power (the role played by the United States in the Western hemisphere); it is a more multi-polar process.

All of these are reasons why regionalism might take different forms in Europe and Asia. But none of them obviously explains why experience with financial integration in the two regions contrasts so sharply.

This chapter inquires into the causes of these contrasting experiences and asks what they bode for the future. It poses questions like the following. Is the contrast explicable in terms of the fact that Europe was earlier to begin the process of removing controls on cross-border portfolio capital flows? Is it explicable by the fact that Europe had better developed financial markets at the start of its regional monetary and financial integration project? Is the main difference deeper trade and factor market integration due to Europe’s Single Market project, compared to more partial and tentative moves toward regional trade integration in Asia? Or does the euro make a key difference through the elimination of exchange risk?

Our empirical analysis focuses on cross border bank claims, which are available on a bilateral basis. In contrast to other forms of financial capital, statistics on which do not typically distinguish country of origin and destination, there exists disaggregated information on the home and host country for consolidated international bank claims courtesy of the Bank for International Settlements.³ We are interested in comparing international financial transactions within Europe and within Asia; doing so requires information on source and destination, by country. While this focus yields evidence on the determinants of only one aspect of financial internationalization, the results still shed useful new light on what was previously terra incognita.

2. DATA AND METHODS

Our dependent variable is the consolidated international bank claims of BIS reporting banks as of the end of 2000, in US dollar terms. We gathered these data for reporting Western European countries (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom), reporting Asian countries (Japan, Taiwan, Hong Kong and Singapore), and the

United States and Canada.⁴ The data for Taiwan, Hong Kong and Singapore, while reported to the BIS, are not published on its website or in its *Quarterly Review* for reasons of confidentiality. These were obtained from the BIS (in the case of Taiwan) and the relevant national authorities (in the cases of Hong Kong and Singapore).⁵ We also obtained compatible data for Korea from that country's supervisory authorities. In addition to both claims of and on each of these countries vis-à-vis one another, we have their individual claims on several additional Central European countries (Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Poland, Romania, and the Slovak Republic) and several additional Asian countries (China, Indonesia, Malaysia, Philippines, and Thailand).

This measure of international bank claims is organized by the country of origin of the claims (specifically, the country in which the head office of the reporting bank is located). The underlying information is drawn mainly from supervisory and statistical returns of the countries in which the banks are headquartered. Data are broken down by national destination of the loans. We consider gross rather than net flows – for example, we have separate observations for Japanese banks' claims on Korean borrowers and Korean banks' claims on Japanese borrowers.

The BIS's consolidated claims provide a broad measure of international financial integration, appropriately for our study. In contrast to the BIS's 'locational data' (not published on the BIS website), which distinguish banks by location, the consolidated data distinguish banks by nationality, summing contractual lending by the head office and its branches and subsidiaries on a worldwide consolidated basis (net of inter-office accounts). Claims of Japanese bank branches and subsidiaries operating in, say, the UK (or, for that matter, in a third country) and raising funds there in order to extend loans to UK borrowers are counted as Japanese claims on the UK. If we were just interested in analysing the determinants of cross-border capital flows, locational data would be preferable. But financial integration can take other forms besides cross-border capital flows. When Japanese banks set up shop in London and do intermediation there, that too can be thought of as a form of financial integration.⁶ In a sense, it is to our advantage that our data capture financial integration broadly and not simply the volume of bank-intermediated cross-border capital flows.

It will be evident from the preceding that we have information on internationally active banks headquartered in a smaller number of Asian than European countries. This reflects economic reality: banks headquartered in a larger number of different European countries engage in international lending than is the case of their Asian counterparts.⁷ The dearth of data for Asia is not quite as bad as the preceding paragraph suggests, since we have data on claims by banks in reporting Asian countries broken down not only

into claims on one another but also into claims on other Asian countries (including China, Indonesia, Malaysia, Philippines, and Thailand, as noted above), as well as on individual European countries and on Canada and the United States.⁸ But the fact that we have data only for Asia's financially more-developed economies raises a problem of selectivity – with more complete Asian data, might we get different results and an even stronger contrast between Asia and Europe? This is an important issue. We address it below by explicitly modeling the determinants of data availability and correcting for sample selectivity.

We gathered ancillary information about these countries from a variety of sources. Information on GDP, population, and trade was drawn from IMF and World Bank publications.⁹

Data on physical distance, dominant language, and shared borders was taken from Andy Rose's website. Our classification of de facto exchange rate arrangements (pegged, intermediate and floating) was taken from Reinhart and Rogoff (2002), who distinguish exchange rate regimes using actual rates (including black market rates) as opposed to official arrangements declared to the IMF.¹⁰

The gravity model provides the framework for our empirical analysis. We hypothesize that cross-border claims increase with the average size of the lending and borrowing countries (specifically, with their aggregate and per capita GDPs), increase with common language and shared border, and decline with physical distance between the lending and borrowing countries (where these last three variables proxy for information and transactions costs). The gravity model is typically used to analyse merchandise trade flows, but there have also been some prior applications to international investment (see, for example, Frankel 1997; Frankel and Wei 1997). To our knowledge, however, there have been few previous applications to issues like international banking.¹¹

3. BASIC RESULTS

Table 4.1 shows summary statistics for our variables for Asia, for Europe, and for the US and Canada (the last two for comparison's sake). The first row reports total consolidated international banking claims of individual European (Asian) countries on other European (Asian) countries. Note that these are total claims, not yet country averages or ratios to GDP. Such claims are an order of magnitude larger in Europe than in Asia. The differential is equally evident when we scale consolidated claims on other countries within the region by GDP and more pronounced still when we scale them by population.

Table 4.1 Means of explanatory variables

	Europe	Asia	US and Canada
BIS claims within the region (current US\$) ^(a)	3.01E+ 12	2.33E+ 11	2.26E+ 11
BIS claims / GDP ^(b)	33.9%	3.5%	2.1%
BIS claims / population ^(c)	6414.47	126.54	722.33
GDP (constant 1995 US\$)	1.04E+ 13	8.49E+ 12	9.70E+ 12
GDP per capita (constant 1995 US\$)	470 062	132 776	540 538
Exports within the region/GDP ^(d)	18.4%	6.7%	5.2%
Average of domestic credit provided by banking sector (% of GDP) ^(e)	73.6%	130.8%	125.5%
Average of annualized standard deviation of cross rates within the region ^(f)	6.2%	13.0%	6.2%
Average of number of years of financial liberalization, 1990–97	7.4	7.0	8.0
Average of number of years without capital controls, 1990–99	6.6	4.6	10.0

Notes:

- (a) Consolidated foreign claims of reporting banks on countries within the same region.
 (b) The ratio of total BIS claims and total GDP of countries within the region.
 (c) The ratio of total BIS claims and total population of countries within the region.
 (d) The ratio of total intra-regional trade flows and total GDP of countries in the region.
 (e) Unweighted average for countries in the region.
 (f) Unweighted average of sqrt(12) times standard deviation of monthly cross exchange rates between countries within the region.

Note also, from Table 4.1, that several plausible determinants of international bank claims are lower in Asia than in Europe. This is true of country size (measured here by GDP). It is true of the level of economic development (measured by per capita GDP), which is relevant insofar as richer countries tend to be more open financially. And, it is true of intra-regional trade (scaled by regional GDP), which is relevant insofar as finance tends to follow trade (Rose and Spiegel, 2002). Europe has more stable exchange rates (as measured by the standard deviation of cross-rates within the region), which may be conducive to financial internationaliza-

tion. It has a longer history of domestic financial liberalization and more years without capital controls. These are all potential explanations for more financial internationalization in Europe. The one variable that works in the other direction is that banking systems are a more important source of domestic credit in Asia (scaled by GDP), the notion here being that when banking systems are more important domestically they will also be more important internationally.

Table 4.2 reports results for the gravity model.¹² Recall that the unit of observation is gross bilateral claims, and that independent variables like GDP, per capita GDP, and trade are averages for the lending and borrowing countries. The basic specification in column 1 works well: international bank lending is an increasing function of GDP and per capita GDP. The coefficient on log GDP is unity; in other words, there is evidence of neither economies nor diseconomies of scale. In addition, richer countries (as measured by the level of per capita GDP) have a higher level of consolidated bank claims on other countries. International bank lending falls with distance and rises with common language. All of these coefficients differ significantly from zero at standard confidence levels. In contrast to gravity models of merchandise trade, there is no significant effect of common land border. That physical distance and common language but not common land border seem to matter suggests that information costs are more important than transportation costs.¹³

The second column reports what are in some sense the most provocative results, adding dummy variables for intra-European and intra-Asian flows. Note that the coefficient for Asia is larger and that the two coefficients are significantly different from one another at the 99 percent confidence level according to the standard F test. Also noteworthy is the fact that while the coefficient for intra-European flows enters negatively and significantly (at the 90 percent level), that for intra-Asian flows is positive but insignificant.¹⁴ Asia is characterized by a lower value of cross-border bank claims, these results suggest, because Asian countries have, *inter alia*, lower per capita incomes on average and are (again, on average) further distant from one another, not because their financial markets are otherwise less well integrated. (Recall that the Asian countries in question include not just Japan, Hong Kong, Singapore, South Korea and Taiwan but also a number of smaller, lower income emerging-market borrowers.) The problem, these results suggest, is not simply one of financial integration per se; it is a problem of geography and economic development. Again, the question is the generality of this finding, to which we will also return.

In columns 3 and 5 we replicate these results with a correction for selectivity. We model the determinants of inclusion in the sample – this

Table 4.2 Basic regression results

Dependant variable	Log value of consolidated foreign claims of country 1 on country 2					
	(1)	(2)	(3)	(4)	(5)	(6)
Log of Product of Real GDPs	0.965** (26.68)	0.942** (25.37)	0.913** (23.45)		0.854** (20.94)	
Log of Product of Real GDPs per capita	0.201** (3.84)	0.229** (4.20)	0.219** (4.25)		0.279** (5.22)	
Log of Distance	-0.796** (11.47)	-1.039** (5.85)	-0.757** (11.00)		-0.967** (5.65)	
Common Language Dummy	0.916** (5.04)	0.764** (4.01)	0.956** (5.35)		0.719** (3.87)	
Land Border Dummy	-0.151 (0.52)	-0.251 (0.79)	-0.132 (0.46)		-0.132 (0.43)	
Intra-Europe Dummy		-0.606 (1.68)			-0.634 (1.81)	
GDP (1995 Constant US\$)		0.146 (0.42)		0.001** (9.78)		0.001** (17.32)
GDP per capita 1995 Constant US\$				0.000** (19.80)		0.001** (19.80)
Constant	-28.739** (16.98)	-25.912** (10.47)	-26.412** (14.39)	-1.983** (17.31)	-22.482** (8.79)	-1.918** (17.24)
Observations	645	645	1154	1154	1154	1154
R-squared	0.648	0.652				
F-Test b_asia = b_europe		6.364				
rho			-0.469		-0.649	
sigma			1.541		1.566	
lambda			-0.722		-1.017	

Note: ** significant at 1%

generally means the probability of reporting domestic banks' claims on other countries to the BIS – as a function of GDP, GDP per capita, and a constant term.¹⁵ (The probit for the availability of data is in columns 4 and 6.) This specification is motivated by the observation that the BIS has traditionally been a club of high-income countries. Not surprisingly, the results suggest that selectivity is present. The point estimate of Heckman's lambda, measuring the effects of the selectivity correction, is several times its standard error. Reassuringly, however, comparing columns 1–2 with columns 3–4 shows that the basic results carry over. We report selectivity corrected estimates in all the regressions that follow.

4. HYPOTHESIS TESTS

We now consider a series of specific hypotheses that may help to explain the differing levels of financial integration in Asia and Europe: the extent of trade integration, the monetary and exchange rate regime, the development and deregulation of financial markets, and the difficulties of Japanese banks.

The first column of Table 4.3 addresses the hypothesis that Europe's efforts to promote intra-regional trade, starting with the completion of its customs union in the mid-1960s and continuing with the Single Market Act in 1986, encouraged financial integration by promoting the merchandise transactions to which financial flows are often linked.¹⁶ It shows what happens when we add bilateral trade (the bilateral exports of the two partner countries) to the previous specification. The point estimate on the new variable suggests that a 10 percent increase in trade is associated with a 9 percent increase in cross-border bank lending, other things being equal.¹⁷

Previous research has found that the European Community and the Single Market have been predominantly trade creating.¹⁸ The record of East Asian regionalism, by comparison, is more mixed. These observations suggest that the longer history and more successful record of trade liberalization in Europe may be part of the explanation for the extent of financial integration there. Once we control for trade, we get negative coefficients on both intra-European bank claims and intra-Asian bank claims; in other words, the largest flows, other things equal, are between Europe and Asia and between North America and Europe (this being the point emphasized by Park and Bae 2002).¹⁹ Importantly, the negative coefficient on the dummy for intra-Asian claims is significantly larger in absolute value than its counterpart for Europe according to the standard F test (reported in the bottom row of the table). In other words, the slower development of intra-regional trade is not a sufficient explanation by itself for lower levels of financial integration than in Asia than in Europe.²⁰

Table 4.3 Hypothesis tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Log of product of real GDPs	0.282** (4.749)	0.291** (4.894)	0.235** (2.669)	0.186* (2.562)	0.293** (4.566)	0.316** (5.432)	0.200** (3.185)	0.263** (4.379)	0.292** (4.890)	0.218* (2.82)
Log of product of real GDPs	0.115* (2.360)	0.124* (2.528)	0.138* (2.316)	0.145** (2.668)	0.032 (0.555)	-0.072 (1.253)	0.09 (1.850)	0.145** (2.796)	0.121* (2.477)	-0.127 (1.81)
per capita										
Log of distance	-0.641** (3.990)	-0.640** (3.991)	-0.775** (3.741)	-0.735** (4.020)	-0.531** (3.172)	-0.689** (4.378)	-0.630** (3.959)	-0.608** (3.768)	-0.614** (3.819)	-0.638 (3.59)
Common language dummy	0.292 (1.693)	0.261 (1.513)	0.553* (2.546)	0.537** (2.857)	0.316 (1.906)	0.253 (1.508)	0.367* (2.136)	0.288 (1.674)	0.256 (1.482)	0.456* (2.72)
Land border dummy	-0.771** (2.728)	-0.744** (2.634)	-1.186** (2.863)	-1.031** (3.074)	-0.731* (2.575)	-0.767** (2.825)	-0.851** (3.027)	-0.736** (2.601)	-0.739** (2.616)	-0.700* (2.22)
Log value of bilateral trade	0.897** (13.376)	0.893** (13.330)	0.949** (10.327)	0.981** (12.429)	0.890** (11.832)	0.841** (12.703)	0.980** (13.936)	0.916** (13.489)	0.898** (13.419)	0.760* (9.15)
Intra-Europe dummy	-0.719* (2.243)	-0.713* (2.228)	-0.906* (2.271)	-0.834* (2.339)	-0.468 (1.410)	-0.863** (2.758)	-0.712* (2.242)	-0.571 (1.720)	-0.698* (2.174)	-0.431 (1.27)

Intra-Asia dummy	-1.267** (3.873)	8.106 (1.542)	-1.256** (2.989)	-1.604** (4.295)	-1.070** (3.216)	-0.830* (2.506)	-1.639** (4.817)	-1.236** (3.776)	-1.197** (3.639)	-0.565 (1.54)
Bilateral trade x intra-Asia dummy		-0.422 (1.787)								
Average domestic credit provided by banking sector (% of GDP)			0.002 (1.117)							
Domestic credit provided by banking sector (% of GDP), alternative					0.005** (4.556)					0.003* (2.47)

Table 4.3 (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Number of years of financial liberalization in 1990–1997, borrowing countries				0.068* (2.046)						-0.004 (0.10)
Average number of years without capital controls in the 1990s						0.170** (5.595)				0.234** (6.52)
Dummy for Japan as the lending country							0.963** (0.601)			0.012 (0.03)
Annualized standard deviation of monthly cross-exchange rates								1.581 (1.676)		

If the long history of trade integration, as opposed to simply its level, is conducive to financial integration, then a given level of trade should have larger effects in Europe than in Asia. To test this, we added the interaction of bilateral trade with the Asia dummy (in column 2). The results are consistent with this interpretation, in that the log of trade remains positive and significant while the interaction of trade with the Asia dummy enters negatively and significantly. Note, however, that the difference in the magnitude of the effect of bilateral trade in Asia is relatively minor in comparison with the large overall effect.

Column 3 asks whether the contrast is explicable by the fact that Europe had better developed financial markets at the start of its regional monetary and financial integration project. We proxy domestic financial depth and development by the ratio of domestic credit provided by the banking sector as a percentage of GDP (again, the average for the lending and borrowing countries). So measured, there is no sign that domestic financial development has an impact on consolidated international bank claims.²¹

We also considered only financial depth in the lending country on the grounds that it is mainly the development of the lending country's banks that is responsible for the extent of international bank credit flows. As shown in column 4, the coefficient on this variable is positive and significant at standard confidence levels. Not surprisingly, countries with better developed banking systems engage in more cross-border intermediation. However, less well developed lending-country financial systems do not explain the relatively low level of intra-Asian international bank claims – in fact the contrary seems to be the case. When this new variable is added, the difference between the intra-Asia and intra-Europe dummies is larger, not smaller, than before.²² Arithmetically, we now get a larger difference in the absolute value of the two dummies for intra-regional bank claims because the coefficient on financial depth in the lending country is positive, as already noted, and the mean of that regressor is larger in Asia than in Europe – because we have data on this variable for only five Asian countries, namely, Japan, Hong Kong, Singapore, South Korea, and Taiwan.²³

Column 5 looks at financial liberalization as distinct from financial development, using the World Bank's index of interest rate decontrol. This variable is available up through 1997; we therefore construct our financial liberalization measure as the number of years of financial liberalization in the period 1990–97 in the borrowing country.²⁴ The results are supportive of the view that countries that have more completely liberalized their domestic financial markets engage in more cross-border bank transactions. The coefficient in question is significant at the 95 percent confidence level. When we construct this variable as the average for the lending and

borrowing countries, however, the coefficient is significant at the 90 but not the 95 percent confidence level. The sensitivity of this estimate to how the measure is constructed suggests caution in interpreting the result; we present further evidence below, suggesting that the extent and timing of domestic financial liberalization is not one of the more important determinants of regional financial integration. And, regardless of how this variable is defined, there remains a significant difference in the coefficients on intra-Asian and intra-European claims. Evidently, less financial liberalization is relevant, but it is only part of the explanation for less cross-border bank intermediation within Asia.

Column 6 asks whether these contrasting patterns can be explained by the fact that Europe was earlier to begin the process of removing its controls on cross-border portfolio capital flows. We construct the independent variable as the average number of years that the two countries in question did not have capital controls in the 1990s.²⁵ The results suggest that the larger the share of the decade for which the capital account was uncontrolled, the larger consolidated international bank claims are. One reason that Asia has a lower level of financial integration evidently is that it has relied more on capital controls in recent years. Revealingly, the addition of this variable eliminates the difference between the intra-Europe and intra-Asia dummies. A recent history of more stringent capital controls can entirely explain the difference between the two regions, or so this regression suggests. This is the first (and, it will turn out, only) statistically-significant policy-related variable that has this effect.

Column 7 asks whether the chronic problems of Japan's banks provide part of the explanation for why there is not more cross-border bank lending within Asia, by adding a dummy variable for observations where Japan is the lending country. The BIS, among others, places considerable weight in its discussion of changes in international bank claims on the tendency for Japanese banks to draw down their exposures on other countries as a way of replenishing their capital and liquidity. This tendency has been invoked in particular as part of the explanation for the severity of the Korean crisis at the end of 1997; see BIS (1998). The earlier enthusiasm with which Japanese banks leapt into international lending, once Japanese financial markets were deregulated and they lost their captive corporate customers to securitization, works in the other direction by creating a network of customer relations and a stock of syndicated loans, all of which would not yet have necessarily been drawn down. The dummy variable for Japan turns out to enter positively, as if this second effect dominates (although it is not significant at standard confidence levels). The addition of this variable does not alter the relative size of the two dummies for intra-regional claims. In other words, problems in the

Japanese banking system do not obviously explain Asia's lower levels of financial integration.

Column 8 asks whether part of the story is more stable exchange rates in Europe (of which monetary union – the elimination of intra-regional exchange rate volatility achieved by the elimination of the exchange rate – is the limiting case). When stability or volatility is measured by the standard deviation of the monthly nominal rate over the 12 months of calendar year 2000, more stable bilateral exchange rates do not appear to be associated with international bank lending; if anything, there is weak evidence of the opposite. And, given this coefficient, there is, predictably, no change in the relative size of the coefficients for intra-Asia-lending and intra-European lending, which continue to differ significantly from one another. It is not obvious, in other words, that financial integration in Asia has been hindered by the post-1997 collapse of pegs and the observed volatility of currencies, or that cross-border bank lending in Europe has been significantly stimulated by monetary unification.²⁶

Column 9 sheds some light on why: it distinguishes pegged exchange rates, intermediate regimes, and flexible rates.²⁷ Both pegs and floats seem to be associated with less cross-border lending compared to the omitted alternative of intermediate regimes. This is consistent with the view (viz. Goldstein 1998) that soft pegs imply the socialization of exchange risk and lead governments to implicitly guarantee bank commitments, encouraging more risky cross-border lending than would occur in their absence. Note, however, that both coefficients are not quite significant at the 90 percent confidence level. Again, this suggests caution in interpreting the result. Moreover, given the wide range of *de facto* exchange rate regimes maintained in Asia, circa 2000, the addition of these variables reduces but does not eliminate the difference between the key coefficients on the two dummy variables for intra-Asian and intra-European claims.

In column 10, we test the entire set of hypotheses simultaneously. Most of the gravity-model-related variables remain well defined and enter with coefficients that are significantly different from zero at standard confidence levels (the exceptions being common land border, which just misses statistical significance at the 90 percent level, and now per capita income). Most of the remaining variables have similar effects as before. More bilateral trade, better developed financial markets in the lending country, and the earlier removal of capital controls are all associated with significantly greater cross-border bank claims.²⁸ The problems of Japan's banks continue to have little discernible impact on the magnitude of cross-border bank claims within Asia.

The main differences from when we tested hypotheses one at a time are that the domestic financial liberalization variable loses all significance, and

there is not much evidence of a relationship between the exchange rate regime and financial integration. Neither exchange rate regime measure now comes close to significant at the 90 percent confidence level, and a chi-squared test for the significance of the pair fails to reject the null of no effect.

While the negative coefficient on the Asia dummy continues to exceed its European counterpart in absolute value, we now cannot reject the null that the two effects are equal to one another. In other words, after controlling for the country characteristics suggested by the gravity-model framework and for selected policy-related variables (capital controls, the extent of intra-regional trade, the structure of domestic financial markets), there no longer remains an Asia-Europe difference to be explained.

4. CONCLUSIONS AND IMPLICATIONS

In this chapter we have viewed Asian financial integration in a European mirror. We have asked why there is less financial integration in Asia, taking as a case study the cross-border lending and investment activities of national banking systems.

The starting point for our analysis is the observation that cross-border bank claims in Asia are smaller by an order of magnitude: they are 33.9 percent of regional GDP in Europe but only 3.5 percent in Asia. But cross-border bank claims are strongly increasing in per capita income (a measure of economic development) even after controlling for economic size (real GDP in the lending and borrowing countries). Our results suggest that the very different levels of economic development in Asia and Europe, along with other differences in regional circumstance that are largely predetermined from the point of view of policy (the distance between countries, whether they share a common language, and whether they share a land border), explain a good deal – but not all – of the difference in financial integration between the two regions, so measured. In some specifications they even suggest that Asia is better integrated financially than Europe, other things equal – that is, adjusting for factors that are mainly predetermined from the point of view of policy.

The rest of the gap is explained by policy variables. Evidence that finance follows trade suggests that Asia is less financially integrated than Europe because it has done less to promote the growth of intra-regional trade. Intra-regional exports as a share of GDP are still only a third what they are in Europe. As ASEAN elaborates its free trade area and links itself to the other economies of the region, additional cross-border finance needed to grease the wheels of trade will presumably be forthcoming. Our results also suggest that controls on capital account transactions can have

a lingering effect on the volume of cross-border claims, and that their shadow is longest where those controls were maintained for the greatest number of years. The underdevelopment of financial markets and institutions in some potential lending countries also appears to be an impediment to financial integration in the region; this too can be addressed by policy, in particular by initiatives designed to promote the growth of Asian financial markets.

Other factors sometimes pointed to as hindering financial integration in Asia appear to have little effect. Lower levels of financial integration do not appear to reflect the long-standing problems of Japan's banks or to be the legacy of domestic interest-rate regulation. Nor do lower levels of financial regulation appear to reflect Asia's failure to follow Europe down the road to monetary unification or any obstacles to financial integration associated with Asian countries' move in the direction of greater exchange rate flexibility.

The message, in terms of future prospects, is mixed. Incomes in large parts of Asia, notably China, will remain significant lower than incomes in Europe for some years. Conventional estimates suggest that such differentials, now on the order of 80 to 90 percent, narrow at the rate of 2 percent a year. Until that gradual process significantly shrinks the per-capita-income gap, Asia will almost inevitably continue to lag Europe in terms of financial integration. Of course, policies to promote intra-regional trade and to remove remaining restrictions on international financial transactions could force the pace of financial integration. But, as recent experience has demonstrated, quick liberalization also has a downside in the form of increased financial vulnerability. Better developed and integrated regional financial markets (in Asia, and elsewhere) can be part of the solution to this problem, but as the 1997 crisis reminds, they can also be a source of problems along the way.

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NOTES

1. In addition, the volume of outstanding commercial paper rose by nearly a third in the nine months ending in October 1999 alone (the first three post-euro quarters), while international banks have been able to book very large money-market deals on a cross-border basis at very fine bid-ask spreads (Eichengreen 2000).
2. These mergers and acquisitions so far remain mainly within national borders but increasingly occur across them (as with the acquisition by Spanish banks of the leading Portuguese banking groups and by Swedish intermediaries of some Danish institutions).
3. The only other form of financial capital flow that could be analysed in this manner, to our knowledge, is M&A related flows, for which several commercial vendors tabulate deals by host and home country. See di Giovanni (2002). There is also a kindred literature on foreign direct investment; see Mody et al. (2002).
4. Note that the BIS also reports this variable for some very small European countries like Andorra and Luxembourg. These small countries were not included in our analysis, both because their circumstances are special and because it was not possible to assemble information on the ancillary variables.
5. The data for Singapore unfortunately aggregate claims on the ASEAN countries. This prevents us from analysing Singapore's claims on individual ASEAN members, as explained below, although we have information on claims on other Asian countries (China, Hong Kong, Taiwan, Japan and Korea), on the European countries, and on Canada and the United States, as well on their respective claims on Singapore. These data limitations create obvious problems of selectivity, which we address below. Reassuringly, however, they turn out to have no implications for our substantive conclusions.
6. Banking system internationalization is widely discussed in the literature as a form of financial integration.
7. There may also be a statistical/institutional aspect to the reporting discrepancy: the BIS has expanded into Asia only relatively recently, so a relatively limited number of Asian governments and supervisors report to it.
8. This is where the limitations of our data for Singapore bind. Whereas we have information on Singapore's claims on China, Hong Kong, Taiwan, Japan and Korea, we lack such information for flows to Indonesia, Malaysia, Philippines, and Thailand.
9. The Bank's World Development Indicators and the Fund's *International Financial Statistics* and *Direction of Trade Statistics*. Taiwan not being a member of these organizations, we gathered data on its trade from national sources.
10. Below we compare the results using the Reinhart-Rogoff classification with those obtained using an alternative measure of de facto exchange rate regimes constructed by Levy Yeyati and Sturzenegger (2001) and with the IMF's de jure classification as published in *International Financial Statistics*.
11. The one exception of which we are aware is Rose and Spiegel (2002).
12. The equation is estimated in double-log form, which seems to deal best with potential problems of heteroskedasticity.
13. This is in contrast to results for both trade (e.g. Frankel 1997) and M&A flows (di Giovanni 2002), which tend to find that both information and transportation costs matter.
14. The omitted alternatives are US-Canadian claims (these two countries being highly integrated financially) and intercontinental claims. When we add a North American dummy variable (for US-Canada claims), the other results are unchanged (and the new variable enters with a coefficient insignificantly different from zero). In other words, the negative coefficients for Asia and Europe are not being driven by an unusually high level of claims between the two North American countries.
15. We say 'generally' because we also have data for Korea that are not reported to the BIS. None of our results hinge on the inclusion of Korea in the sample or on its treatment in the selection equation.

16. One can argue further that the Single Market Act promoted international bank lending by eliminating barriers within Europe to bank mergers, acquisitions and strategic alliances. In practice, however, the extent of cross-border bank consolidation remains limited. See note 2 above.
17. One can reasonably question the direction of causality, since trade plausibly follows finance as well as the other way around. But there is no doubt that there exists an association. We followed Rose and Spiegel (2002) by omitting distance, contiguity and common language from the equation and instead using them as instruments for the trade variable. As in their study, we found that the coefficient on trade was unaffected.
18. See for example Bayoumi et al. (2000), whose conclusion is that the European Economic Community and the European Free Trade Area both significantly stimulated intra-European trade. The authors find that EFTA was mainly trade creating, while the EEC increased the relative importance of intra-bloc trade through a combination of trade creation and trade diversion. Their results for the founding members are reinforced by an analysis of the two enlargements of the EEC, for which they find both trade creation and trade diversion. Contemporaneous empirical studies (e.g. Frankel 1997) find less evidence of consistent, significant effects of Asian regional agreements.
19. And between the U.S. and Canada, which are highly integrated, as noted above.
20. The same, not unexpectedly, is true in column 1, where we constraint the effects of bilateral trade to be the same in Europe and Asia.
21. Note that addition of this variable causes the significance of the difference between the two regional dummy variables to disappear (the F-statistic is now less than one, as shown at the bottom of the relevant column). This sharp change in other coefficients, which seems to suggest that we are now fully explaining the observed difference between Asia and Europe with reference to a domestic-financial-development effect that is statistically insignificant, appears to be a statistical anomaly. In particular, it reflects the extent to which Japan is an outlier: its domestic credit is 310 percent of GDP while the other countries are all in the range of 50 to 150 percent. Because domestic credit (averaged over the borrowing and lending countries) is positively correlated with the Asia dummy but negatively correlated with the Europe dummy, even an insignificant effect, in conjunction for the large average values for country pairs involving Japan, has a large impact on the difference between the Asia and Europe dummies.
22. This point was anticipated in our discussion of Table 4.1 (line 7) above.
23. The domestic bank credit/GDP ratio is nearly twice as high in the five Asian countries as in Europe (when the ratios in question are GDP weighted) – again, see Table 4.1.
24. Using this variable for an earlier date is not ideal, but it is probably not terribly misleading either, given the need for domestic financial liberalization to work its effects. There is not much variation in these data, since most countries in the sample had removed their interest rate controls by the early 1990s; as a consequence, the results are likely to be driven for the observations for a few countries (in Asia, China and Korea; in Europe, various transition economies), where decontrol was still incomplete.
25. Our initial thought was to measure the number of years since the removal of capital controls. But since some countries, such as the United States, essentially never had capital controls, this variable, if left unadjusted, would be dominated by outliers. And those outliers would probably not reflect economic reality, insofar as distant history, as opposed to the more recent history of capital account restrictions, is unlikely to strongly shape capital flows. We therefore prefer the measure described in the text, which is roughly equivalent to the share of the 1990s decade that was capital-control free.
26. A dummy variable for when both countries in a pair participate in Europe's monetary union entered with a zero coefficient whenever it was tried. Note that this was still true when we omitted the dummy variable for European country pairs (with which the EMU dummy is highly colinear).
27. As noted above, we use the Reinhart–Rogoff categorization, classifying their regimes 1–4 as pegs, 5–12 as intermediate arrangements, and 13 as floating. We obtain the same pattern of signs reported in the text when we substitute the Levy Yeyati–Sturzenegger

classification or the IMF's de jure classification, although levels of statistical significance are lower.

28. Although the last of these effects is now only significant at the 90, as opposed to the 95, percent confidence level.

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5. How has the European monetary integration process contributed to regional financial market integration?

Beate Reszat

1. INTRODUCTION

European financial market integration has been a stepwise process which is far from completed. Monetary integration has been one important element and driving force in this process, but, as this chapter will demonstrate, not, by far, the only one. Others include the emergence of the euromarkets in the 1950s and 1960s, regional exchange-rate arrangements, individual countries' financial liberalization efforts and the EU Single Market programme. Beside, not all influences were policy induced. At times, market forces played a decisive role.

Experience in Europe has demonstrated that the benefits of financial integration are greater for some countries than for others. There were – and still are – considerable differences between EU member states concerning financial systems, structures and institutions, and the question is on which level adjustment and convergence are taking place. The common assumption implicitly or explicitly made in many regional integration debates is that financial systems adjust to the highest existing standard. But, of course, other scenarios can be imagined as well. An increasing inward orientation in the region may shift the focus from an overall strive for excellence towards winning market share in lesser developed systems, and the need for compromise in the policy dialogue on integration may water down principles of efficiency.

The important point here is that the role of monetary integration in different scenarios may differ, too. In eliminating currency risks and reducing transaction costs, in more advanced financial systems it may facilitate integration and provide a further stimulus for the convergence of rules, institutions and markets. In a less developed environment, despite these apparent advantages, it may create more problems than contribute to

solving the existing ones if, for example, the introduction of a common currency changes risk perceptions and makes market actors neglect remaining differences between countries. On the other hand, for fully developed international financial centres its effects are probably negligible. As will be argued, in these cases it is the benefits of being part of, and having access to, integrated regional financial markets that matter and less the participation in a common currency.

The chapter is divided into five sections. Section 2 will turn to the changes financial markets in Europe have experienced in recent years. What were the early beginnings of financial growth and integration and what did the European financial landscape look like before monetary union? What kind of linkages existed between financial centres and what kind of synergies were already exploited? How did the region-wide network of interconnecting financial hubs and spokes in Europe emerge? Who were the main actors in the markets and how and why did their composition change in time? How did the integration process influence the international competitiveness of European markets? What kind of international ties had been established before? What was the influence of official exchange-rate arrangements on the financial integration process? Which adjustments took place in various market segments as EMU approached anticipating the new regime?

Then, section 3 will deal with the changes monetary union itself brought about. As will be demonstrated, so far the impact of the introduction of a common currency and the elimination of exchange risk on financial integration is a limited one. The most immediate effect was on money markets, although even in this case the degree of integration differs between market segments. Other spectacular influences were on bond markets and derivatives trading. The effects on other market segments such as those for equity and retail finance were less marked than they were on payment and settlement systems. And they were hardly visible for institutional arrangements and issues like legal systems, tax regimes and corporate governance practices where the adjustment of structures and rules is evolving painfully slowly. In some respects, the final outcome of the integration process, and the way it is affected by monetary union, is still an open question. This holds too for the hierarchy of financial centres in Europe where monetary unification intensified the competition between places in and outside the euro area.

In section 4, the lessons to be learned from the effects of EMU on regional financial integration are discussed. This has two aspects. The first is EU enlargement and the effects of monetary integration on the financial integration of future members in Central and Eastern Europe into the Single Market and the resulting prospects for the existing members, Denmark, Sweden and the UK, that are not participating in the common

currency. The second aspect concerns monetary and financial integration in other parts of the world where European monetary cooperation and integration is regarded as model for achieving greater regional financial stability. Section 5 will draw some tentative conclusions about policy implications in the light of these discussions.

2. EARLY INTEGRATION PATTERNS

The end of World War II left Europe as a shattered landscape both in real and financial terms. The European capital markets were virtually non-existent. London's supremacy was broken and New York had become the most important financial centre in the world. Finances were in disarray. In many parts of the region, banks' functions were widely reduced compared to pre-war circumstances and many international financial relations had broken down. With the exception of the Swiss franc, currencies were not convertible and no markets for foreign exchange existed. Cross-border payments were settled through the European Payments Union, an intra-European clearing mechanism that had been established in 1950 and lasted until restoration of convertibility for major European currencies in 1958.

European and international economic policy-making in those years focused on reconstructing European economies. European economic integration started with the European Coal and Steel Community in 1951 and that was succeeded by the European Economic Community (EEC) established by the Treaty of Rome in 1957. Monetary and financial integration was not an explicit aim in these first postwar initiatives. After the creation of the Bretton Woods system, European currencies were embedded in the worldwide system of fixed exchange rates with little incentives for their own active exchange rate policy. Cross-border capital mobility remained widely restricted. But, it was as early as the late 1950s and early 1960s that the first signs of rising financial activities across national borders began to show in the region. These were the years when the first euromarkets for currencies and bonds emerged.

2.1 The Euromarkets

There are several explanations for the beginnings of the euromarkets. The most common relates to the restraints on foreign portfolio investment in the United States (the interest equalization tax), and on US bank lending abroad, in the 1960s. But, the roots of the markets date back to the late 1950s, to the rising US balance-of-payments deficit and the widespread

use of the US dollar as a vehicle currency in international transactions, the growth in European business after the formation of the Common Market in 1958 and the sterling crisis in Britain in 1957. The latter led to a tightening of British exchange restrictions that prevented London-based banks from financing third-country trade in sterling and the authorities encouraging the use of dollars instead.

The first euromarkets were external markets for foreign currency loans and deposits that had their beginnings in London in the late 1950s. At that time, local corporations, subsidiaries of non-European firms, central banks and other financial institutions began to deposit dollars accumulated outside the United States with banks in London that would retain them as dollars and pay dollar interest rates. The most prominent examples include the financial arm of the Soviet Union and other East-bloc states that in this way circumvented placing their holdings in the US (Walter and Smith 2000). Since those deposits were beyond the reach of US regulation, no liquidity reserves had to be held against them and, although related to US deposit rates, this relation was a loose one encouraging interest arbitrage by US banks.

Markets for other currencies soon followed. As an equivalent of reference rates in the national markets banks, securities houses and investors used the London-Interbank Offered Rate, LIBOR, as primary benchmark to determine the cost of borrowing. LIBOR was fixed for 12 currencies daily for maturities of one week and from one month to 12 months by the British Bankers' Association (BBA). There is a panel of contributor banks selected by the BBA on the basis of market activity and perceived market reputation with each bank contributing the rate at which it could borrow funds in the interbank market (Kettell 2000).¹ Markets for other financial instruments like eurobonds, eurocommercial paper and euro-equities emerged. The most important one is the eurobond market centered in London. This is a market for long-term debt instruments issued through international syndicates of financial intermediaries and sold outside the countries of the currency in which the bonds are denominated. The equivalent to loan syndication in this market is underwriting, which is an agreement of a group of financial institutions guaranteeing to subscribe to a set proportion of a new issue at a specified price in order to ensure the issue's full subscription. The first bonds were eurodollar bonds which from 1963 to 1973 were issued exclusively in Europe. After the US abolished the interest equalization tax and restrictions on capital movements out of the country in 1973, dollar bonds could be issued simultaneously in New York and Europe (Kindleberger 1993) and a true international market emerged giving a strong impetus to London's revival as world financial centre. These days, about 60 per cent of international bonds in the

primary market, and 70 per cent in the secondary market, worldwide are traded in London (IFSL 2001).

The rise of the euromarkets and the concomitant growth of international business in London from the 1950s on compensated the City for a loss of home business as a result of the decline of the British economy after the war. But, above all, it served to re-establish its leading role in the world of finance. While before 1914, 30 foreign banks had been established in London, and another 19 came between the wars, in 1969, 87 more arrived. In the 1970s, 183 institutions followed, and still another 115 in the first half of the 1980s, so that all in all, between 1914 and 1985 the number of foreign financial firms in the City grew more than fourteen-fold (Hall 1998). But, despite this revival, during these years, the place remained a remarkably conservative one, rarely inclined to financial and technological innovation (Hamilton 1986). European banks were dominating the scene. To cite one observer:

Prior to 1983 the American commercial and investment banks had paid little attention to London, regarding it as the 'Siberia of investment banking, a place to banish those the firm wished to forget.' There was hardly any need to be in London. Cross-border business in equities and corporate finance was limited and entry to the Stock Exchange was barred. The Eurobond market had moved from New York to London in the 1960s but the participants formed their own tight community and for many years the investment banks did not seek to build more rounded businesses on top of them. (Augar 2000, p. 70)

With the establishment of the euromarkets came the first pan-European institutions. For example, the emergence of an international bond market led to the creation of two international clearers – Euroclear and Cedel. For interbank transactions the SWIFT (Society for Worldwide Interbank Financial Communication) network was established. SWIFT is a private international telecommunications service for member banks and qualified participants. It provides a network for a large range of interbank communications including money transfers, letters of credit and many more. SWIFT was founded in 1973 as a cooperative non-profit organization with headquarters in Brussels. In the beginning, it had 239 member banks from 15 countries. Operation started in May 1977 with 15 banks in Belgium, France and Britain. At the time of writing, there are over 7000 members from 194 countries.

The euromarkets can be regarded as the first step towards concentration and integration of financial activities in the European region that goes beyond the traditional foreign funding of domestic financial needs known in European trade at least since the Middle Ages. This process was entirely market-driven. Monetary authorities rather distrusted the markets as a potential source of instability and a source of financial liquidity outside

their control. In their reliance on special techniques of risk sharing and risk reduction the euromarkets showed financial institutions the way to act in an unfamiliar international environment coping with different systems and standards and, at the same time, made them aware of the benefits of a market without borders. In this they created a climate in which future ideas of a convergence of rules and regulations, and the establishment of common institutions, would thrive.

2.2 Early Exchange-rate Arrangements

Another influence contributing to this climate of building common markets and institutions in the realm of European finance was exchange rate policy. Since the early beginnings the EEC members had defended the exchange rates of their currencies vis-à-vis the US dollar within the Bretton Woods system within margins of ± 0.75 per cent, a rule that was abandoned only with the worldwide agreement to widen bands in 1971.

With the breakdown of the Bretton Woods system the need for a common European approach to fixed exchange rates became more urgent. Since 1969 there had been plans for a stepwise reduction of fluctuation margins in Europe (the Werner Plan), and in 1972, six European countries – the Benelux countries, plus France, Germany and Italy – agreed to establish the ‘snake in the tunnel’, a system of narrow fluctuation limits within the wider bands of the still-existing Bretton Woods system. They were followed by Denmark, Ireland and the United Kingdom within a couple of months. In 1973, when the Bretton Woods system collapsed, the European countries decided to stick to the ‘snake’ but their success was not a lasting one. Of the system’s initial eight members only five were left in the so-called ‘mini snake’ consisting of the Benelux countries, Denmark and Germany when it was replaced by the newly established European Monetary System (EMS) in 1979 (Table 5.1).

The EMS did not last either. It disintegrated in two stages after the details of full European monetary union were decided in the Maastricht Treaty in December 1991, inviting currency traders to test the new agreement in several waves of speculation. The first wave came in summer and autumn 1992 with the result that Britain and Italy left the system. The second wave occurred in the following year with devastating attacks on the French franc. After this, the EMS was formally preserved in a wide-band version of ± 15 per cent until the start of monetary union in 1999 (Copeland 2000).

Like the euromarkets, European exchange rate policy contributed to creating the first building blocks of a common monetary and financial culture in Europe paving the way for further integration and harmonization. It was the first policy-driven effort, and the currency crises along its way

Table 5.1 Chronology of exchange-rate arrangements in Europe

	Event	Details
1972	Beginning of the 'snake in the tunnel'	Fluctuation margins of 2.25% between member currencies and 4.5% against the US dollar
1979	EMS start	Establishment of the ECU
1990	EMU: begin of the first stage	Removal of capital controls
1993		Widening of fluctuation margins to 15%
1994	Beginning of the second stage	Establishment of EMI
1998		Fixing of irreversible bilateral exchange rates, establishment of the ECB
1999	Beginning of the third stage	Introduction of the euro
2002		National coins and notes are no longer legal currency
And for the future:		
2004	New entrants' participation in EMS II	The new members are Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia
2006	Ecofin examines Maastricht criteria of the new member states	
2007	Earliest possible introduction of the euro as unit of account in new member states	
2008	Issue of euro coins and notes in new member states	

demonstrated that the markets did not always agree with, or believe in, the results. Over the years, there was a growing understanding that, given transaction volumes and the capacities to find leeways and leakages for circumvention, in order to be efficient, rules governing financial markets must either completely rule out market interference or leave a wide degree of flexibility and scope for market forces to find their own way. In Europe, in the realm of monetary policy, with the introduction of the common currency, the first approach was chosen. In financial market development, for a long while the second one appeared more promising with the pendulum swinging back in the other direction only recently.

2.3 Big Bang Ripples

Liberalization of European financial markets started with deregulation in Britain in the early 1980s as a by-product of a series of economic reforms aimed at reducing state influence. In 1983, the London Stock Exchange (LSE) abolished membership restrictions and opened itself to competition, abandoning the separation between jobbers (dealing in stocks held on their own books) and brokers (buying and selling stocks solely on clients' orders), and removing the system of fixed commissions. The consequences were far-reaching and in their dimensions hardly foreseen by anyone involved in the process.

In preparation for the 'Big Bang', which took place in October 1986, mainland European and, in particular, American and Japanese financial institutions strongly expanded their presence in London. This put considerable competitive pressures on the 225 broking and jobbing firms belonging to the LSE in 1986 and led to a wave of mergers and acquisitions. Within a year of the Big Bang announcement, eighteen of the top twenty brokers and all the major jobbers had taken part in a merger (Hall 1998).

Market culture changed as well. American ways of doing business gradually took over ringing in the slow 'death of gentlemanly capitalism' (Augar 2000). Until the Big Bang, the City had been a highly stratified system characterised by dense social networks and recruitments of 'old boys' from private schools and Oxbridge. With the arrival of a growing number of foreign financial institutions market culture became a mixture of old English and new, largely American rites. The more 'cut-throat' habits prevailing in New York dealing rooms now began to show up in London as well and traders were more and more explicitly encouraged to demonstrate their willingness to take risks and 'move for the kill' (Crang 1998). At the same time, the market became more innovative and ready to compete with others on an international level.

Soon other European markets began to sense the winds of change, too. State intervention became widely discredited. Extensive reforms were undertaken in France, Germany, Italy and Switzerland. In Germany, the first of several successive Financial Market Promotion Laws was launched.² But, the outstanding example is France, a country where government traditionally played a much larger role than elsewhere through direct state ownership of financial institutions. Between 1984 and 1986, in France, an entirely new market culture developed. Controls were lifted, new financial instruments created and new markets, in particular for futures trading, established (Allen and Gale 2001).

The Big Bang was only the beginning of a Europe-wide financial consolidation – a process that is still going on. However, while in the UK, reform

largely concentrated on the stock market, on the Continent the focus was more on banking systems. This is explained by the fundamental differences existing among European banks and stock exchanges in their respective importance for national economies (Gros and Lannoo 2000). For example, in bank-based systems like France and Germany, exchanges played – and still play – a minor role in financing economic activity. In market-based systems their importance is high. The outstanding example here is the UK where the ratio of market capitalization to GDP far exceeding 100 per cent, also reflects London's importance as an international financial centre.

In the 1980s, European countries were widely considered as overbanked with bank loans providing the primary source of corporate finance. Efficiency in banking was low and of less concern than bank stability and solvency. In many cases, the relation between banks and government was close and protective barriers were high (Walter and Smith 2000). Pressures for restructuring and consolidation were heightened by the fact that, during the 1980s, many banks – not only in Europe – experienced large losses from a mismatch of assets and liabilities and from non-performing domestic and international loans, and many weaker ones sought to merge with stronger institutions.

Consolidation was a stepwise process. When the Second Banking Directive, aimed at creating a single market for banking services in the EU, was implemented in 1993, the first big wave of mergers and acquisitions in European banking was already completed. Nevertheless, severe weaknesses remained. Despite a number of privatizations in some countries, public influence on banking was reduced only gradually. Besides, EU financial markets remained overbanked. In 2001, the average population per branch in the EU was still 1960 with wide discrepancies between countries ranging from 4390 in Sweden to 1008 in Spain (Table 5.2).

With the Big Bang the composition of actors in European markets changed opening up a new international dimension: for the first time in the financial history of Europe, institutions from other world regions began to compete with European ones in their domestic field on a large scale and on an equal footing. Beside, there was a rising awareness of the financial services sector as motor of economic growth and source of income and employment at a time when traditional industries in manufacturing were in decline. As a consequence, a fierce competition for financial business and the location of financial institutions started between European cities. This raised widespread expectations to markedly alter the financial landscape of Europe, ending up in a state of concentration of financial activities in fewer places that would further promote the integration process.

Table 5.2 Number of banks in Europe^(a)

	Number of banks	Population per branch
Austria ^(b)	836	1500
Belgium	112	1785
Finland ^(c)	369	2630
France ^(d)	1050	2375
Germany	2526	1450
Greece ^(b)	61	4305
Ireland	88	n.a.
Italy ^(d)	843	2125
Luxembourg ^(b)	212	1395
Netherlands ^(b)	561	2315
Portugal ^(d)	212	1820
Spain	366	1008
Non-member countries		
of EMU: Denmark	203	2550
Sweden	149	4390
UK ^(b)	452	3854
EU	8022	1960

Notes:

(a) As of 2001

(b) In 1999

(c) In 1998

(d) In 2000

Source: Bundesverband deutscher Banken 2002**2.4 Financial Centres and Networks**

Competition between European financial centres is not an entirely new phenomenon. From the first financial centres in Italy and France in the Middle Ages to the later rise of Bruges, Antwerp and Amsterdam, European financial activities had been largely concentrated on the Continent. London's importance as a centre of European merchant banking started comparably late in the seventeenth and eighteenth centuries during political and economic turbulence in mainland Europe. The City's international role strengthened with the rise of the British Empire. But, even at the height of its predominance London was never without rivals and Paris, Frankfurt and other places were constantly challenging its predominance (Reszat 2002b).

On the other hand, there had always been financial linkages between European cities. Prior to the invention of the electric telegraph in the nineteenth century, information flows were slow and dependent on the

prevailing transport system, and price differences in various locations offered huge arbitrage opportunities. Communication improved considerably with the first submarine cables – not only within Europe but also worldwide³ – and, later on, with the first telephone lines. The telephone facilitated all kinds of financial and foreign exchange transactions. By the 1950s ‘it could be said with very little exaggeration that it was almost as easy to transact business with a bank in a foreign centre as with one just across the road.’ (Einzig 1970, p. 239)

But the biggest boost to the rise of financial trades, networks and relations was with the beginnings of electronic dealing. Talks about the IT revolution of the 1990s make it easily forgotten that the roots of electronic dealing and communication in the financial services industry date back to the 1970s and 1980s. At the beginning of the 1970s, videotext technique allowed firms such as Reuters, Extel and Datastream in Europe, and Telerate and Quotron in the USA, to install terminals on dealers’ desks displaying prices fed in by banks and brokers. Simultaneously, another ‘revolution’ took place in stock markets when in 1971, the National Association of Securities Dealers installed NASDAQ, an electronic dealing system consisting of 20 000 miles of leased telephone lines connecting dealers with a central computing system. When the London International Financial Futures Exchange (LIFFE) was founded in 1982, although keeping the open-outcry system for floor trading, it became a leader among European exchanges with its high degree of automation in quotation and settlement (OECD 2001).

Electronic trading and automation paved the way for the first linkages and strategic alliances between exchanges both on a regional and global scale. One step in this direction was the establishment of a trading link between the Singapore International Monetary Exchange (SIMEX) and the Chicago Mercantile Exchange (CME) in 1984. This was the first of several networks and systems of an increasingly globalized automated securities trading and a forerunner of Globex, the system jointly developed by the CME and Reuters which allowed the electronic matching of buy and sell orders from computer terminals around the world. The first fully electronic exchange in Europe was the Swiss Options and Financial Futures Exchange (SOFFEX) founded in 1988.

Strategic alliances and mergers of stock exchanges became the first visible signs of the changing financial landscape in Europe. But, competition between European financial centres did not remain restricted to the securities markets. Slowly it started to comprise a wide range of financial services and many facets of the financial business and related industries. Beside trying to influence costs and efficiency considerations cities efforts’ to attract financial institutions increasingly focused on other aspects of

the world of finance, including the building of infrastructure, the enhancement of amenities of central business districts and even the promotion of lavish cultural programmes. Symbols of financial success became more and more important in the rivalry of places, and one new sign of cities' prosperity and importance in this context was the 'skyline': in the early 1980s, before London and Frankfurt began to compete openly for having the highest buildings, none of the big European centres had an accumulation of structures worth calling a skyline (Reszat 2000b). However, since then, buildings have become ever higher and architects' ambitions ever bolder.

Since the 1990s, European places managed to increase their importance as financial hubs and spokes in the world system, a process owing much to their exchanges' strategic alliances and mergers in a search to exploit scale economies and synergies. Cooperation included the adoption of a common trading system or implementation of a common system to access multiple trading systems (McAndrews and Stefanadis 2002). In 1998, the Swiss SOFFEX merged with Deutsche Terminbörse to become EUREX, Europe's biggest derivatives market measured by the number of contracts traded. These days, outside Switzerland and Germany, EUREX has access points in Amsterdam, Chicago, New York, Helsinki, London, Madrid, Paris, Hong Kong and Tokyo. In March 2000, the bourses of Paris, Amsterdam and Brussels merged to form Euronext which then won the battle for LIFFE in October 2001. But there were also failures as the examples of the hostile takeover bid for the London Stock Exchange by OM Gruppen of Sweden, and the equally unsuccessful plan to create iX by merging the London and Frankfurt stock exchanges, demonstrated.

Efforts are no longer restricted to the traditional big centres. In January 1998, the exchanges in Stockholm and Copenhagen signed a cooperation agreement to form NOREX, a common Nordic equity market later joined by Oslo and Helsinki. Besides, new electronic markets emerged. Examples are Virt-X, a joint venture of the London-based electronic market Tradepoint and the Swiss Stock Exchange, and Jiway, a retail-focused centre launched by OM Gruppen and Morgan Stanley Dean Witter in 2000 as an online cross-border exchange for retail investors.⁴

In addition, international links widened. A tendency emerged to build worldwide alliances by establishing markets in various countries with local partners using a common technology. For instance, this strategy is applied by NASDAQ, which so far, beside NASDAQ Europe, also established NASDAQ Japan and NASDAQ Canada. A German variant in collaboration with Dresdner Bank and Commerzbank is in preparation as of end-2003. Another example is the Globex Alliance which in Europe includes Euronext-LIFFE and derivatives exchanges in Italy, Portugal and Spain.

Despite considerable competitive pressures, London managed to stay the

Number 1 both on a regional and international level. The City still attracts the largest part of international financial business in Europe. Compared to its rivals in Paris and Frankfurt, it has by far the highest number of foreign banks and the highest share of cross-border lending, foreign equities turnover, foreign exchange and OTC derivatives dealing, and the highest incomes in marine and aviation insurance, and it is the most important centre of international bond trading, both in primary and secondary markets (Table 5.3).

But the figures also demonstrate that this position is not unchallenged. These days, other European centres, too, attract a notable share of foreign institutions and activities, and in some markets are even taking the lead. For example, this holds for exchange-traded derivatives which are primarily traded in Frankfurt and – not shown in the table – for the insurance industry as a whole. The latter is largely concentrated in Munich where total premium income is exceeding that in New York and London, ranked second and third respectively.

Financial centres in Europe built up the first linkages and networks long before official programmes of financial and monetary integration came into force and managed to keep their position as hubs and spokes of regional and international financial activity or even widen it in recent years. So far, expectations that increasing competition would leave Europe's financial landscape reduced to fewer centres have not materialized. On the

*Table 5.3 European financial markets in comparison**

	UK	France	Germany	US	Japan
Number of foreign banks	481	187	242	287	92
Cross-border bank lending (March 2001)	20	6	9	10	11
Foreign equities turnover (2000)	48	–	6	36	–
Foreign exchange dealing (April 2001)	31	3	5	16	9
Derivatives turnover					
Exchange-traded (2000)	8	8	15	43	5
OTC (April 2001)	36	9	13	18	3
Insurance net premium income (1998)					
Marine	19	5	12	13	13
Aviation	31	14	3	23	3

Note: * If not stated otherwise, as percentage share of world total.

Source: IFSL

contrary, technological progress allowed smaller places to start competing with the big ones on an equal footing. Rivalry between financial centres enhanced financial integration but not through their decline in number but through the creation of strategic alliances and mergers beyond borders. The Single Market programme only speeded up these developments.

2.5 The Single Market Programme

The Big Bang in the UK raised the appetite of other countries for a Europe-wide financial liberalization which was reflected in the EU Single Market programme for financial services. There had been official European integration efforts before. For example, the internal market in banking had been established with the first banking directive of 1977 that enabled banks in the European Community to establish branches or subsidiaries in member countries. But, after the Single Market Act of 1985, there was widespread agreement that more progress was needed. A borderless market with unrestricted movement of people, goods and services would require further liberalization of financial flows and payments and the convergence of financial market legislation to fully exploit the benefits of integration. The aim was to make both individuals and firms take advantage of deeper and more liquid financial markets, and a wider range of financial instruments available for risk management and portfolio diversification, and of more intense competition between financial institutions ensuring better prices and higher efficiency.

In the Single Market framework, financial services are divided along functional lines focusing on the banking, securities and brokerage sectors. Four key directives set the rules for EU-wide harmonization in these sectors (Gros and Lannoo 2000):

- The second banking directive of December 1989 that came into force in 1993 introduced the single EU banking licence allowing credit institutions authorized to do business in one member state full access to other EU markets.
- The investment services directive of 1993 defines the modalities for the free provision of services by brokers and securities markets.
- The third life and non-life directives of 1992 were established to coordinate laws, regulations and administrative provisions relating to the various parts of the insurance industry and set minimum rules for the qualitative and quantitative investment of assets.

In 1998, the EU launched the Financial Services Action Plan (FSAP) in an attempt to capitalize on the introduction of the euro. The plan includes

43 new laws establishing a unified set of rules for investors and consumers under a strict timetable. The aim is to complete the legislative framework for the internal market in financial services and to eliminate remaining deficits in the substance of EU legislation.

The various components of the FSAP can be divided into four broad areas. The first is the creation of a single European wholesale market for financial products and services. This includes the issues of EU-wide capital raising, of stock market listings and prospectuses, and regular reporting. Other measures in this group are the establishment of a common legal framework for integrated securities and derivatives markets and of a single set of financial statements for listed companies, the containment of systemic risk in securities, the creation of a secure and transparent environment for cross-border restructuring, including takeovers, and of a single market for investors (Table 5.4). There is also a pension funds directive and a new UCITS directive replacing the one that had been established in 1985 setting minimum standards for a single licence for unit trusts throughout the community.

A second group of components aims at creating open and secure retail markets. This consists of nine measures such as those on the distant selling of financial services, on clear and comprehensible information for purchasers, on insurance intermediaries, a single market for payments, and e-commerce policy for financial services. The third area deals with prudential rules and supervision including the re-organization and winding up of insurance undertakings and banks, the disclosure of financial instruments and the supervision of financial conglomerates. The last group contains issues of wider conditions for an optimal single financial market such as harmonization of tax regulations or the creation of an efficient and transparent legal system of corporate governance (Deutsche Bank Research 2002).

Under the EU timetable, by the end of 2003, the new laws to create a single capital market must be in place and by 2005 national rules for other financial services such as insurance and pensions must be completed. At first view, the progress reached so far is impressive. In mid-2002, about 58 per cent of actions planned under the FSAP were already completed successfully and in 33 per cent of all cases at least some progress has been made. But these outcomes cannot hide the fact that in qualitative terms there have been minor improvements and mostly on issues the Commission was able to decide on its own without involving other EU institutions. There has been little advance on politically sensitive issues where the outcomes have to be negotiated between the Commission, the Council and the European Parliament, and the agreement of rules on the taxation of savings incomes of January 2003, for which the first proposal had been tabled in 1989, can be regarded as milestone.

Table 5.4 FSAP components

	Objective	Subject areas
1.	Single wholesale market	EU-wide capital rising Common legal framework for integrated securities and derivatives markets Uniform financial statements for listed companies Containing systemic risk in securities settlement Cross-border corporate restructuring Single market for investors
2.	Open and secure retail markets	Distance selling of financial services Financial service providers' duty of information towards purchasers Cross-border electronic payments for financial services
3.	Prudential rules and supervision	Reorganization and winding-up of insurance undertakings and banks Disclosure of financial instruments; supervision of financial conglomerates
4.	Wider conditions for an optimal single financial market	Harmonization of tax regulations; creation of an efficient and transparent legal system of corporate governance

All in all, national barriers to reform in the EU are still high. The wish list is long, containing access to portable European pension schemes for citizens working across the Union, the removal of local marketing and administrative restrictions on EU investment funds (UCITS), balanced business rules for investment firms marketing their products in multiple EU states, or the abandonment of inconsistent national tax treatments of pension funds. Further, there are calls for a more efficient approach to financial regulation. One important point is the creation of a single national regulatory authority in each member state covering all financial services and consolidating the various national supervisory authorities to

facilitate consistent implementation and enforcement of European regulations. While for the conduct of monetary policy a single institution, the European Central Bank, has been established, no comparable provision has been made for the creation of common institutions to supervise the financial sector. There are debates on whether the EU would actually need a decentralized structure similar to the European system of central banks, or even a geographically integrated European regulation and supervision, or whether the present Lamfalussy approach (Lamfalussy Group 2001), as vague as it may be on implementation, will suffice. But, there are few doubts that the current practice of about 40 public bodies in the European Union dealing with securities markets regulation and supervision has to be reformed.

There are also critics who hint at the drawbacks of the whole approach of the FSAP, referring to the gap between the broad political commitment to financial reform and integration in the EU and the pace of progress at the lower level at which individual measures have to be adopted. Still the main difficulties result from the different stages of financial market development in the 15 member states including different values, conventions and business cultures that are hard to harmonise. Long-established structures and traditions and national interests largely explain why, in practice, governments as well as market operators, supervisors and regulators in some countries resist reform more than in others.

3. THE EFFECTS OF EMU

The issue of to what extent the Single Market programme will contribute, and has already contributed, to financial development in member countries and to European financial integration cannot be separated from the effects that the introduction of the euro itself had on financial markets, systems and institutions. This section will examine the changes monetary union itself brought about and discuss the effects of monetary union on financial market integration in Europe.

3.1 Markets

With the euro came the European System of Central Banks (ESCB) and a common monetary policy and money market in Europe. In the interbank market, during the first weeks after its introduction, spreads across national markets in the euro zone declined rapidly indicating that banks had started to manage their liquidity more centrally operating in a single market area. A two-tier market developed with larger banks trading directly with each

other across borders and smaller institutions operating at the national level.

In Europe, the interbank money market consists of unsecured deposits, short-term repos, in which short-term liquidity is exchanged against collateral, and foreign currency swaps in which future payments in one currency are exchanged for payment in another currency. In 1999, unsecured deposits accounted for 53 per cent of the market, repos for 24 per cent and currency swaps for 23 per cent. A breakdown by maturity shows that in overnight transactions, deposits played by far the biggest role with over 70 per cent market share while for longer maturities, repos and swaps have a greater importance as they provide greater security.

With the launch of the euro the share of currency swaps declined markedly. At first glance somewhat surprisingly, integration advanced most rapidly in the riskiest market segment, the unsecured deposit market. Its share rose from 48 to 53 per cent. But, at closer inspection it turns out that most of this change occurred in the overnight market. For longer maturities, the share of repos rose while that of deposits even declined. Nevertheless, participants agreed that the repo market did not become as integrated as the unsecured market. Conditions for repos still show a diverging pattern across euro area countries. One reason is the cost of managing the collateral involved. There are differences with respect to the reduction of risk achieved by the cash lender, the opportunity cost incurred by the collateral lender (i.e. the cash borrower) and the cost of cross-border management of the collateral borne by both parties such as settlement, marking to market, coupon treatments or legal arrangements. Other factors leading to an ongoing preference for deals in domestic assets include national investment guidelines limiting holdings of foreign securities, differences in tax treatments of bonds and an uneven distribution of collateral throughout the euro area.

In securities markets, too, integration patterns differ. In the market for short-term securities such as Treasury bills, commercial paper (CP) issued by corporations, and bank certificates of deposits (CDs), adjustment was comparably slow with a strong remaining domestic orientation. One explanation is the traditional focus of money market funds on domestic retail markets. Another is lack of infrastructure and a harmonised trading environment which is reflected in the segmentation of clearing and settlement systems, differences in fiscal treatment and a lack of uniform legal documentation.

There was a shift between public and private issues with privately issued securities overtaking the short-term government paper market. The latter slowed down in reaction to reduced government deficits in many euro area countries and Treasuries' efforts to lengthen average maturities of liabilities

in order to take advantage of lower interest rates. At the same time, private issues increased markedly, but the markets remained strongly fragmented: Throughout the euro area the supply of CDs and CP is not standardized and largely tailored to domestic investors' needs. Before EMU, in Europe these instruments were rarely used except in countries where CP issuance is part of business relations between banks and corporations serving as close substitutes to other forms of short-term funding such as credit lines. In general, only very big internationally operating firms issued securitized money market instruments to finance short-term operations. The recent change is partly explained by the direct influence of the euro on firms' financial environment and a growing attractiveness of the euro market for non-resident issuers, while in part it is the result of rising mergers and acquisitions that to some extent were financed by CP.

At the other end of the maturity spectrum, with the introduction of the euro the second-largest market worldwide for medium- and long-term bonds emerged in the region. European bond markets, too, were long dominated by the government sector. As a rule, in contrast to the US, only few large firms with high ratings were issuing corporate bonds. This changed in recent years and meanwhile non-government securities have overtaken government securities as the larger market segment. One explanation, again, is the development of public finances in Europe and elsewhere. In recent years, many governments have made substantial progress in budget consolidation. In the euro area, this tendency was reinforced by commitment to the Maastricht Treaty, and the Stability and Growth Pact of 1998, calling for a reduction of government debt levels to 60 per cent of GDP and limiting fiscal deficits to 3 per cent of GDP.

The replacement of national currencies opened up new opportunities on the demand side, too. Institutional investors such as pension funds and insurance companies, and other financial institutions facing restrictions on their investments in foreign currency instruments, suddenly faced a much wider choice of assets available. In particular, French and German institutional investors became a driving force in the market with German institutions already strongly increasing their purchases of euro-denominated securities in 1998, ahead of the formal introduction of the euro (Galati and Tsatsaronis 2001). Their presence is not only considerably adding to market liquidity but, due to the peculiarities of investor behaviour, also contributing to market stability. In general, institutional investors are following relatively passive asset management strategies. They tend to have longer investment horizons than other market participants and are trading positions less often or hold them until maturity.

While bond and derivatives trading have shown strong integration tendencies since the late 1990s, other markets seemed less affected by the

launch of the euro. This holds in particular for equities. The contribution of the common currency to the process of consolidation that undeniably is under way among European stock exchanges appears a rather modest one. Fragmentation across national lines remained high. Each country still has its own legal and regulatory apparatus and the number of cross-country alliances is still small. As a consequence, institutions and arrangements required to execute and settle stock trades are replicated numerous times, trades are still mainly conducted among local investors, and trading volumes and liquidity for individual stocks are low. Trade execution fees are much higher than, for example, in the US thereby reducing the ability of European exchanges to attract listings from other parts of the world (Goldberg et al. 2002).

One effect of the euro is that, even before its introduction, it heightened overall awareness of the opportunities of cross-border trading in the region giving stock exchanges greater incentive to expand across national boundaries thereby contributing to the first signs of emergence of an equity culture across Europe. But, impediments remain high (McAndrews and Stefanadis 2002). One is legal and regulatory differences. Those include listing requirements, accounting rules and tax treatment with the latter not only referring to different taxes but also to mechanisms for tax collection and double-taxation treaties. Another is the home-country bias investors show due to information costs associated with international trading. Cultural differences and language barriers still make it difficult and expensive to obtain information on foreign companies and developments and, although its introduction eliminated some intra-European currency risk and simplified cross-country comparisons of corporate data, the euro is but one factor in a vast variety of influences determining demand and supply in stock markets.

Another impediment is the fragmentation of clearing and settlement systems. What makes cross-border transactions in Europe so expensive is that national markets have their own securities depositories and settlement systems intimately connected to the national payment infrastructures (Schmiedel et al. 2002). There are estimates that clearing and settlement costs for transactions in Europe are nine times higher than in the USA, and may be up to forty-six times higher for cross-border trades. Consolidation is under way, albeit slowly. In recent years, Cedel and Deutsche Börse Clearing merged to form Clearstream. Sicovam, the Paris settlement system merged with Euroclear, which was then joined by CIK and Necigef, the central securities depositories of Belgium and the Netherlands, and in London the CCP, a central counterparty for stocks, was formed as a joint initiative by the London Stock Exchange, the London Clearing House and London's settlement house, Crest. The latter, in turn, merged with Euroclear, and (as of

January 2003) there is an imminent merger of the London Clearing House with Paris-based Clearnet, 80 per cent owned by Euroclear.

In reaction to the euro, there were major changes in the way shares are traded. Months before the introduction of the common currency, institutional investors, investment banks and asset managers started to disband country desks and reorganized their equity and trading operations on an area-wide basis focusing on industrial sectors instead (Galati and Tsatsaronis 2001). The idea was that in eliminating currency risk the euro would further accelerate the process of European economic integration which – together with the unified monetary policy stance through the creation of the Eurosystem and an increasing cohesion of fiscal policies through the provisions of the Maastricht Treaty – would make economic conditions become more synchronized across countries thereby diminishing the relative importance of country-specific influences on share prices.

In a sense, there is a tendency for those expectations to become more and more self-fulfilling. As cross-border equity trading grows, trading infrastructures within Europe become increasingly linked, and the results of analyst reports and high-quality securities research are more widely circulated, pricing mechanisms are converging. Of growing importance in this process are practices such as block trading and portfolio insurance. Block trading was introduced in the UK after the Big Bang in order to accommodate institutional investors that sought to build up large positions in European stocks without causing market prices to rise, and spread to other European markets subsequently. In recent years, a special variant emerged that further sped up price convergence: accelerated trades. Those are coordinated actions of hundreds of traders of big brokerages designed to build momentum selling millions of shares within hours to large numbers of international institutional investors.

Practices such as block trading and portfolio insurance are but two facets of a growing presence and influence of both international firms and investors from outside Europe. In the past, European stock exchanges differed significantly in their interest and ability to attract foreign listings and on the other hand, with few exceptions, investing in European shares appeared not very attractive from outside. In some exchanges, foreign listings did not exist at all, in others such as Germany, the number of foreign listed companies was higher than the domestic, but trading volumes were low. In the UK, the value of trading in foreign equity is traditionally high. In 1998, it accounted for 93 per cent of all foreign trading in the EU reflecting the City's competitive strength (Gros and Lannoo 2000). The advent of the euro has increased both competition between European exchanges for foreign listings and the awareness of investors from outside Europe of their growing attractiveness.

3.2 Banks

Another sector where the influence of the euro was felt only modestly is banking. In the beginning, aspirations had been high. With the advent of the common currency, the banking sector was expected to become far more efficient. Monetary integration would allow financial institutions to exploit economies of scale from at least two sources. One is geographic widening of business across Europe, the other growth by mergers and acquisitions. Both were said to bring bank profitability closer to the levels prevailing in the USA. But, both did not materialize in the expected way.

Banking structures in Europe differ from those in other parts of the world (Bundesverband deutscher Banken 2002). At the end of 2001, there were about 8000 banks in the EU. In the euro area, the majority of banks are small. At the end of 1999, around 80 per cent had assets worth €1 billion or less. Among them, the largest numbers of banks are found in France, Germany, Italy, the Netherlands and Spain. There are only 21 big banks with total assets worth €100 billion or more, 10 of which are located in Germany, another 6 in France, 2 in Belgium and one in Austria, Italy and Spain respectively.

Traditionally, cross-border activities of banks depend, above all, on country size and economic relevance. In preparation to, and with the advent of, the euro the number of banks with cross-country operations increased markedly as the data for the five countries with the biggest numbers of banks demonstrate (Table 5.5). Target countries were above all those countries that already had a larger number of foreign banks before, such as Belgium, France, Italy, the Netherlands and Spain. The exception is Luxembourg that saw a decline in foreign bank presence from many countries. Above all, banks tended to strengthen their presence in neighbouring countries. But, cross-penetration was not restricted to the euro area. Even before EMU, banks from non-member countries operated in other European countries and, as a group, further increased their presence in reaction to the euro and other developments. This holds in particular for British banks that are competing with other European ones on their home territories.

Despite the increase of cross-border activities, Europe remains largely divided by national barriers. Even the big banks still derive 50 to 75 per cent of their profits from domestic markets. This holds not only for the inter-bank market but in particular for retail business. Except for Ireland and the Benelux countries, the share of loans from banks in the euro area to non-banks in other member countries is traditionally less than 2.5 per cent, and this did not change with the euro introduction (Bundesverband deutscher Banken 2002).

Table 5.5 Cross-border penetration of banks in the euro area

Country of origin Host country	France		Germany		Italy		Netherlands		Spain	
	1998	2001	1998	2001	1998	2001	1998	2001	1998	2001
Belgium	7	10	6	7	1		6	8	3	2
Finland	1	1		2						
France			10	14	5	6	3	4	9	7
Germany	10	17			5	5	7	8	2	1
Greece	4	4	2	2	1	1	2	2		
Ireland	2	5	1	3			3	4	2	2
Italy	10	13	11	12			5	7	4	3
Luxembourg	7	6	36	30	9	7				1
Netherlands	3	4	4	8	1	1				
Austria	1	1	3	6	1	1	2	3		
Portugal	5	5		3			1	1	6	7
Spain	10	16	4	7	5	4	3	4		

Source: Bundesverband deutscher Banken 2002.

What has happened is an adjustment of systems. One concomitant of the restructuring process in the banking industry in recent years is a shift in Continental Europe from traditional bank lending to investment banking, with the consequence that the dichotomy between bank-based and market-based systems is eroded steadily. Competition in the market for investment services increased as the convergence of underwriting fees indicates (Study Group on Fixed Income Markets 2001). These days, for banks it is often a matter of survival to adapt to a changing environment by becoming engaged in bond underwriting, selling capital market products to households and securitizing bank loans in bundling them into packages to be sold in the market.

But this process owes less to the introduction of the euro than it is reflecting an overall international trend (Turner 2001). The same holds for mergers and acquisitions in the banking industry. The wave of pan-European mergers that was supposed to follow the introduction of the euro, 'with a new breed of super-banks emerging, sweeping inefficiencies before it' (Skorecki 2002), did not happen. There have been some spectacular cases such as HSBC's acquisition of *Crédit Commercial de France* and HVB's purchase of *Bank Austria* in 2000. But consolidation has mostly taken place within countries, and after the first experiences with foreign takeovers, states have become more, rather than less, protective against outsiders.

Strategic alliances are an alternative to cross-border mergers and acquisitions which have gained more and more attraction with the concerns raised about the efficiency of ever bigger financial institutions in recent years. In contrast to a view widely held in the industry and outside, little empirical evidence has been found so far of scale economies for large banks, and no evidence whatsoever for the largest ones (Walter and Smith 2000). The same appears to hold for insurance companies and brokerages. Beside, there is a growing awareness of the danger that the tendency towards all-finance conglomerates might magnify operations risks as the result of incompatible systems and an unforeseen rise of exposures in merged credit portfolios (CSFI 2002). For Europe, these findings are of particular importance since, on average, the top European financial institutions are already much larger than, for instance, those in the USA – a fact that apparently did not help improve their performance in the past.

3.3 Systems

Experience with financial developments in the euro area since the late 1990s has shown that many of the remaining obstacles to financial integration are rooted in the institutional environment. In the banking industry, state influence is still high and national structures hinder further consolidation. One example is Germany where the banking system's 'three-pillar' structure of commercial banks, public sector banks and mutually owned institutions has so far inhibited mergers between different sectors. Securities markets are still strongly fragmented: in 1998, there were 32 stock exchanges in Europe (compared to eight in the USA) and 23 derivatives exchanges (in the USA: seven). In the government securities market, there are still 12 different issuers, and differences in governments' credit ratings, issuance techniques and instruments remain a hindrance to the fungibility of euro area government securities (Study Group on Fixed Income Markets 2001). One prerequisite for the smooth functioning of securities markets is an efficient clearing and settlement process. But, in the EU, clearing and settlement, too, are still highly fragmented. In 2001, there were 19 different national Central Securities Depositories (CSDs) and two international ones (Giovannini Group 2001).

Many of the existing institutional differences between countries have their roots in recent history and in the reactions to the financial crises of the past. The suppression of financial markets that has historically occurred in France and Germany has been one response to market failures, the self-regulation that has been characteristic of the UK system was another one (Allen and Gale 2001). But, above all, European countries have different legal origins and systems. Traditionally, a distinction is made between civil

law countries and common law countries. In principle, laws in civil law countries set a minimum standard of expected behaviour with citizens obligated to comply with the letter of the law. In contrast, common law countries have a 'non-legalistic' orientation. Their laws establish the limits beyond which it is illegal to venture and within which latitude and judgement are permitted and encouraged.

Differences in legal systems are one explanation for differences in the protection of outside investors and in the judicial efficiency observed across countries (La Porta et al. 2000). The latter affect enforcement costs and thereby the cost of financial intermediation. For example, other things unchanged, a rise in judicial efficiency can increase the availability of credit and lower collateral requirements. In the EU, all countries except Ireland and the UK are common law countries. International comparisons found that countries with common law tradition tend to have a higher judicial efficiency than civil law countries. This makes an initial advantage of the euro area, a common legal tradition of most of its members, turn into a disadvantage of the wider region when in an effort to proceed with financial integration an adjustment to the standards prevailing on the Continent is sought.

One of the expressions of a country's legal system is bankruptcy law and debtor-creditor law which, in Europe, imposes considerable impediments to the financial integration process. In addition, it hinders the development of a pan-European risk capital market. For example, in many European countries, bankruptcy rules make it very difficult for an entrepreneur who has failed once to start a company again. This is in strong contrast to the USA where the 'right to fail' is considered part of the learning process of business. In this way rules in European countries contribute to establishing a European culture of risk aversion (Sallard 1999).

Another institutional barrier to integration is tax systems. Taxation of income and capital is an area in which despite the Single Market programme differences across countries are still high. In the EU, 15 different company tax systems apply. Countries' tax systems still tend to favour domestic investments which might help explain the observed home bias in international portfolios. Dividends are subject to double taxation, and in some member countries the tax credit granted to resident shareholders for the tax paid at company level is not available to non-residents. Considerable differences exist in the effective tax burden: for a subsidiary of a parent company this can reach more than 30 percentage points depending on location. As a consequence, investments may not take place in the lowest cost locations but where the lowest taxes are paid (Adam et al. 2002). Differences in tax systems help explain why, for example, in the middle of the process of financial integration and convergence of systems

in Europe, Ireland managed to establish itself as an outstanding international banking centre.

Deposit insurance is another example of institutional barriers. These days, banks in Europe are increasingly competing for an international clientele, and deposit insurance is one important element of this competition. EU standards regulate little beyond the minimum insured amount of €20 000 prescribed in the EU deposit insurance directive. Schemes in member countries differ widely in premiums, coverage limits, sources of funding, whether they also insure deposits in foreign currency, whether the administration of the scheme is official, private, or joint, and whether bank membership is voluntary or compulsory. The existence of deposit insurance and its various design elements have, above all, two consequences. They determine location decisions of banks and non-banks, thereby influencing domestic employment, incomes, and the tax base, and they affect financial stability. There are indications for a trade-off between the attractiveness of a location to international bank deposits and bank safety: the existence of explicit deposit insurance may lower market discipline and increase the probability of a banking crisis (Huizinga and Nicodème 2002).

3.4 Centres

One open issue is the effect of the euro on Europe's financial landscape. In the debates, attention usually focuses on stock markets where mergers and consolidation processes resulted in the emergence of three major 'poles' in recent years (Goldberg et al. 2002). One formed in 2000 with the establishment of Euronext, a second pole is centered around Deutsche Börse, and a third one exists in the UK. These are strengthening the role of Paris, Frankfurt and London respectively in their competition for becoming the future hub of European finance.

Traditionally, London has the most advantages. The high concentration of financial institutions in the City allows them to realize considerable scale economies. They benefit further from the existence of high quality professional and supporting services such as accounting, actuarial and legal services and IT, and from an efficient infrastructure including office accommodation and telecommunications. In addition, there is the use of the English language. These days, these advantages are often contrasted with the disadvantage resulting from the fact that Britain is not a member of the euro area. But, this is rather an argument used outside the City. In London itself, the euro is widely regarded as just one stress factor among others. Expensive property rates and worsening infrastructure are considered at least as threatening to the City's long-term attractiveness (CSFI 2002).

Similar modifications must be made concerning the role of Frankfurt which was expected to benefit the most of the three places from EMU because of the size of the German economy, the former importance of the D-mark, the dominance of German banks in the euro area and the location of the European Central Bank. Three years after the launch of the euro, although the presence of foreign institutions has clearly risen, anecdotal evidence gives the impression that Frankfurt's relative position has not improved markedly. For example, when DePfa, one of Germany's biggest financial institutions and a specialist in public sector finance, relocated from Wiesbaden to Dublin, the head of the bank moved from Frankfurt to London. Big German banks have long shifted major activities such as foreign exchange and investment banking to the UK and, recently, there were even rumours that Deutsche Bank, the symbol of German financial power, was harbouring plans to abandon Frankfurt in favour of London. In general, in the financial industry identification with Frankfurt is low. Employees are commuting between Frankfurt and London or other places for the weekends, and many traders are not even located in Frankfurt but use its trading infrastructure and new technologies for doing business from afar.

So far, the advent of the common currency did not prompt business to shift from London to places in the euro area on a massive scale. On the contrary, the spatial closeness of one of the world's leading financial centres to the euro zone countries tended to further increase the place's attractiveness to financial institutions both in and outside Europe. On the other hand, London's rivals in Frankfurt, Paris and other places are constantly coming up with new challenges. The debate about the hierarchy of financial places in the region will gain new impetus if and when Britain decides to join the euro.

There is a growing role of places outside Europe in shaping the European financial landscape with competition between European financial places and institutions increasingly taking place outside the region. Recent moves of Eurex and Euronext-LIFFE to enter the US markets are but one example. The growing presence of European banks in other parts of the world is another one. This expansion is not free of risks. Poorly performing foreign investments and acquisitions threaten to worsen earnings quality and increase banks' overall risk profile. In particular, the establishment in emerging economies makes the banks highly vulnerable to systemic risk during financial crises which, in turn, may have repercussions on home markets. One example is the expansion of Spanish banks in Latin America which, at first, was considered one of the most important elements of bank internationalization in recent years and later became one of its most fatal examples as crisis struck in Argentina.

4. LESSONS TO BE LEARNED

Experience so far has shown that the contribution of monetary integration to European financial integration differed across markets. The euro's catalyst role has been the stronger the more national markets have in common and the greater the importance of currency risk as a discriminating factor. It has been most successful in the interbank market for very short-term unsecured deposits and in markets for bonds and derivatives where standardization is comparably high. It played a lesser role for collateralized instruments and equities where differences in institutions and systems as well as cultural aspects impose additional barriers and hamper comparability. In general, influences accounting for heterogeneity can be grouped into five categories:

- *Maturities* The longer the investment horizon, the greater is the probability that country- or instrument-specific influences become felt, making prices for seemingly similar products of different origin move apart.
- *Liquidity* Prices for seemingly similar financial instruments may get out of sync even with other influences unchanged when squeezes in some markets occur and liquidity dries up while others remain unaffected.
- *Standardization and transparency* In highly standardized and transparent markets currency risk is often the only or most important element hindering integration.
- *Third-market dependence* This bears the risk that prices for seemingly similar instruments drift apart because part of them are influenced by developments in another market they are closely related to. One example is the link between different cash instruments and the relations to their derivatives.
- *Institutional differences* Beside the influences described in the preceding section these include different stages of market development, an aspect that may become crucial for the EU accession countries from Central and Eastern Europe.

The higher developed, more standardized and more liquid comparable financial instruments of different origin are, and the greater the degree of financial integration reached before, the stronger the effects of monetary integration and the introduction of a common currency. By contrast, imposing a single currency on immature, strongly specialized or highly fragmented markets may not only lower its effectiveness but increase the likelihood of additional frictions. Examples are the uncertainties and

search processes related to pricing processes in bond markets and the construction of yield curves in the euro area.

In national markets there is usually a strict hierarchy of borrowers determining the financial instruments serving as benchmarks. In the euro area, this relation is broken. It turned out that markets for national instruments are not deep and diverse enough to assume benchmark status for the whole region across all maturities. As a consequence, price discovery has become more complex and widened to a larger circle of benchmark candidates including private borrowers and derivatives. Benchmark status is fraught with more risks and changing more frequently.

Concerns arose about the adequate pricing of risks. Again, bond markets may serve as an example. Recently, markets have seen a convergence of bond spreads for Eastern European countries negotiating for EU entry in 2004 with the prospects of joining the euro zone in 2007. For example, in March 2002, euro-denominated bonds of Slovenia and Hungary were yielding 45 to 50 basis points over the German bond, and Poland about 70 basis points. By comparison, Sweden's bond yields at the same time were 46 basis points over the German bond, Greece's was 33 basis points. In November 2002, Moody's eliminated the gap between foreign and domestic government debt ratings of eight entry candidates treating them as if they were already full members of the euro area. Agencies normally assign a lower rating to a country's foreign debt on the ground that, in contrast to domestic debt, it cannot print its own currency for serving and repaying it. But, Moody's assumed this foreign currency risk to fall and be eliminated completely by the time the countries would join the euro.

The example indicates how much the introduction of the common currency has changed conditions and risk perceptions in European markets. Four years before the launch of the euro, Italy, Spain and Portugal had been yielding about 500 basis points over the German bond while Greece was not even able to issue domestic bonds of 10-year maturity until 1997. The question arising in this context is, whether those borrowers had been so much riskier than the present entry candidates or whether this time the markets are simply over-optimistic and mispricing the related risks. Uncertainty is even greater in markets less transparent than those for government bonds, and there is a danger that the introduction of the common currency will attract additional activity to these markets neglecting the remaining differences between countries.

There are several implications of the experience with European monetary integration so far for countries outside the euro area: first, there is the group of accession countries. On average, their banking sectors are still relatively weak compared to western Europe, stock markets are less developed, the range of financial instruments available is limited, corporate loan markets

are underdeveloped and household savings are slow in moving away from bank deposits into other instruments. With EU entry, the process of financial sector consolidation that has barely begun, is expected to accelerate with new market participants from foreign countries reinforcing competitive pressures.

In this situation, the process of monetary integration which is one prerequisite for EU accession can be expected to speed up financial integration, but, it is not without problems. The introduction of the euro in these countries will distract attention from country-specific determinants of financial markets and prices to sector-specific and individual features as it has done in the West before. But, in contrast to the latter, for the years to come, for those countries in economic transition, financial risks and returns in home markets will continue to strongly depend on their direct economic and political environment. As in today's markets for euro-denominated bonds, there is a danger that the gap between real and perceived circumstances widens thereby increasing the potential for market frictions and failures.

A related issue is currency risk. After EU entry, the countries will be obliged to wait for a transition period of two years after which the convergence criteria will be assessed and the introduction of the common currency will become possible for the first time. During this period, the countries' currencies will be exposed to a heightened risk of speculative attacks. The EMS crises of 1992/93 have demonstrated the force of such attacks and, given the volume of foreign exchange trading in global markets, there are strong doubts whether the new member states would be able to stand the pressures. They will have no opportunity to avoid this situation, for example, by shortening the transition period, because that would mean a breach of the rules. The only alternative left would be unilateral 'euroization' – the lonely decision to adopt the euro from the start – but the resulting economic effects which could aggravate existing problems of EU membership, are a strong argument not to follow this course.

The currency risks of EU enlargement are not necessarily limited to accession countries. There is a danger of contagion to the three existing EU countries outside the euro. With EU enlargement, traders in the markets may treat the EU area as an entity and not discriminate between new and 'old' members. In this case, a speculative attack would not spare the UK, Denmark and Sweden. In addition, in contrast to the monetary relations of members within the euro area those countries would have to face the possibility of destabilizing cross-rate effects. So far, the three euro-out countries have experienced few disadvantages from their present status. As a result of global competitive pressures, like other EU countries, they have

gone through a process of financial consolidation in recent years. Banks from Denmark and Sweden expanded into neighbouring countries, and their exchanges fared well in European competition. With respect to the wider economic effects of EMU, the performance of the three was even stronger than that of other EU countries. But, to them, EU enlargement may provide additional arguments to join the euro.

One group of countries closely watching European developments are those in other world regions where, in recent years, European monetary integration has become a model for similar efforts. Learning from the European experience is a motto that in particular struck a chord in East Asia where countries are striving for greater financial stability after the experience of the crisis of 1997/98. Monetary integration is widely considered as an important ingredient in this process, but, the question is: does European experience really suggest it to be an indispensable prerequisite for financial integration? The answer depends to a large extent on the stage of financial development of member countries.

Monetary integration helps unite markets for financial instruments where market forces are not hindered by insurmountable barriers and differences, thereby enhancing the overall efficiency of national financial systems and creating further incentives for reform. But it is no substitute for the removal of barriers hindering the free movement of financial institutions and services. And, it cannot compensate for the specific information about individuals, firms and markets required, for example, in stock trading or retail banking. As a consequence, the markets for loans and equities, and a few other financial products, will always retain a strong national element. Another aspect is that, as the UK example demonstrates, for a fully-developed international financial centre, a common currency probably would not make much difference. The bulk of financial business these days is done in a few key markets and currencies and it is access to these markets that determines international competitiveness. For places such as Tokyo, Hong Kong and Singapore, participating in a regional project of financial integration like the Single Market programme would be an important step, joining a single currency not necessarily so.

5. CONCLUDING REMARKS

European monetary integration is one element in the process of financial integration in Europe, and one that in and outside the region is easily over-rated. It is only the – preliminary – last step in the development of a common monetary and financial culture that is deeply rooted in history. There is a direct line from the Italian merchant banks at the Champagne

fairs in France in the thirteenth century over the establishment of the Amsterdam Bourse as Europe's leading securities market in the seventeenth century to the more recent role of London as hub of international foreign exchange and bond trading. This created a tradition of openness that found its latest expression in recent efforts to formally establish and complete a common legislative framework for investors and consumers of financial services under the Single Market programme. Countries from other regions lacking this experience may find it difficult to mimic the integration process.

The integration effects of monetary union have so far differed across markets and institutions. The euro has been most successful in integrating the interbank market for very short-term unsecured deposits and those for bonds and derivatives. It had a big impact on volumes in fixed-income markets through the shift from government to non-government securities, both short-term and long-term, as a consequence of the rules of the Maastricht Treaty and the Stability and Growth Pact on public finance. Another remarkable effect was the contribution of the common currency to the explosion of trading in instruments such as interest rate swaps and credit derivatives, and the need it created for developing new strategies and techniques for hedging and trading in the euro area.

In some cases, its effects cannot be separated from overall international tendencies. For instance, this holds for the increase of short-term private securities as the means of financing growing numbers of mergers and acquisitions or the rise of off-balance-sheet instruments increasingly used for hedging and funding purposes. Other examples are the success of credit derivatives that is partly the result of the growing attention on credit risks in international markets and the vanishing dichotomy between investment banking and traditional bank lending.

In many respects, despite its undeniable advantage of eliminating currency risks and reducing transaction costs for both financial and non-financial firms, the influence of the euro on financial integration in Europe is limited as yet. Markets and systems are still highly fragmented and without the further removal of institutional barriers, and a greater commitment to financial reform at the level where individual measures are adopted, Europe's citizens are denied its full benefits. Cultural values, conventions and national interests are hard to harmonize. Just as, despite the 280 laws approved by European parliaments between 1986 and 1992 in order to create the Single Market, an Austrian baker still needs eight licences to open a shop in Italy a few kilometres down the road, financial integration faces many hindrances, and the functioning of national financial markets often remains opaque to investors and financial institutions from outside.

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NOTES

1. With the introduction of the euro, a new benchmark sponsored by the European Banking Federation was introduced, the EURIBOR. This is the rate at which euro interbank term deposits within the euro zone are offered by one prime bank to another. There is also a new overnight reference rate which is the Euro Overnight Index Average or EONIA.
2. This first law brought among other things the admission of financial innovations such as floating rate notes, zero bonds, dual-currency issues and certificates of deposits. The reforms of the second included the outlawing of insider trading, tightening of share disclosure requirements and the establishment of a centralized regulatory body for Germany's securities markets. The third in February 1998, aimed at increasing access to venture capital for small and medium-sized unlisted firms, facilitating the raising of capital for listed companies and widening the range of investment instruments for private savings. The fourth law which came into force in July 2001 includes measures to tighten financial market regulation, improve investor protection and fight against money laundering.
3. London became linked to Paris by cable in 1851 and to New York in 1866. See Reszat (2000a) and the references provided there.
4. Jiway was bought out by OM in September 2001 in an attempt to cut costs by integrating its exchange operations with those of the OM London Exchange. In addition, there are plans for the London Stock Exchange and OM to form a new derivatives exchange, a joint venture called EDX London.

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6. International capital flows and business cycles in the Asia Pacific region

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1. INTRODUCTION

Over the past decade, a number of Asia Pacific countries have liberalized their financial markets to foreign capital by reducing restrictions in inward and outward capital flows. At the same time, these countries have achieved a substantial degree of trade integration through trade liberalization policies. Increased capital flows due to financial and trade integration can generate substantial effects on business cycles. Large capital inflows following financial market liberalization can generate an initial surge in investment and asset price bubbles followed by capital outflows and recession, the so-called boom–bust cycles. In worst cases, the boom–bust cycles can end with a sudden reversal of capital flows and financial crises.¹ On the other hand, financial market opening can reduce the volatility of some macroeconomic variables such as consumption through risk-sharing as it allows domestic residents to engage in international financial asset transactions.²

What are the macroeconomic effects of capital flows, in particular on business cycle fluctuations? Do business cycles become less volatile and more synchronized across countries as the degree of financial or trade integration increases? Understanding business cycle implications of capital flows is important as it provides welfare implications of financial market and trade liberalization policies, as well as international monetary and trade arrangements.

This chapter focuses on the effects of capital flows due to financial market liberalization on business cycles, in particular co-movements across countries.³ We aim to shed some light on this issue by providing detailed stylized facts on business cycles in the Asia Pacific region and by empirically analysing the relationship between capital flows and

business cycles. For empirical analysis, we adopt the VAR (Vector Autoregression) method. First, we identify the capital flow shocks and then examine the effects of capital flow shocks on cyclical movements of key macroeconomic variables in each country. We also examine whether these effects are consistent with the boom–bust cycle theory. By further analysing the correlation between capital flow shocks across countries, we try to infer the role of capital flows in explaining business cycle synchronization.

Economic theory does not provide a unanimous prediction on the effects of capital flows on co-movements of business cycles. Financial market integration can increase business cycle co-movements as macroeconomic effects of capital flows in different countries follow similar patterns through various channels of contagion and common shocks.⁴ However, co-movements of output can decrease as allocation of capital becomes more efficient, allowing production to become more specialized.⁵ Other variables also affect the relationship between capital flows and business cycles, including monetary and fiscal policies, the nature of underlying shocks in the economy, etc.

Using the data of 12 Asia Pacific countries, we find the following stylized facts: first, business cycles in the five Asian crisis countries – Indonesia, Korea, Malaysia, Thailand and the Philippines – are highly synchronized and follow business cycles in Japan, while they differ from cycles in Australia and New Zealand. On the other hand, greater China, including Hong Kong and Taiwan, shows similar cyclical movements. Second, in general, business cycles in the 1990s are more synchronized across countries than those in the 1980s, which supports the view that financial and trade integration increases business cycle synchronization in Asia.

Using the VAR method, we find empirical evidence that positive capital flow shocks (capital inflows) affect output, consumption, and investment positively in most countries, which is consistent with the story of boom–bust cycles. In addition, capital flow shocks are highly correlated across the crisis countries. These two results imply that capital flow shocks can explain business cycle synchronization among the crisis countries.

The remaining sections of this chapter are organized as follows. In section 2, we review theoretical and empirical studies on the relationship between business cycles and financial integration. In section 3, we analyse trends and stylized facts of business cycles in the region. In particular, we investigate how the volatility of business cycles in each country has changed over time and whether we can find any evidence of business cycle synchronization in the region. We examine the following 12 countries in the Asia Pacific region: five Asian crisis countries (Indonesia, Korea, Malaysia, the

Philippines, and Thailand), China, Singapore, Taiwan, Hong Kong, Japan, Australia and New Zealand. Section 4 provides an empirical analysis of the relationship between capital flows and business cycles. We use the VAR method to analyse how capital flows affect various macroeconomic variables and investigate whether capital flows generate boom–bust cycles in the region. Section 5 concludes the chapter.

2. THEORETICAL OVERVIEW

Financial market integration can decrease co-movements of output by increasing industrial specialization (Kalemli-Ozcan et al. 2001). Countries with integrated international financial markets can ensure against country-specific shocks through portfolio diversification; therefore such countries can afford to have a specialized production structure. That is, financial market integration allows firms to take full advantage of comparative advantage and engage in production specialization, which in turn increases the asymmetry of output as long as industry-specific shocks exist. Heathcote and Perri (2002) analysed the same issue from a different angle. They noted a significant drop in the cross-country correlation of output in the 1990s and argued that the drop was due to a decrease in cross-country correlation of productivity shocks combined with increased financial market integration. Degree of financial market integration endogenously and positively responds to the correlation of shocks. That is, as productivity shocks become less correlated, potential welfare gains from portfolio diversification increase, as does the degree of financial market integration.

However, countries with liberalized capital accounts can be significantly more synchronized, even though they are more specialized (Imbs 2003). A large body of literature on contagion argues that capital flows in different countries, in particular developing countries in the same region, are synchronized through various channels of financial contagion including herd behavior, information asymmetry, etc. (Calvo and Mendoza 2000; Mendoza 2001). International investors may classify different countries in a single group and make region-based investment decisions. In addition, capital flows can be highly synchronized if shocks that determine capital flows are positively correlated or spill over across countries, or if developing countries go through financial liberalization process at the same time. Since capital inflows have significant effects on business cycles (so-called ‘boom–bust’ cycles), if capital flows are highly correlated and have similar effects on business cycles, then financial integration can contribute to synchronization of business cycles.

3. TRENDS AND STYLIZED FACTS OF BUSINESS CYCLES

In this section, we document the main characteristics of business cycles of the selected countries in the Asia Pacific region.⁶ We use the data from the International Financial Statistics (IFS) CD-Rom and examine volatility (measured by standard deviation) and co-movements (measured by cross-country correlation) of output, consumption and investment in these countries. The sample period is from 1980 to 2001 and all the data are Hodrick-Prescott filtered (with filtering parameter = 100). Since we are interested in changes in business cycle statistics as financial markets liberalize, we examine business cycles in different sub-sample periods: 1980–89 and 1990–2001. For the second period, we use the data with and without the Asian crisis period because the data for that period may distort the statistics.

We focus on two aspects of business cycles related to financial market liberalization and examine whether the stylized facts derived from the data support the theoretical predictions studied in the previous section. First, we investigate how much the volatility of business cycles has changed over time. As financial markets develop over time, volatility of consumption is likely to decrease through consumption smoothing and risk-sharing channels unless output volatility increases substantially. However, the impact on volatility of output is more ambiguous as argued in the previous section. Second, we focus on how synchronized business cycles in the region are and the changes in the degree of business cycle synchronization over time. We expect that business cycles in this region become more synchronized due to the region's trade integration and high proportion of intra-industry trade. However, the effects of financial integration on business cycle co-movements are ambiguous as argued in the previous section.

3.1 Volatility of Business Cycles

Table 6.1 presents volatility of output, relative volatility of consumption and investment in four different periods: the whole period, the 1980s, and the 1990s with and without the Asian crisis period. For relative volatility, a ratio larger than one in this table indicates that the volatility of the respective variable is greater than that of aggregate output.

The output volatility is relatively low with a standard deviation ranging from 1.93 to 2.46 in more developed countries in the region: Japan, Australia and New Zealand. On the other hand, less developed countries in the region exhibit higher volatility: 5.60 in Thailand, 4.69 in Indonesia and 4.71 in Malaysia. Developed countries tend to have more stable industrial structures and output streams. Small countries that depend on natural

Table 6.1 *Volatility of business cycles*

	1980–2001	1980–89	1990–2001	1990–2001 (without crisis)
Standard deviation of output				
Korea	2.81	1.50	3.52	2.52
Indonesia	4.69	1.28	6.23	5.38
Malaysia	4.71	3.14	4.94	4.31
Philippines	3.88	5.49	2.13	2.05
Thailand	5.60	3.38	6.38	6.30
Japan	1.93	0.98	1.71	1.50
China	3.51	3.24	2.82	2.97
Singapore	3.71	3.61	3.40	3.66
Taiwan	2.39	2.51	1.97	2.03
Hong Kong	2.98	2.87	3.07	2.68
Australia	1.99	1.87	1.84	1.95
New Zealand	2.46	2.23	1.89	1.94
Relative standard deviation of consumption				
Korea	1.30	0.72	1.28	1.17
Indonesia	1.19	2.37	1.02	1.20
Malaysia	1.33	1.38	1.26	1.16
Philippines	0.75	0.69	0.62	0.45
Thailand	0.85	0.64	0.83	0.75
Japan	0.76	0.82	1.00	1.11
China	1.09	0.87	0.73	0.73
Singapore	0.98	1.05	1.01	0.76
Taiwan	1.31	1.51	1.04	1.09
Hong Kong	1.01	0.84	1.20	1.30
Australia	0.51	0.45	0.64	0.56
New Zealand	0.85	0.86	1.12	1.15
Relative standard deviation of investment				
Korea	4.60	3.42	4.47	3.72
Indonesia	4.17	7.44	4.07	4.08
Malaysia	4.32	4.82	4.19	4.28
Philippines	4.82	4.55	4.37	3.84
Thailand	3.48	3.14	3.42	3.16
Japan	3.13	5.60	2.24	2.26
China	2.22	2.32	2.59	2.70
Singapore	2.76	2.44	2.92	2.73
Taiwan	4.84	5.84	4.34	4.25
Hong Kong	3.99	4.71	3.64	3.85
Australia	4.09	3.57	3.55	3.54
New Zealand	4.41	4.07	5.01	5.15

resources for their main products tend to have volatile output streams due to volatile prices (terms of trade) of primary goods. Moreover, the share of agricultural activity is higher and the shares of industry and service sectors are lower in the less developed countries. The agricultural sector output is highly variable since it is heavily affected by extremely volatile productivity and price shocks.

Comparing output volatility in the two periods, the results are mixed. Five countries show significant increases (Korea, Indonesia, Malaysia, Thailand and Japan), one country shows a significant decrease (the Philippines), and the remaining countries do not experience significant changes over time. Except for the Philippines, the five Asian crisis countries show higher volatility of output in the 1990s compared to the 1980s. This result is consistent even when the crisis period is excluded. On the other hand, greater China (China, Hong Kong, and Taiwan) and Singapore do not experience a rise in output volatility in the 1990s, nor did Australia and New Zealand.

According to the consumption smoothing property in the intertemporal current account model, consumption should be less volatile than output (Obstfeld and Rogoff 1996). Countries, when facing positive shocks, lend to foreign countries in order to smooth the consumption stream over time, and vice versa. However, in the table, we observe that this is not the case in many countries.⁷ The table shows that consumption volatility is significantly less than output volatility in only five countries including more developed countries (Japan, Australia, and New Zealand) in the region. Developed countries can smooth their consumption by using various risk-sharing tools. As financial markets develop, developing countries should be able to gain access to these risk-sharing tools and reduce volatility of their consumption stream. There is no significant change over time in consumption volatility and no explicit pattern is detected in the table.

Investment is three to four times more volatile than output in the table, which is the typical result in other empirical and simulation studies (Baxter and Crucini 1995; Kim et al. 2001a). Investment volatility in China, Singapore and Japan is among the lowest with relative standard deviation less than or around three, while investment in five Asian crisis countries is quite volatile with relative standard deviation of higher than four. There are no significant patterns of change in investment volatility in the 1980s and 1990s. For some countries (Indonesia and Japan), it significantly decreases, while other countries do not display any notable pattern.

Including the crisis period in the data for the 1990s does not significantly change the statistics for all three variables. No systematic patterns of change in volatility result from including or excluding this period in the

data. In sum, we found that output volatility increases in the 1990s in many countries and consumption smoothing is not realized as consumption volatility is higher than output volatility in most countries.

3.2 Co-movements of Business Cycles

Table 6.2 shows cross-country correlation of output to illustrate the degree to which business cycles are synchronized across countries. The first panel shows the results from the entire sample period. A significant and positive correlation is exhibited across most countries, except for Australia, New Zealand and China. The business cycles of Australia and New Zealand are negatively correlated with those of most other Asian countries: specifically 7 and 5 cases of negative correlation, respectively. Australia and New Zealand each have a positive (but not strongly positive) output correlation with China, Hong Kong and Taiwan. This is no surprise because the industrial structures of these two countries are totally different from the typical structure in Asian countries. China's business cycles are also negatively correlated with other economies except Taiwan and Hong Kong. This can be explained by the fact that these three economies – so-called Greater China including China, Hong Kong and Taiwan – are in the same economic zone.⁸ A high correlation between Malaysia and Singapore can be explained in the same context.

The original five Asian crisis countries plus Singapore and Hong Kong, show positive correlation with each other and they are positively correlated with business cycles in Japan as well. This indicates that Japan has been leading business cycles in the region. McKinnon and Schnabl (2002) showed that the yen/dollar exchange rate significantly affects business cycles in East Asian countries through trade and FDI channels. For example, depreciation of the yen in 1995 slowed East Asian export expansion significantly, while yen appreciation accelerates Japanese FDI into the East Asian countries. Bayoumi and Eichengreen (1999) find that the correlation of supply shocks in the region is especially high for two groups, with Japan and Korea in one group and Indonesia, Malaysia, and Singapore in the other. Loayza et al. (2001) examine common patterns in aggregate demand and supply shocks with a different methodology. They find strong co-movements for two groups: Japan, Korea and Singapore make up one group, and Indonesia, Malaysia and Thailand, the other. These results indicate that there are two different business cycles in the region, even though the East Asian countries show relatively strong co-movements as a whole.

Comparing the data of the 1980s and 1990s proves that business cycles are more synchronized in the 1990s. We examine this property by comparing the

Table 6.2 Cross-country correlation of output (1980–2001)

	Korea	Indonesia	Malaysia	Philippines	Thailand	Japan	China	Singapore	Taiwan	Hong Kong	Australia
1980–2001											
Indonesia	0.66										
Malaysia	0.47	0.87									
Philippines	0.24	0.27	0.41								
Thailand	0.70	0.86	0.81	0.41							
Japan	0.57	0.53	0.39	0.31	0.67						
China	0.10	0.20	0.01	-0.55	-0.01	-0.22					
Singapore	0.18	0.43	0.73	0.44	0.59	0.10	-0.15				
Taiwan	0.45	0.14	-0.03	0.02	0.21	0.39	0.35	-0.07			
Hong Kong	0.76	0.51	0.30	0.21	0.49	0.36	0.28	0.14	0.58		
Korea											
Australia	-0.03	0.37	-0.51	0.11	0.33	0.06	0.15	-0.32	0.35	0.17	
New Zealand	0.29	0.16	-0.04	0.02	0.02	0.20	0.57	-0.06	0.43	0.57	0.44

Table 6.2 (continued)

	Korea	Indonesia	Malaysia	Philippines	Thailand	Japan	China	Singapore	Taiwan	Hong Kong	Australia
(1990–2001)											
Indonesia	0.82										
Malaysia	0.83	0.97									
Philippines	0.21	0.24	0.19								
Thailand	0.83	0.95	0.94	0.01							
Japan	0.64	0.85	0.83	0.24	0.72						
China	0.42	0.75	0.79	<u>-0.17</u>	0.82	0.51					
Singapore	0.40	0.41	0.53	<u>-0.17</u>	0.60	0.17	0.69				
Taiwan	0.36	0.46	0.63	0.12	0.45	0.49	0.57	0.58			
Hong Kong	0.86	0.85	0.87	0.03	0.87	0.66	0.62	0.49	0.36		
Kong											
Australia	<u>-0.23</u>	<u>-0.50</u>	<u>-0.49</u>	0.49	<u>-0.54</u>	<u>-0.58</u>	<u>-0.60</u>	<u>-0.09</u>	<u>-0.32</u>	<u>-0.30</u>	
New Zealand	0.46	0.54	0.49	0.56	0.51	0.14	0.44	0.40	0.08	0.40	0.21

Note: Negative coefficients are underlined. Bold numbers in the bottom panel indicate that correlation coefficients increase in the second period.

number of negative cross-country correlations of output in the two periods. We observe a negative correlation in 17 country pairs during the 1980s, while the number decreases to 10 in the 1990s. Moreover, in the 1990s, without Australia, only two country pairs display a negative correlation. Out of a total of 66 pairs, 41 cases show that correlation increases from the 1980s to the 1990s.⁹ In fact, correlation coefficients are significantly positive in most of the 41 cases; only four pairs exhibit a correlation coefficient less than 0.4.

The empirical results for this region support the view that business cycles become more synchronized as financial markets liberalize. Empirical results on business cycle co-movements in previous studies are mixed, depending on sample countries and periods. Some document that the correlation of output decreases over time, in particular in the 1990s. Heathcote and Perri (2002) showed that output correlation among the U.S., Europe, Canada and Japan dropped from 0.76 to 0.26. On the other hand, Kose et al. (2002), using the data for 21 industrial and 55 developing countries, showed that output correlation in general increased in the 1990s from the previous periods. This is mostly due to the industrial country samples.

In conclusion, we can summarize the main characteristics of the business cycle co-movements as follows. First, business cycles in Australia and New Zealand are different from those in the East Asian countries. Second, business cycles in the five Asian crisis countries are highly synchronized and follow business cycles in Japan. Third, Greater China including Hong Kong and Taiwan, shows similar cyclical movements. Finally, in general, business cycles in the 1990s are more synchronized across countries than those in the 1980s, which supports the view that financial integration increases business cycle synchronization.

4. CAPITAL FLOWS AND BUSINESS CYCLES: EMPIRICAL STUDIES

In this section, we investigate how capital flows affect the business cycle dynamics of the Asia Pacific countries, for example, whether capital flows generate boom–bust cycles, and whether capital flows help explain the synchronization of the business cycles in the East Asian countries. Capital flows, especially after financial market liberalization, may increase the volatility of business cycles by creating boom–bust cycles, in particular fluctuations in investment, consumption, exchange rate, and other asset prices. Further, if capital flows are positively correlated across countries, either due to simultaneous capital market liberalization in East Asian

countries or due to the herd behavior of international investors, the boom–bust cycles in each country may imply the synchronization of business cycles.

For empirical methodology, we adopt the VAR estimation method to extract the shocks to capital flows, to analyse how shocks to capital flows affect the various macroeconomic variables in each country, and to examine how the shocks to capital flows are correlated across countries.¹⁰

4.1 Vector Auto-Regression Model

We assume that the economy is described by a structural form equation:

$$G(L)y_t = e_t \quad (6.1)$$

where $G(L)$ is a matrix polynomial in the lag operator L , y_t is an $n \times 1$ data vector, and e_t is an $n \times 1$ structural disturbance vector.¹¹ We assume that e_t is serially uncorrelated and $\text{var}(e_t) = \Lambda$, which is a diagonal matrix where the diagonal elements are the variances of structural disturbances. That is, structural disturbances are assumed to be mutually uncorrelated.

We can estimate a reduced form equation (VAR):

$$y_t = B(L)y_{t-1} + u_t, \quad (6.2)$$

where $B(L)$ is a matrix polynomial in lag operator L and $\text{var}(u_t) = \Sigma$.

There are several ways of recovering the parameters in the structural-form equation from the estimated parameters in the reduced-form equation. The identification schemes under consideration impose restrictions on contemporaneous structural parameters only. Let G_0 be the contemporaneous coefficient matrix in the structural form, and let $G^0(L)$ be the coefficient matrix in $G(L)$ without the contemporaneous coefficient G_0 . That is:

$$G(L) = G_0 + G^0(L). \quad (6.3)$$

Then, the parameters in the structural-form equation and those in the reduced-form equation are related by:

$$B(L) = -G_0^{-1} G^0(L). \quad (6.4)$$

In addition, the structural disturbances and the reduced-form residuals are related by:

$$e_t = G_0 u_t, \quad (6.5)$$

which implies:

$$\Sigma = G_0^{-1} \Lambda G_0^{-1}. \quad (6.6)$$

In the method proposed by Sims (1980), identification is achieved by Cholesky decomposition of the reduced-form residuals, Λ . In this case, G_0 becomes triangular so that a recursive structure, that is, the Wold-causal chain, is assumed. In a general non-recursive modeling strategy suggested by Blanchard and Watson (1986), Bernanke (1986), and Sims (1986), maximum likelihood estimates of Λ and G_0 can be obtained only through the sample estimate of Σ . The right-hand side of equation (6.6) has $n \times (n + 1)$ free parameters to be estimated. Since Σ contains $n \times (n + 1)/2$ parameters, by normalizing n diagonal elements of G_0 to 1's, we need at least $n \times (n - 1)/2$ restrictions on G_0 to achieve identification. In this generalized structural VAR approach, G_0 can be any structure (non-recursive). In this chapter, recursive modeling is used.

4.2 Basic Model and Effects on Output

We construct a basic model to examine the effects of capital flows shocks on output. The basic model includes three variables: {CUR, RGDP, CAP}, where CUR is the current account (as the ratio to the trend GDP), RGDP is the log of real GDP, and CAP is the capital account (as the ratio to the trend GDP).¹² A constant term and complete seasonal dummies are included. Four lags are assumed.¹³ CAP and RGDP are included in the model since they are primary variables of interest; we examine the effects of capital flows or capital account on real GDP. CUR is included to control the capital account movements that depend on current account movements since some capital account movements are often related to the financing of current account imbalances and we are interested in extracting autonomous capital flows.

The basic model uses a recursive structure, in which the ordering of the variables is {CUR, RGDP, CAP}, where the contemporaneously exogenous variables are ordered first. With this ordering, the shocks to capital flows are extracted by conditioning on the current and lagged CUR and RGDP, in addition to their own lagged variables. We condition on the current (and lagged) CUR since current account imbalances are often financed by capital account. We exclude such endogenous movements of capital flows from the shocks to capital flows. In addition, we condition on the current (and lagged) RGDP since changes in the real GDP may affect the capital account. For example, an increase in the real GDP may attract more capital, and improve the capital account. We exclude the endogenous movements of capital flows due to the real GDP changes from the shocks to capital flows.¹⁴

The sample period is 1990–2001, during which capital account was liberalized in these Asian-Pacific countries. We consider two samples, one with the crisis period and the other without it (dropping 1997:3–1998:2). We relate the capital flow shocks identified in the model to the financial market liberalization. If the capital account had been tightly controlled (i.e., China), the shocks to capital flows in our model or autonomous capital flows would have been very small since the capital account should have been directed to finance the current account imbalances (note that our model identifies capital flow shocks, by controlling for the current account movement). Therefore, by examining the effects of autonomous capital account shocks during the sample period, we can infer the consequences of capital account liberalization.

We use quarterly data for the estimation since monthly data is not available for most countries. We consider nine countries for which quarterly data series are available for most of the sample period. They are Korea, Japan, Indonesia, Thailand, the Philippines, Singapore, Taiwan, Australia, and New Zealand.¹⁵ Data sources are International Financial Statistics, ADB Database, and Bloomberg.

The impulse responses to CAP shocks over three years are reported in Figure 6.1 for the sample including the crisis period and Figure 6.2 for the sample dropping the crisis period. Dotted lines are one standard error bands.

First, we explain the results for the sample including the crisis period. In response to positive CAP shocks, the real GDP tends to increase in all countries, except for Singapore. In Singapore, capital inflows did not generate a boom in the economy. This can be explained by the fact that Singapore serves as an intermediary of international capital flows, not as final destination of foreign capital, which means that real economic activities in Singapore have little relationship with capital flows in and out of Singapore.¹⁶ The positive effect of capital inflows is significant in most countries, including all crisis countries under consideration, and quite persistent in many countries. The positive effects last for more than three years in most countries. For example, in New Zealand and the Philippines, the positive effects are different from zero with more than 68 per cent probability at least for two and a half years. Although the positive effects after two years are less significant in most other countries, the point estimates show that the effects are positive for more than three years in all countries but Korea, Thailand, and Singapore. The results for the sample dropping the crisis period, reported in Figure 6.2, are not much different except for Indonesia. The negative effects of capital outflows during the crisis period were so dominant in Indonesia, and therefore without this period the boom–bust cycles disappear.

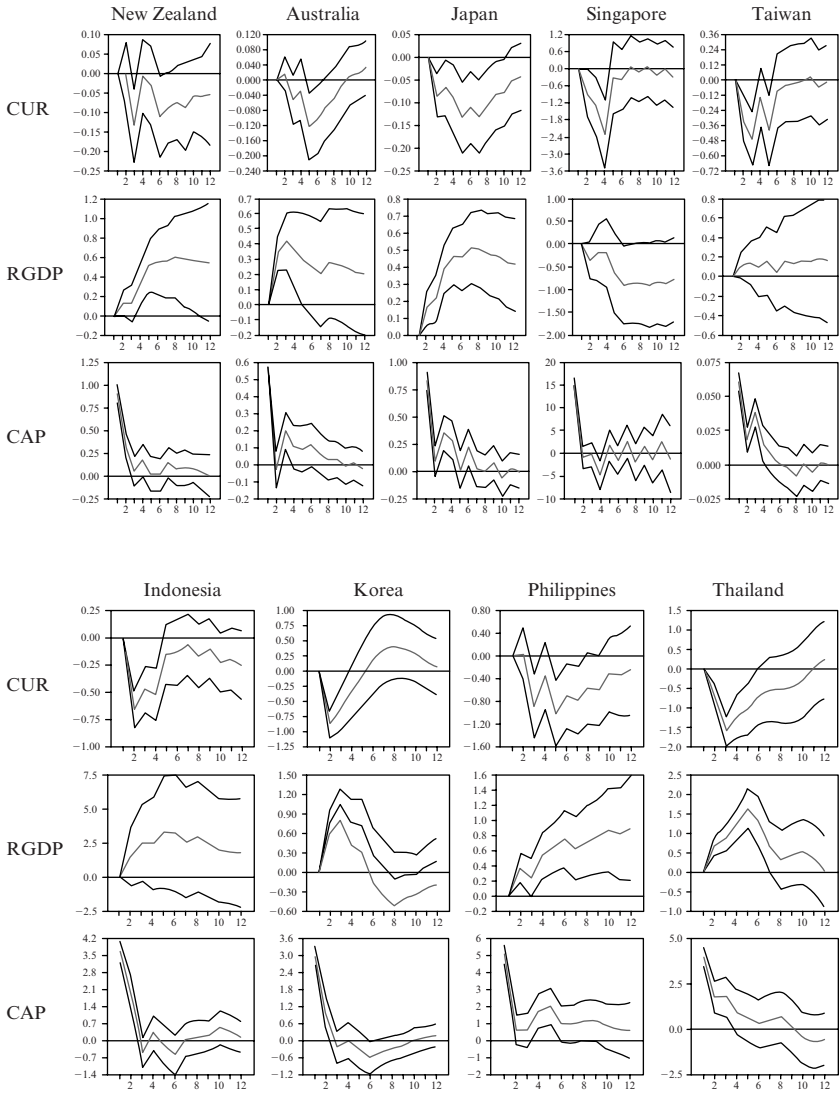


Figure 6.1 Effects of capital flows shocks: sample including crisis period

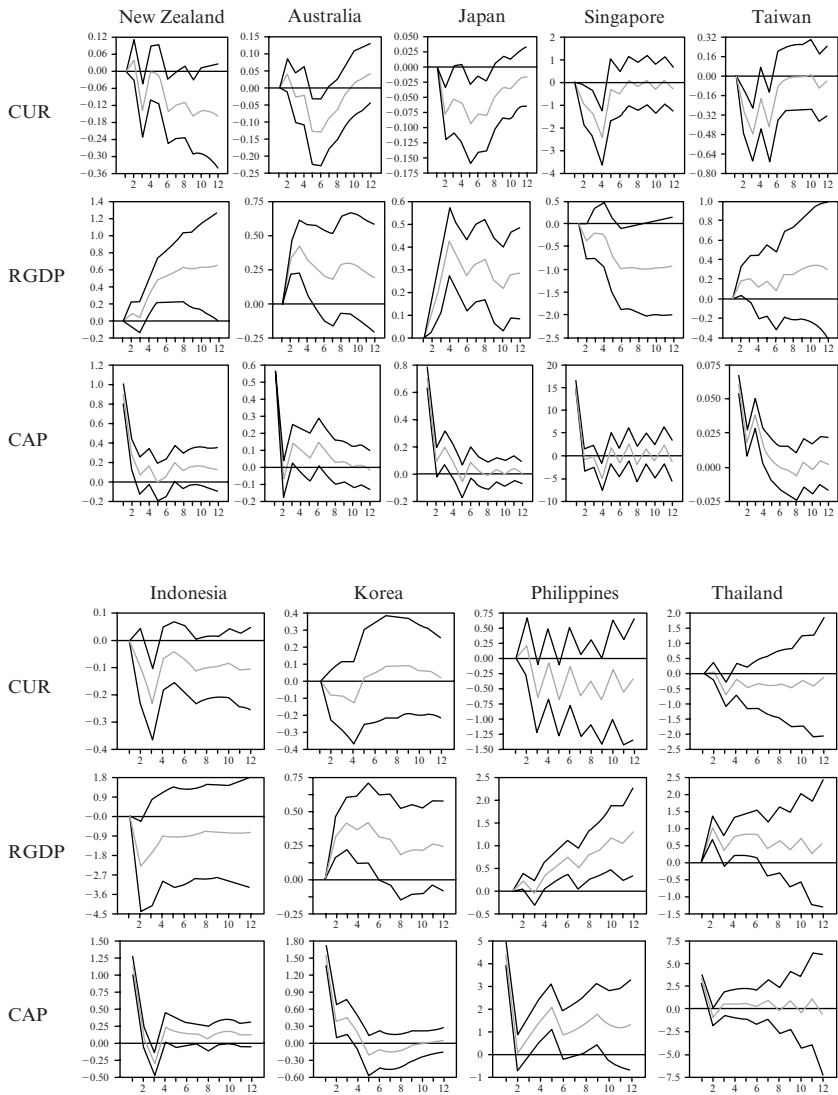


Figure 6.2 Effects of capital flows shocks: sample without crisis period

4.3 Effects on Other Macro Variables

We modify the basic model to examine the effects of capital flow shocks on other macroeconomic variables. The modified model uses a recursive structure, in which the ordering of the variables is {CUR, X, CAP}, where X denotes the variable we are interested in. With this ordering, the shocks to capital flows are extracted by conditioning on the current and lagged CUR and X, in addition to their own lagged variables. We condition on the current (and lagged) CUR and X as before. First, the current account imbalances are often financed by capital account, and we would like to exclude such endogenous movements of capital flows from the shocks to capital flows. Second, we condition on the current (and lagged) X since changes in X may affect the capital account.¹⁷

We include (real) consumption, (real) investment, the price level, and the real exchange rate as X. Each variable is used as a log form. To construct real consumption and real investment, nominal data are deflated by using a GDP deflator. As the price level, we used the GDP deflator. The real exchange rate is constructed by nominal exchange rate against the US dollar and the GDP deflators of each country and the US. Note that an increase in the real exchange rate is a real exchange rate appreciation.¹⁸

Figures 6.3 and 6.4 report the results. We did not report the results for consumption and investment for Taiwan and consumption for Singapore since quarterly data series are not available.¹⁹ The first two rows report the responses of consumption ('CONS') and investment ('INV'); consumption and investment increase in almost all countries. In particular, the increase in consumption and investment is significant in all the Asian crisis countries. When we exclude the crisis period, the positive effects of capital inflows on consumption and investment become weaker in the Asian crisis countries, especially in Indonesia. This is because Indonesia experienced the most serious and prolonged damage from the crisis among the crisis countries. From this analysis, we can easily infer that the increase in output following capital flow shocks is mostly due to the increase in consumption and investment because the current account negatively responds to capital flow shocks (Figures 6.1 and 6.2).

The third and the fourth rows report the responses of the price level ('PGDP') and the real exchange rate ('RER'). The price level responses are mixed, depending on the country and the sample. For real exchange rate, we expect to observe real appreciation following capital inflows. The graphs show that real exchange rate appreciates in most countries except for Thailand. This is actually due to the inclusion of the crisis period, as Figure 6.4 without the crisis period shows a real appreciation in Thailand

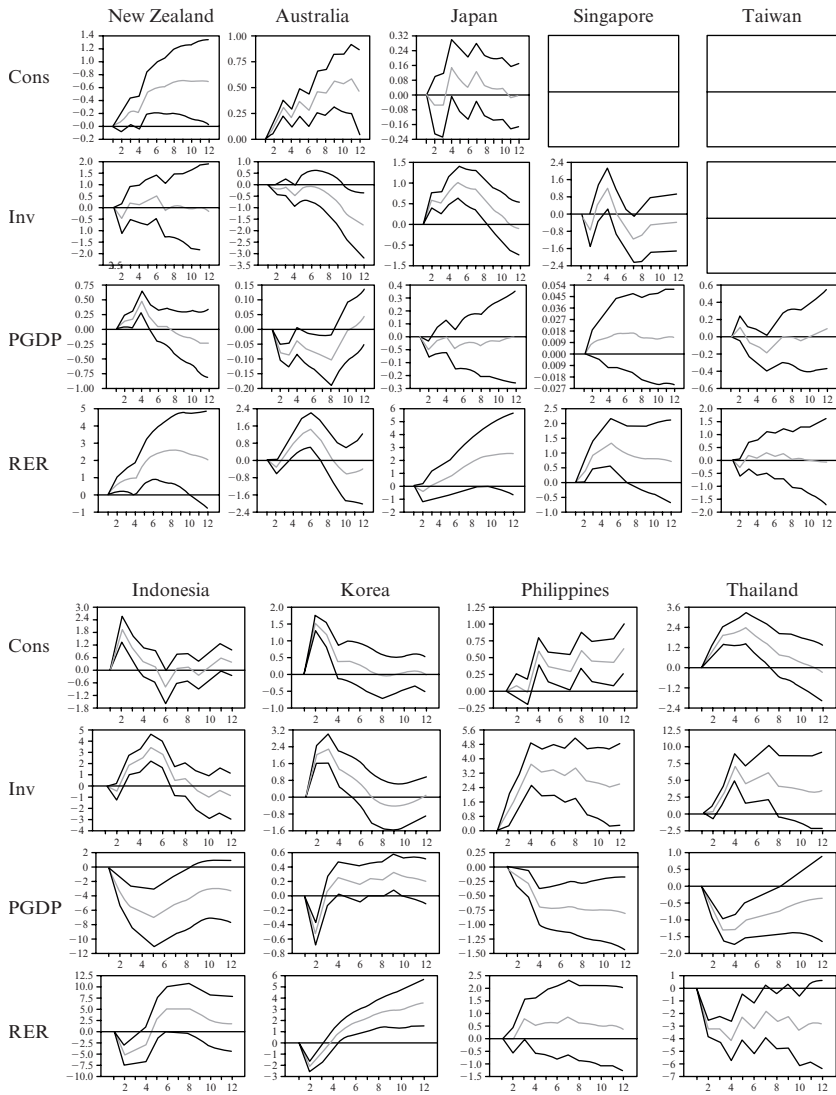


Figure 6.3 Effect of capital flows shocks on various macroeconomic variables: sample including crisis period

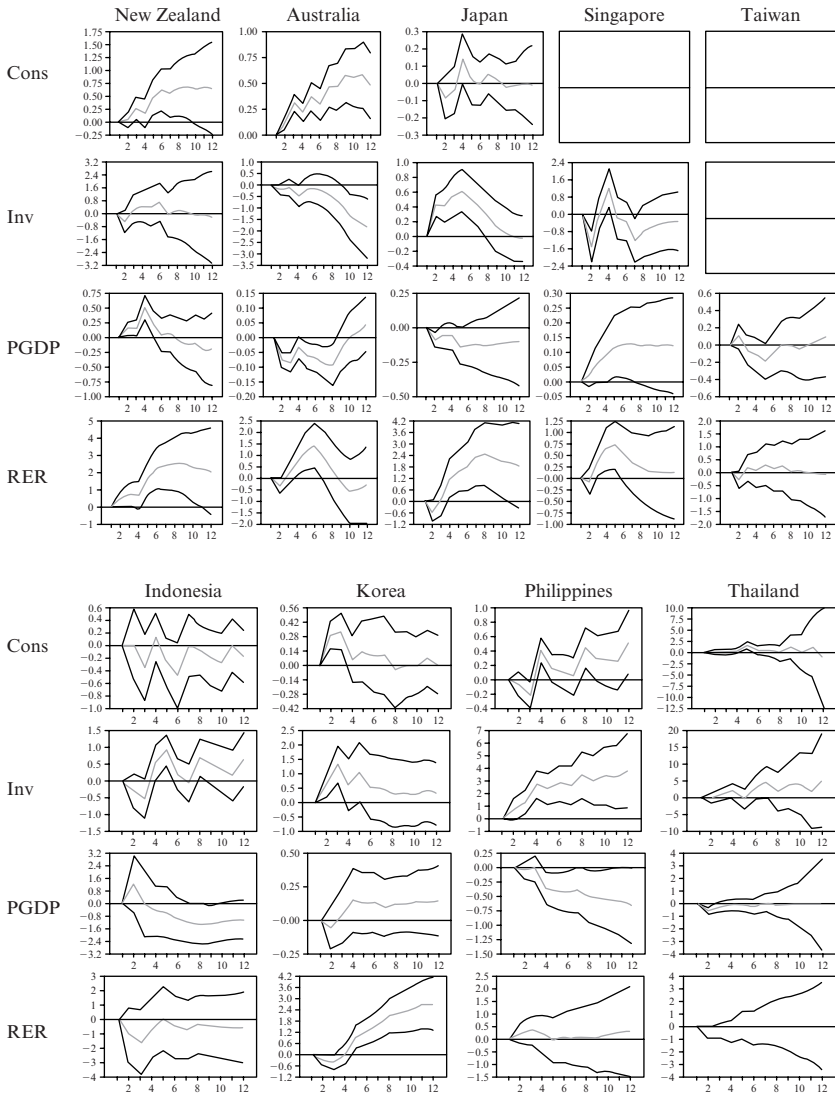


Figure 6.4 Effect of capital flows shocks on various macroeconomic variables: sample dropping crisis period

as well. For Indonesia and Korea, exchange rate initially depreciates and starts to appreciate with some time lag (two quarters).

4.4 Synchronization of Capital Flows and Business Cycles

In the previous section, we show that a positive shock to capital flows increases output in most countries, and the increase in output is mostly due to a consumption and investment boom. The finding, especially the one for the full sample including the crisis period, is consistent with the ‘boom–bust’ cycle following financial market liberalization. In our model, a big surge in capital inflows after financial market liberalization can be captured as a positive shock to capital flows, and such a positive shock leads to the boom. Later, when capital flows are reversed, capital outflows can be captured as a negative shock to capital flows in our model, and such a negative shock leads to the bust stage.

However, this evidence alone is not enough to support the hypothesis that capital flow shocks or the financial market liberalization process increases business cycle synchronization in the Asia Pacific region. Only when capital flow shocks are highly correlated across countries in the region, can they increase co-movements of business cycles. Otherwise, capital flow shocks may not contribute to business cycle synchronization.

In this regard, we calculate the correlations of capital flow shocks across the Asia Pacific countries. First, we extract the capital flow shocks identified in the estimated basic model. Second, we construct the moving average of the capital flow shocks. The moving average is calculated using the current and the lagged values of up to two years and three years. We use such a moving average since capital flow shocks typically have a persistent effect on output (lasting two or three years). Then, we calculate the correlation of the moving average.

Table 6.3 and 6.4 report the results, with and without the crisis period, respectively. For both sample periods, we find a significant positive correlation of capital flow shocks among the crisis countries. All correlations are positive, except for one case (between Indonesia and Thailand, three-year window, sample including the crisis period). For the sample including the crisis period, the average correlation is 0.48 and 0.41 for two and three-year windows, respectively. For the sample excluding the crisis period, the average correlation is 0.56 and 0.62 for two- and three-year windows, respectively. As shown in the previous section, since capital flow shocks have similar effects on business cycles, we can conclude that capital flow shocks contribute to business cycle synchronization among the crisis countries.

We suggest two possible explanations why capital flow shocks among the crisis countries are highly correlated. First, the timing of financial market

Table 6.3 Cross-country correlation of capital flows shocks (including the crisis period)

	Korea	Indonesia	Philippines	Thailand	Japan	Singapore	Taiwan	Australia
Two-year window								
Indonesia	0.07							
Philippines	0.69	0.42						
Thailand	0.80	0.02	0.84					
Japan	<u>-0.51</u>	0.15	<u>-0.17</u>	<u>-0.06</u>				
Singapore	<u>-0.54</u>	0.49	0.03	<u>-0.27</u>	0.12			
Taiwan	<u>-0.57</u>	<u>-0.69</u>	<u>-0.83</u>	<u>-0.45</u>	0.12	<u>-0.10</u>		
Australia	0.86	<u>-0.29</u>	0.42	0.47	<u>-0.73</u>	<u>-0.57</u>	<u>-0.22</u>	
New Zealand	0.54	0.46	0.52	0.65	<u>-0.42</u>	<u>-0.05</u>	<u>-0.72</u>	0.25
Three-year window								
Indonesia	0.00							
Philippines	0.79	0.32						
Thailand	0.91	<u>-0.33</u>	0.77					
Japan	<u>-0.85</u>	0.10	<u>-0.63</u>	<u>-0.83</u>				
Singapore	<u>-0.64</u>	0.44	<u>-0.10</u>	0.00	0.45			
Taiwan	<u>-0.68</u>	<u>-0.66</u>	<u>-0.86</u>	<u>-0.18</u>	0.48	0.05		
Australia	0.94	<u>-0.31</u>	0.67	0.80	<u>-0.88</u>	<u>-0.69</u>	<u>-0.43</u>	
New Zealand	0.87	0.36	0.74	0.63	<u>-0.86</u>	<u>-0.38</u>	<u>-0.80</u>	0.73

liberalization in those countries was similar, and each country experienced the boom–bust cycle after the liberalization. Thus, the financial market liberalization process itself contributes to the synchronization of the business cycles. Second, given some extent of openness in the financial markets, contagion through financial channels contributed to similar capital flows in these countries. Due to information cascade, international investors classify these countries in the same group and apply a single investment decision for the whole group. Combined with herd behavior, financial contagion contributed to the synchronization of capital flows and eventually, of business cycles.

We also find two interesting observations. First, there is a strong correlation of capital flow shocks between the crisis countries and Japan without the crisis period. For the sample including the crisis period, the average correlation is negative, -0.15 for a two-year window and -0.55 for a three-year window. On the other hand, for the sample excluding the crisis period, the average correlation becomes positive, 0.51 for the two-year window and 0.50 for the three-year window. These numbers suggest that capital flow shocks can explain the synchronization of the business cycles of Japan and the crisis countries during normal times (excluding the crisis period).

Table 6.4 *Cross-country correlation of capital flows shocks (without the crisis period)*

	Korea	Indonesia	Philippines	Thailand	Japan	Singapore	Taiwan	Australia
Two-year window								
Indonesia	0.23							
Philippines	0.49	0.64						
Thailand	0.52	0.59	0.90					
Japan	0.64	0.05	0.60	0.76				
Singapore	<u>-0.73</u>	0.35	0.02	<u>-0.26</u>	<u>-0.66</u>			
Taiwan	0.33	<u>-0.29</u>	<u>-0.50</u>	<u>-0.32</u>	<u>-0.27</u>	<u>-0.47</u>		
Australia	0.46	<u>-0.59</u>	<u>-0.11</u>	0.47	0.50	<u>-0.74</u>	0.15	
New Zealand	<u>-0.28</u>	<u>0.00</u>	0.04	0.51	0.00	0.22	<u>-0.52</u>	<u>-0.06</u>
Three-year window								
Indonesia	0.26							
Philippines	0.60	0.60						
Thailand	0.70	0.74	0.89					
Japan	0.73	<u>-0.10</u>	0.60	0.77				
Singapore	<u>-0.84</u>	0.27	<u>-0.24</u>	<u>-0.40</u>	<u>-0.80</u>			
Taiwan	0.41	<u>-0.03</u>	<u>-0.33</u>	<u>-0.01</u>	<u>-0.16</u>	<u>-0.41</u>		
Australia	0.59	<u>-0.51</u>	0.18	0.56	0.82	<u>-0.87</u>	0.03	
New Zealand	0.19	<u>-0.42</u>	0.11	0.61	0.48	<u>-0.42</u>	<u>-0.32</u>	0.71

However, if we include the crisis period, such a role of capital flow shocks is not evident. This is due to the opposite movement of capital flows during the crisis period; capital outflows in the crisis countries and capital inflows in Japan.

Second, we may not observe synchronized business cycles among the crisis countries in the future. Foreign investors started to differentiate Korea from the other four Asian crisis countries. Korea is the only country that has net capital inflows in the post-crisis period. Therefore, from the observation that capital flows have been generating similar boom–bust cycles in the crisis countries, business cycles in Korea may follow a different path from the other four countries in the future.

5. CONCLUSION

The relationship between financial integration and co-movements of business cycles is not unambiguous, both theoretically and empirically. In this chapter, we first documented business cycle synchronization in some countries in Asia and try to explain this phenomenon using financial market liberalization and capital flows. We find that business cycle synchronization

among Asian crisis countries in the 1990s can be at least partially explained by synchronization of capital flows and the ensuing boom–bust cycles after financial market liberalization. Therefore, the results imply that financial market liberalization is likely to synchronize business cycles across a group of countries, which is interesting since recent studies using data from developed countries often found the opposite.

Understanding the effects of capital flows on business cycle co-movements is important and provides implications on various issues. First, potential welfare gains from international risk sharing are highly dependent on the degree of business cycle synchronization across countries. When countries follow similar business cycles, it would be less efficient to share risks across countries. If financial market liberalization and capital flows increase business cycle co-movements, then potential welfare gains from financial market liberalization become less than originally measured using the existing level of business cycle co-movements. Therefore, potential welfare gains from financial market liberalization might be over-estimated.

Second, our results in this chapter can provide implications on financial market liberalization policies. Policies on the speed and sequencing of financial market liberalization should take consideration of their effects on business cycles and eventually on welfare. Finally, our results provide implications for regional monetary and financial integration such as the optimum currency area. For example, one of the conditions for an optimum currency area is having similar business cycle movements in the potential candidate countries.

When most emerging East Asian countries started to liberalize their financial markets in the early 1990s, no regional risk-sharing mechanism existed. Although Japan still remained one important source country for external financing before the crisis, western investors outside the region also played an important role. Since the crisis, however, most East Asian countries became net providers of international capital due to their current account surpluses. While receiving inflows of FDI and portfolio investment on a net basis, these countries have repaid large sums of bank loans for the past several years. Looking into the future, whether countries in the Asia Pacific region have similar patterns of capital flows will be an empirical question. However, until a regional risk-sharing mechanism for integrating financial markets in the region is fully developed, most East Asian countries are likely to become more integrated into the global financial markets. Regional financial centers will play a limited role by intermediating the flows between global centers and regional economies. Then, most East Asian countries will remain exposed to the vagaries of capital flows, and their business cycles will tend to synchronize despite some variations across countries in the region.

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NOTES

1. Although other fundamental domestic problems contribute to financial crises, capital account liberalization and the resulting lending booms sometimes end in twin currency and banking crises.
2. Domestic residents can reduce fluctuations in income stream and consumption by borrowing from abroad during recessions or lending to foreign countries during booms. International portfolio diversification enables consumers and firms to achieve risk-sharing gains by diversifying risks associated with country-specific shocks.
3. We do not focus on the effects of capital flows on business cycle volatility. See Buch et al. (2002) and Kose et al. (2002) on this issue.
4. See Kim et al. (2001a) for a detailed explanation on financial contagion.
5. See Heathcote and Perri (2002), Imbs (2003), and Kalemli-Ozcan et al. (2001).
6. Refer to Kim et al. (2003) for a detailed analysis of stylized facts of business cycles in Asia and G-7 countries.
7. We should note that the volatility of consumption changes depending on the specific consumption data. It is known that the volatility of durable goods consumption is two to four times higher than that of non-durables consumption (see Backus et al. 1995).
8. Since its recent economic reform, China has embarked upon a process of financial and real integration with Hong Kong and Taiwan. Even before Hong Kong's return to China's sovereignty in 1997, it had achieved a high degree of integration with the mainland. With respect to trade, for instance, Hong Kong intermediates the lion's share of China's external trade via re-exports and offshore trade. With regard to financial activity, a substantial amount of the international capital (in the forms of foreign direct investment, equity and bond financing and syndicated loans) financing China's economic expansion is raised via Hong Kong. Economic links between China and Taiwan have also proliferated since the 1990s. According to official statistics (although the official statistics under-represent the overall economic interest of Taiwan in China), China is the largest recipient of Taiwan's overseas investment and Taiwan is China's third-largest source of foreign direct investment (Cheung et al. 2002).
9. This case is indicated by bold and italic numbers in the table. We do not report the case excluding the crisis period but the results are similar.
10. A similar empirical methodology was used in Kim et al. (2004) to analyse the boom–bust cycles in Korea. Tornell and Westermann (2002) also examined the boom–bust cycles by using a sample of 39 countries.
11. For simplicity, we present the model without the vector of constants. Alternatively, we can regard each variable as a deviation from its steady state.
12. We use an exponential trend on the GDP level (or a linear trend on the log level of GDP). When constructing the ratio, we use all variables in terms of US dollars.
13. We adopt the Bayesian inference, which is not subject to conventional criticism in the presence of unit root and co-integration (refer to Sims (1988) and Sims and Uhlig (1991)). We also experimented with the log level of the variables but results were qualitatively unchanged.
14. Note that the effects of CAP shocks on CUR and RGDP are invariant to the ordering between CUR and RGDP. On the other hand, capital flows might affect CUR and RGDP within a quarter, and the CUR and RGDP shocks may reflect some part of (exogenous) CAP shocks. However, even in such cases, CAP shocks are not endogenous

- to CUR and RGDP changes since they do not result from endogenous responses to CUR and RGDP, although CUR and RGDP shocks may include (exogenous) shocks to CAP in addition to shocks to CUR and RGDP.
15. The estimation period for Thailand is from 1993 since the data series are available only from 1993.
 16. Although Singapore as a regional financial center has relatively more open financial markets vis-à-vis other East Asian economies, it maintained strong economic fundamentals and well-functioning financial systems. Singapore was a creditor country before the crisis, having no external debt. Furthermore, when neighboring countries were hit, Singapore was able to manage the contagion by floating its currency. Like Singapore, Hong Kong had financially sound and economically healthy fundamentals as well as mature institutions, but it still became a victim of the crisis because its firm commitment to the pegged exchange rate system invited speculative attacks. Hong Kong weathered a series of attacks at the expense of its overall macroeconomic performance.
 17. As in the basic model, we order X before CAP. By doing so, CAP shocks represent the shocks to CAP that are not endogenous to CUR and RGDP changes since they do not result from endogenous responses to CUR and X, although CUR and X shocks may include (exogenous) shocks to CAP, in addition to shocks to CUR and RGDP.
 18. For Taiwan, CPI is used since a GDP deflator is not available.
 19. Note that the data for Indonesian investment and consumption are only available from 1993, so the results are for the period of 1993–2001.

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PART II

Financial centers in East Asia

7. Tokyo financial market as a financial center in East Asia

Eiji Ogawa

1. INTRODUCTION

Our experience of the Asian currency and financial crises in 1997 teaches us that it is important for East Asian countries to make direct linkages between plenty of savings and prospective investment chances within the East Asian region and to pool liquidity of the financial markets in East Asian countries. For this purpose, East Asian countries should create and develop regional bond markets in the East Asian region as well as local bond markets in each of East Asian countries. Especially for regional bond markets, current international financial centers in East Asia are expected to activate capital and money flows within the East Asian region. Moreover, cooperation among the international financial centers in the East Asian region would help to develop the regional bond markets and, in turn, make direct linkages between savings and investments within the East Asian region. The Tokyo financial market is expected to play a central role as a regional financial center in developing regional bond markets.

The Tokyo financial market was said to be one of the three major international financial centers in the world economy because it could compete with London and New York financial centers. However, it is difficult to deny that the Tokyo financial market has seen its position decline not only in quantitative terms but also in qualitative terms in recent years. This chapter considers the current position of the Tokyo financial market among the international financial centers and regional financial centers in East Asia.

In section 2 we consider the historical background by focusing on the internationalization of several financial markets in Japan. In the section 3 we survey the current status of the Tokyo financial market from a viewpoint of an international and regional financial center. The section 4 evaluates the role of the Tokyo financial market as an international and regional financial center by focusing on access of foreigners to Japan's financial markets and

to the securities settlement systems in Japan. In conclusion, we show future prospects of the Tokyo financial market as an international and regional financial center.

2. HISTORICAL BACKGROUND

In Japan, financial markets and the financial system have been gradually internationalized since the 1980s through two major events: external pressure (*'Gaiatsu'* in Japanese) from the United States government in the first half of the 1980s and the Japanese Big Bang in the latter half of the 1990s in a situation of the Japanese financial crisis.

Japanese financial markets have been internationalized since 1985 when the Japan–U.S. Ad Hoc Group on the Yen/Dollar Exchange Rate, Financial and Capital Market Issues (the Japan–U.S. Yen/Dollar Committee) suggested the necessity to internationalize the Tokyo financial market as well as the Japanese yen. According to the Committee's suggestion, the Japanese government made an effort to internationalize the financial system in Japan. For example, in 1986, the government established the Japan Offshore Market, where non-residents are allowed to conduct international financial transactions freely. As a result, it has become easier for non-residents to gain access to domestic financial markets in Japan. In addition, the Japanese government has increased access of foreign financial institutions to the Japanese financial markets. The first foreign security companies acquired Tokyo Stock Exchange membership in 1986.

The Japanese government commenced the Financial System Reform, the so-called 'Japanese Big Bang,' in November 1996 under the three principles of 'Free, Fair, and Global,' aiming to rebuild the Japanese financial markets into an international market comparable to the New York and London markets. As the first step, the revised Foreign Exchange Law was changed to totally liberalize cross-border transactions in April 1998. Other measures to deregulate domestic financial markets have been taken in order to realize the Japanese Big Bang.

The Council on Foreign Exchange and Other Transactions of the Ministry of Finance suggested some measures for the internationalization of the Japanese yen in April 1999. These included exempting non-residents and foreign corporations from tax on the interest from interest-bearing Japanese government bonds. Also, in 2003, the Study Group of the Promotion of Internationalization of the Yen suggested some measures to extend corporate bonds to foreign private firms and allow market participants to trade derivatives transactions in the Japan Offshore Market to activate it further.

We briefly look at history of deregulating money markets, bond markets, the Japan Offshore Market, access of foreign financial institutions and foreign firms to domestic financial markets, and the Japanese Big Bang.

2.1 Money Markets

2.1.1 CP market

Domestic Commercial Paper (CP) market was established in November 1987. At the same time, the restriction prohibiting the holding of euro-yen CPs by non-residents was lifted. The domestic CP market was reconsidered in order to develop it further. In December 1988, rating of CPs was introduced and the variety of maturities was increased. Domestic security companies, non-banks, and insurance companies were allowed to issue their CPs in the first half of the 1990s. Foreign security companies were allowed to issue their CPs in the Japanese CP market in March 1995. In April 1996, eligibility requirements for issuing CPs, which included listing conditions, were virtually abolished.

2.1.2 TB market

The first Treasury Bill (TB) was issued in February 1986. At the time, the period of redemption was six months. The first TB was traded in blocks of 100 million yen. In August 1987, a system of refunding withholding tax at acquisition was introduced for foreign central banks. Moreover, tax exemption on return of TB in redemption was introduced for foreign companies in April 1992.

2.2 Futures Markets

Futures of long-term government bonds were started in the Tokyo Stock Exchange in October 1985 and futures for stock price index in September 1988. The Tokyo International Financial Futures Exchange (TIFFE) was established in April 1989. Afterward a variety of future and option transactions were started in the Tokyo Stock Exchange and the Osaka Securities Exchanges and the TIFFE.

2.3 Bond Markets

In December 1984, the position of lead manager for the yen-dominated Eurobonds was opened to foreign financial institutions. In April 1985, the withholding taxes on yen-dominated Eurobonds issued by residents were abolished. The guidelines for issuance of yen-dominated Eurobonds by residents were also relaxed. It meant a comprehensive shift to using rating to determine eligibility for issuing bonds.

In June 1989, regulations regarding eligibility requirements for issuing the yen-dominated Eurobonds by non-residents were moderated further. Rating was no longer required for issuing them. The restriction which prohibited the holding of the yen-dominated Eurobonds by non-residents was lifted for bonds with maturities of less than four years. Recycling restrictions on yen-dominated sovereign Eurobonds issued by non-residents were abolished in January 1994. Recycling restrictions on the yen-dominated Eurobonds, which include corporate bonds as well as sovereign bonds, issued by non-residents were completely abolished in August 1995. In January 1996, eligibility requirements for issuing domestic bonds by non-residents were eliminated. Obligations to set up eligibility requirements for issuing bonds and financial restriction clauses were removed.

2.4 Japan Offshore Market

The Japan Offshore Market was established in December 1986 in order to develop Japanese financial markets as an international financial center from the perspective of internationalizing Japanese financial and capital markets. Some financial and tax measures have been taken concerning financial transactions in the Japan Offshore Market while the financial transactions have been insulated from other domestic financial transactions. In the Japan Offshore Market, banks, as a rule, finance money from foreign countries and lend it to foreign countries. Financial transactions in the Japan Offshore Market are not subject to interest rate regulations, deposit insurance, and reserve deposit requirement. As for interest, withholding income taxes and corporate taxes are exempt.

Both the assets and the liabilities of the offshore Market have decreased in recent years. Its total asset amounts to 47.6 trillion yen while its total liabilities amount to 33.3 trillion yen in the end of November 2002. About 91 percent of the total assets (43.1 trillion yen) are held by non-residents while about 87 percent of the total liabilities (28.9 trillion yen) are owned by non-residents. A share of yen-denominated assets has been larger than that of foreign currency denominated assets over time although the share of yen-denominated assets has decreased since 1999. On the other hand, a share of yen-denominated liabilities has been steadily smaller than that of foreign currency denominated liabilities.

2.5 Access of Foreign Financial Institutions to Domestic Financial Markets

Six foreign security companies first acquired Tokyo Stock Exchange membership in February 1986. Since then the number of foreign security

companies who have acquired membership has increased. In October 1988 foreign financial institutions were allowed to increase their share of underwriting syndicates for the issue of Japanese government bonds.

2.6 Access of Foreign Firms to Domestic Capital Market

The first six foreign companies were listed in the Tokyo Stock Exchange in December 1973. The first yen denominated foreign bond, called the Samurai Bond, was issued by the Asian Development Bank in 1970. The first foreign currency-denominated foreign bond, called the Shogun Bond, was issued in the Tokyo financial market by the World Bank in August 1985. In December 1991, the Osaka Securities Exchange introduced a country fund market for foreign investment companies. In January 1995, the Tokyo Stock Exchange relaxed conditions for listing stocks of foreign companies and decreased the fees involved. In February 1996, regulations on short sells in foreign stock market in the Tokyo Stock Exchange were removed.

2.7 Japanese Big Bang

The Japanese government has promoted a financial system reform, which is called the 'Japanese Big Bang' (Financial Service Agency 2000), in order to make the Japanese financial sector efficient and competitive. This commenced in November 1996 under the three principles of 'Free, Fair, and Global'. The revised Foreign Exchange Law was changed to totally liberalize cross-border transactions in April 1998. Then, the Financial System Reform Law, a package of revisions of laws including the Banking Law, the Securities and Exchange Law, and the Insurance Business Law, which were required to implement the Financial System Reform, was enforced in December 1998.

Almost all measures were already implemented. First, the means of asset management were improved, including the introduction of new investment trusts and over-the-counter sales of shares of investment trusts by banks and other financial institutions, and full liberalization of dealings in securities derivatives. Second, efforts were made to provide attractive services through vital intermediary activities, such as promoting entry of banks, securities companies and insurance companies into each other's business, switching of participation regulation from the licensing system to a registration system for securities companies, liberalizing cross-border capital transactions and foreign exchange business, and fully liberalizing brokerage commissions. Third, diversified markets and channels for financing were created by abolishing the requirements to trade stocks only through the stock exchanges and introducing proprietary trading system (electronic trading systems).

The Tokyo Stock Exchange established a new market for promising start-ups, so-called Mothers (market of high growth and emerging stocks), in November 1999, and the Osaka Securities Exchange established the NASDAQ Japan stock market in June 2000. Fourth, a framework for reliable trading was established by improving the disclosure system, setting up fair trading rules, such as stricter insider trading control, and protecting customers in times of failure of financial institutions.

2.8 Report of the Council on Foreign Exchange and Other Transactions

The Council on Foreign Exchange and Other Transactions of the Ministry of Finance suggested some measures for internationalization of the Japanese yen in 1999. These included the initiation of FB issuance via competitive price auctions, exempting withholding tax on original issue discounts for Japanese Government bills (TBs and FBs) as well as exempting non-residents and foreign corporations from tax on the interest from interest-bearing Japanese government bonds.

Particular importance was assigned to measures for increasing market depth in the short-term financial markets and arrangements for facilitating investment in Japanese government bonds by foreign investors. The Japanese government announced measures outlined below, and implemented necessary arrangements in legal and other frameworks (Council on Foreign Exchange and Other Transactions 1999).

2.8.1 A competitive price auction of FBs begins in April 1999

Original issue discounts for TBs and FBs issued on or after 1 April 1999 which satisfy some requirements, including registration of all bonds in the Bank of Japan (BOJ) bank-entry system at the time of their issuance, are exempt from withholding taxes at the time of issuance, and foreign corporation shall, in principle, be exempt from taxes on original issue discounts for such bonds.

Interest income of non-residents and foreign corporations accrued from interest-bearing Japanese government bonds which satisfy some requirements, including registration in the BOJ book-entry system, and whose period for interest calculation begins on or after 1 September 1999 are exempt from withholding taxes on interest.

3. CURRENT STATUS OF THE TOKYO FINANCIAL MARKETS

We survey the current status of the Tokyo financial markets from the perspective of a international and regional financial center. We focus on

inward and outward portfolio investments of Japan, especially inward and outward investments in stocks and bonds. Next, we look at the current status of the Tokyo financial market as foreign companies' financing function. We refer also on the yen-denominated foreign bond (Samurai Bond) and the foreign currency-denominated bond (Shogun Bond).

3.1 Banking

Banks have been playing a central role in financial intermediation in Japan. Indirect finance has placed a larger weight than direct finance in Japan. Banks in particular, have the largest weight in the indirect finance. Almost all Japanese firms used to depend on bank loans. However, larger firms have now developed away from bank loans toward financing by issuing their own bonds.

Table 7.1 shows bank loans outstanding at the end of 2002. The total was 402 trillion yen with a GDP ratio of 0.80. Banks categorized as city banks have the largest share (53.1 percent) in bank loans in Japan. Foreign banks in Japan had 9 trillion yen of loans. This share was no more than 2.2 percent. Foreign banks are, as a rule, free to establish branches in Japan because the Japanese government has deregulated the establishment of branches of banks. However, some foreign banks have withdrawn from Japanese markets in recent years because of the country's prolonged recession.

3.2 Stock Market

Capitalization has made progress since pre-World War II. However, it is characteristic that individual investors have decreased while institutional

Table 7.1 *Bank loans outstanding (end 2002)*

	Loans and bills discounted		
	Billion yen	Share (%)	GDP ratio
City banks	213 504	53.1	0.43
Regional banks	135 496	33.7	0.27
Regional banks II*	44 193	11.0	0.09
Foreign banks in Japan	8 870	2.2	0.02
Total	402 063	100.0	0.80

Note: * Includes the banks that used to be so-called mutual banks.

Source: Bank of Japan

investors, largely life insurance companies and pension funds, have increased since World War II. Market values of the Tokyo Stock Exchange (both the first and second sections) amount to about 230 trillion yen as at 13 March 2003 as shown in Tables 7.2a and 7.2b (Stocks traded in the first section must meet stricter criteria, such as total market capitalization and net profits, than the second section.) Its GDP ratio is 0.459. The Tokyo Stock Exchange (both the first and second sections) had about 493 trillion yen of trading values in 13 March 2003.

Figure 7.1 shows the financial assets of households in Japan. Japanese households invest in bonds and stocks with small shares but only on a small scale, holding more than half their financial assets in the form of cash and deposits. In addition, they hold a relatively larger share in the form of insurance and pensions.

Figure 7.2 shows the percentage distribution of market value owned by types of shareholder in stock exchanges in Japan. Financial institutions have steadily acquired the largest percentage (around 40 percent). Foreigners' shareholdings have increased since 1990, approaching a level of approximately 20 percent in 2001.

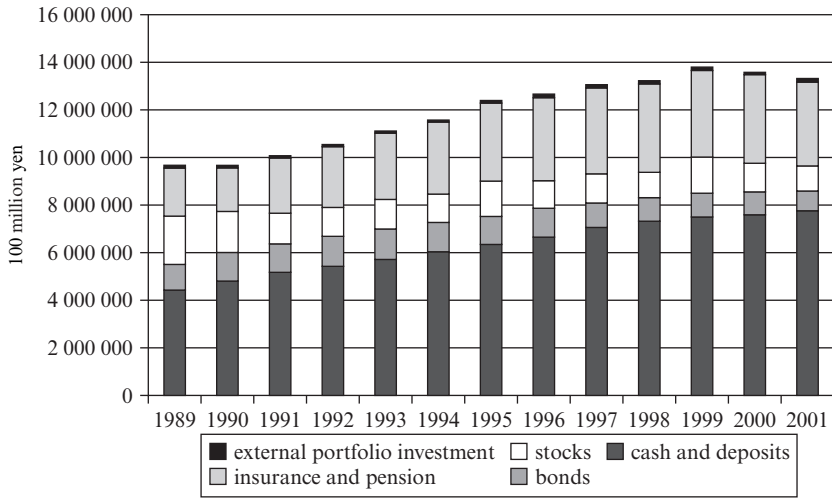
Table 7.2a Market values of stock exchanges (13 March 2003)

	Absolute amounts (billion yen)	GDP ratio (%)
Tokyo Stock Exchange (1st section)	225 612	0.451
Tokyo Stock Exchange (2nd section)	4 062	0.008
Total	229 674	0.459

Table 7.2b Trading values of stock exchanges (13 March 2003)

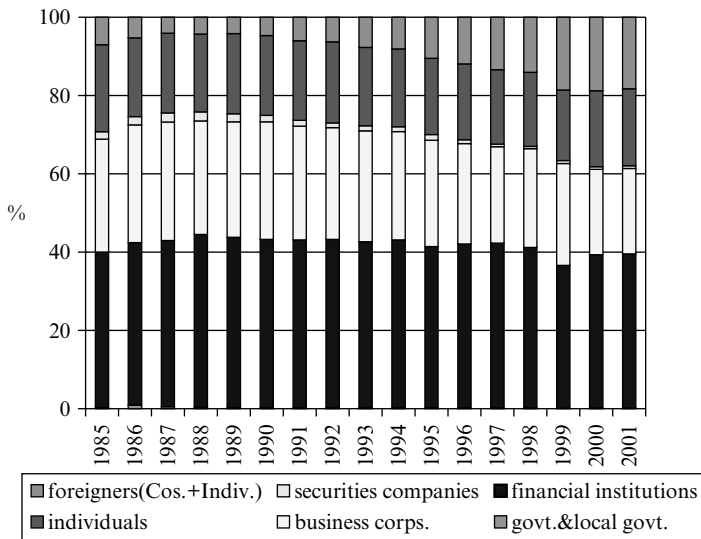
	Absolute amounts (billion yen)
Tokyo Stock Exchange (1st section)	489 981
Tokyo Stock Exchange (2nd section)	2 635
Foreign section	217
Total	492 833

Source: Tokyo Stock Exchange



Source: Bank of Japan.

Figure 7.1 Financial assets outstanding of households



Source: Tokyo Stock Exchange.

Figure 7.2 Distribution percentage of market value owned by type of shareholder in stock exchanges in Japan

Table 7.3 shows numbers of listed companies in the Tokyo Stock Exchange as at 14 March 2003. The total of listed domestic companies in the first and second sections and Mothers (market of high-growth and emerging stocks) is 2140. The number of listed foreign companies in the Tokyo Stock Exchange is only 34, a ratio of just 0.016 (=34/2140).

3.3 Money and Capital Markets

The amount outstanding in Japanese money markets amounts to approximately 157 trillion yen at the end of 2001, as shown in Table 7.4. The CDs, market which amounts approximately 45 trillion yen, is the largest among them. Markets of TBs and FBs are relatively large. They amount approximately 79 trillion yen.

Figure 7.3 shows movements of the money market outstanding. Markets

*Table 7.3 Number of listed companies
in the Tokyo Stock Exchange
(14 March 2003)*

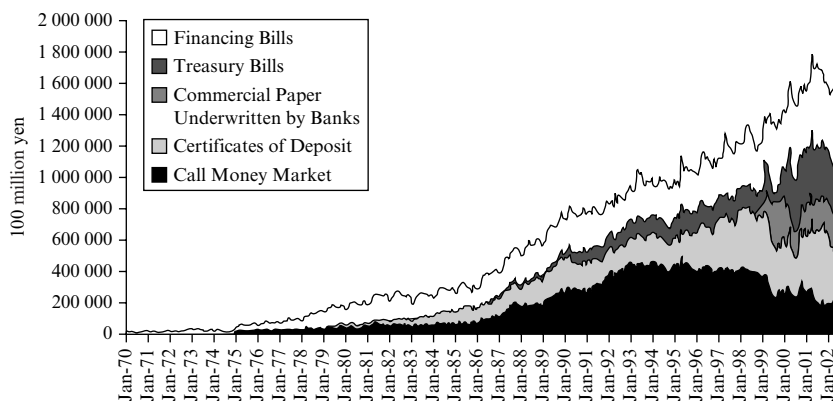
1st section	1 524
2nd section	570
Mothers	46
Total domestic stocks	2 140
Foreign stocks	34

Source: Tokyo Stock Exchange

*Table 7.4 Amount outstanding of the money markets in Japan
(end 2002)*

	Billion yen	GDP ratio
Call money market	15 087	0.030
Certificates of deposit	14 759	0.029
Commercial paper underwritten by banks	30 339	0.061
Treasury bills	35 295	0.070
Financing bills	43 526	0.087
Total	139 006	0.278

Source: Bank of Japan, <http://www.boj.or.jp/siryosiryof.htm>



Source: Bank of Japan

Figure 7.3 Money market outstanding (end of month)

for CDs, CPs, TBs, and FBs have been increasing consistently over time. On the other hand, the call money market has decreased in recent years because of the financial difficulties of Japanese financial institutions including banks and life insurance companies. The call money market had been the largest one till the mid-1990s.

Outstanding long-term and medium-term Japanese government bonds amounted to 387 trillion yen at the end of 2001 as shown in Table 7.5. The total of long-term and medium-term Japanese government bonds is more than five times that of Japanese government bills (the total of TBs and FBs). Long-term bonds are about two-thirds of the total of long-term and medium-term Japanese government bonds.

Figure 7.4 shows that outstanding amounts of Japanese government bonds have been increasing consistently over time. Long-term bonds had amounted to most of the Japanese government bonds before 1999 and super long-term ones started to be issued in 1999. In addition, the share of medium-term government bonds has increased since 1999. In sum, the variety of Japanese government bond markets as well as their market size have increased in recent years.

3.4 Transaction and Settlement System for Bond Markets

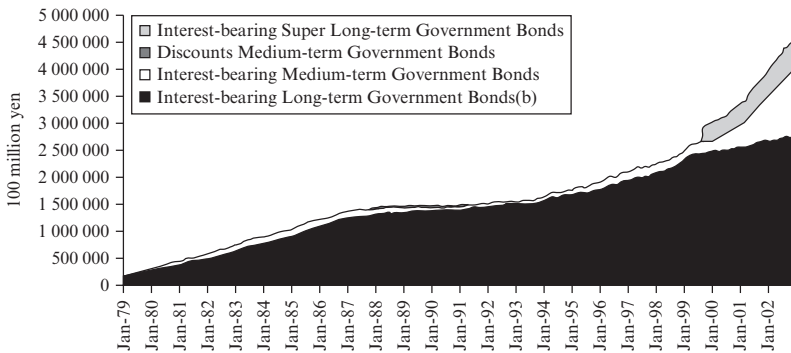
3.4.1 Japanese government bonds and bills

The Bank of Japan introduced the new Real-Time Gross Settlement (RTGS) system in January 2001, making the RTGS the only mode for its settlement system for funds and Japanese government bonds and bills and

Table 7.5 Amounts outstanding of Japanese government bonds (end 2001)

	Billion yen	GDP ratio
Interest-bearing super long-term government bonds	50 273	0.100
Interest-bearing long-term government bonds	266 426	0.532
Interest-bearing medium-term government bonds	127 519	0.255
Discounts medium-term government bonds	2 289	0.005
<i>Total of government bonds</i>	<i>446 507</i>	<i>0.892</i>
Treasury bills	35 295	0.070
Financing bills	43 526	0.087
<i>Total of TBs and FBs</i>	<i>78 821</i>	<i>0.157</i>
Total of government bonds, TBs and FBs	525 328	1.049

Source: Bank of Japan (2002) and http://www.boj.or.jp/siryo/siryo_f.htm



Source: Bank of Japan

Figure 7.4 Japanese government bonds

abolishing designated-time net settlement. All Japanese government bonds and bills are settled on a RTGS basis through the Bank of Japan Financial Network System (BOJ-NET).

The changeover to the RTGS system has had two main effects (Bank of Japan 2001). The first is the change from designated-time settlement to

real-time settlement. Instructions transmitted to the Bank of Japan from financial institutions, including banks and securities companies, that have current accounts (BOJ Accounts) with it are now executed immediately upon receipt, instead of accumulating until certain settlement times. The other major change is from net settlement to gross settlement. For the settlement of funds and Japanese government bonds and bills the whole (gross) value of transactions is debited from or credited to the account for each BOJ Account holder for each transaction, instead of the net amount of a number of transactions.

Thus, the RTGS system is a settlement mode that limits the direct effect of the inability to pay of one financial institution, in the event that it is unable to transfer either funds or Japanese government bonds and bills for any reason, to the immediate counterparties of that financial institution. The changeover to the RTGS system was aimed at reducing the systemic risk inherent in designated-time net settlement.

3.4.2 Corporate and local government bonds

Corporate and local government bonds are settled through the Japan Bond Settlement Network Co. (JB NET), which is a network which transmits settlement information of both corporate and local government bonds. Settlements are made in a registrar for each of corporate and local government bonds. Accordingly, the JB NET is not a central securities depository itself but a kind of relay network linking registrars. A whole system which includes the JB NET system and linkages with the registrars is functioning as a central securities depository for corporate and local government bonds¹.

In the JB NET, they trade not only domestic bonds (except for Japanese Government bonds and bills) but also yen-denominated foreign bonds. The domestic bonds include public corporation bonds, bank debentures, industrial bonds, local government bonds, and corporate bonds. Convertible bonds as well as straight bonds are also traded in the JB NET. In April 1998, the JB NET changed over into a Delivery Versus Payment (DVP) system (that is, a simultaneous process of security delivery and payment) by linking the JB NET with the BOJ-NET which is supported by the Bank of Japan.

3.5 Transaction and Settlement System of Stock Markets

Transactions of stocks on the Tokyo Stock Exchange are settled on the third business day following the trades, employing a 'Rolling Settlement' system.² The Tokyo Stock Exchange employs a netting system. For settlement of trades on the Tokyo Stock Exchange, both securities and funds are

delivered on a net basis. Transactions in domestic stocks are settled on a net basis through book-entry transfers at the Japan Securities Depository Center (JASDEC) under the supervision of the Tokyo Stock Exchange. The Exchange, its clearing participant firms and the Japan Securities Finance Co. Ltd. have their stock accounts with the JASDEC as its participants for stock settlement.

The JASDEC is providing a central stock depository and a book entry transfer system for domestic stocks in Japan. It started to operate securities settlements in October 1991. Security companies, banks, trust banks, insurance companies, and stock exchanges participate in it. Securities dealt with include domestic listed stocks, over-the-counter registered stocks, investment trusts which closely trace the movements of a specific underlying stock index, including the TOPIX and NIKKEI 225 Exchange Traded Funds (ETF), and Real Estate Investment Trusts (REIT) (Nakajima and Shukuwa 2002; Japan Securities Depository Center 2002).

3.6 Foreign Exchange Markets

The Tokyo Foreign Exchange Market had been steadily growing till 1990 in a context of liberalizing international trade and capital transactions in Japan as well as the growth in Japanese economy (Shikano 2001). In particular, the rapid growth of the Tokyo Foreign Exchange Market in the 1980s reflected the liberalization of capital transactions according to the enforcement of the revised Foreign Exchange and Foreign Trade Control Law in December 1980, the abolition of the principle of real demand related to futures transactions in foreign exchange in April 1984, the abolition of regulations regarding the conversion of foreign currency-denominated funds into the yen in June 1984, and activation of inward portfolio investment followed by the deregulation of international financial transactions in the 1980s.

Daily turnover of US\$/yen transactions in the Tokyo Foreign Exchange Market steadily increased in a latter half of the 1980s. However, it decreased during a period from 1990 to 1994, increasing again from 1995 to 1998. Turnover of spot transactions has been decreasing since 1999 while that of swap transactions has been increasing since 2000. The averages per business day of turnover in the Tokyo Foreign Exchange Market were US\$8.4 billion for spot transactions and US\$ 18.1 billion for swap transactions at the end of 2001.

Table 7.6 shows foreign exchange turnover net of local inter-dealer double counting in April (daily average). The Tokyo Foreign Exchange Market has about US\$147 billion of foreign exchange turnover in total. Its share in the world is 9.1 percent. The first largest foreign exchange turnover

Table 7.6 Foreign exchange turnover net of local inter-dealer double-counting in April 2001 (daily averages in millions of US dollars)

	Japan	Share (%)	United Kingdom	United States	Total
Total	146 780	9.1	504 429	253 429	1 617 917
US dollar	135 069	9.2	462 094	236 436	1 472 741
Euro	25 934	4.2	207 268	100 111	611 809
Japanese yen	109 708	29.7	87 698	67 622	369 567
Pound sterling	4961	2.4	122 852	25 901	207 419
Swiss franc	1252	1.3	28 042	17 687	98 050
Canadian dollar	972	1.3	18 787	18 444	72 524
Australlian dollar	4910	7.1	16 945	7 106	69 572
Other currencies	10 753	3.2	65 173	33 998	334 152

Source: BIS(2002) *Triennial Central Bank Survey*, March 2002.

is the US dollar and the second largest is the Japanese yen. The share of the Tokyo Foreign Exchange Market in the foreign exchange turnover of the Japanese yen is about 30 percent in the world.

3.7 Japanese Financial Accounts

The Japanese economy has had large current account surpluses for a long time. On one hand, it has had large capital outflows that have corresponded to the current account surpluses. Table 7.7 shows that Japanese economy has about 7.6 trillion yen of net capital outflows in total in 2002 (gross capital inflow was 0.6 trillion yen and gross capital outflow was 8.1 trillion yen). The financial accounts are classified into direct investment, portfolio investment, financial derivatives, and other investment. Japanese direct investment had 2.8 trillion yen of net outflows in 2002. Its portfolio investment had 12.7 trillion yen of net outflows. Its financial derivatives had 0.3 trillion yen of net inflows. Its other investment had 7.6 trillion yen of net inflows but bank loans had 1.0 trillion yen of net outflows.

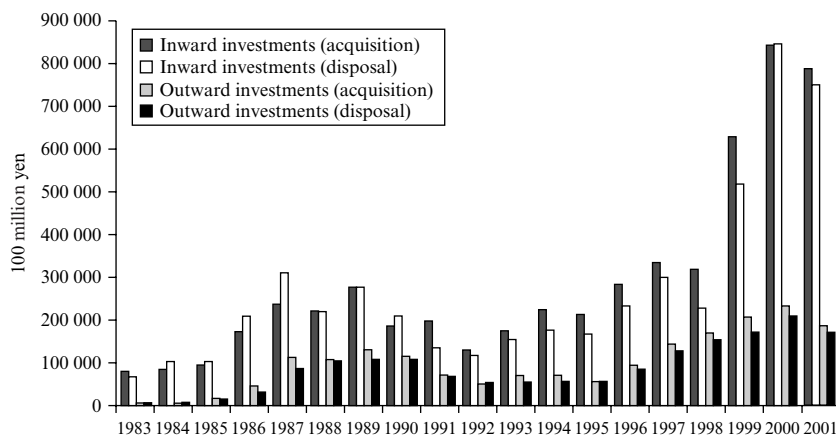
3.8 Inward and Outward Investments in Stocks

The deregulation of international financial transactions in Japan is reflected in increases in portfolio investments, which include investments in stocks and bonds.

Table 7.7 Financial account in 2002

	Absolute amounts (billion yen)		
	Gross inflow	Gross outflow	Net
Financial account	575.3	-8132	-7556.7
(GDP ratio)	0.001	-0.016	-0.015
Direct investment	-3947.4	1169.4	-2778
(GDP ratio)	-0.008	0.002	-0.006
Portfolio investment	-2711.6	-9968.8	-12680.4
(GDP ratio)	-0.005	-0.020	-0.025
Financial derivatives	-9438.2	9701.2	263
(GDP ratio)	-0.019	0.019	0.001
Other investment	2848.6	4791.6	7640.2
(GDP ratio)	0.006	0.010	0.015
Other investment (loan)	6488.1	-7493.9	-1005.8
(GDP ratio)	0.013	-0.015	-0.002

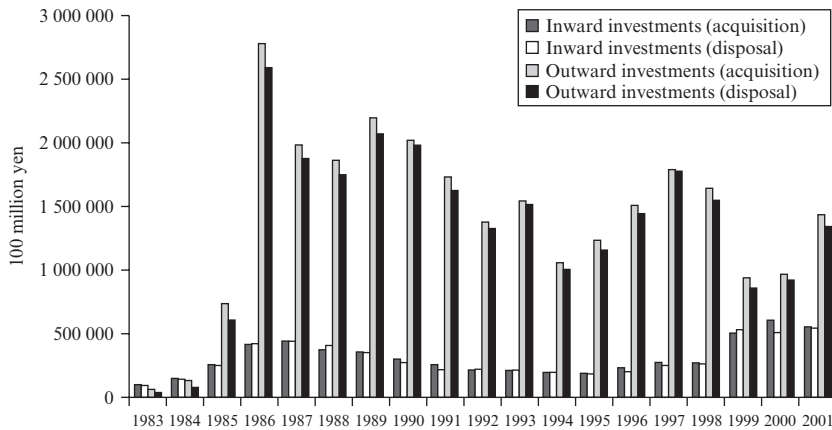
Source: Bank of Japan.



Source: Ministry of Finance

Figure 7.5 Inward and outward investments in stocks

Figure 7.5 shows that gross inward and outward investments (in terms of acquisition and disposal) in stocks had surges during the first period from 1985 to 1987 and the second period from 1998 to 2000. The two periods corresponds to the first internationalization of financial markets and the Japanese Big Bang. The gross inward investments in stocks have



Source: Ministry of Finance

Figure 7.6 Inward and outward investments in bonds

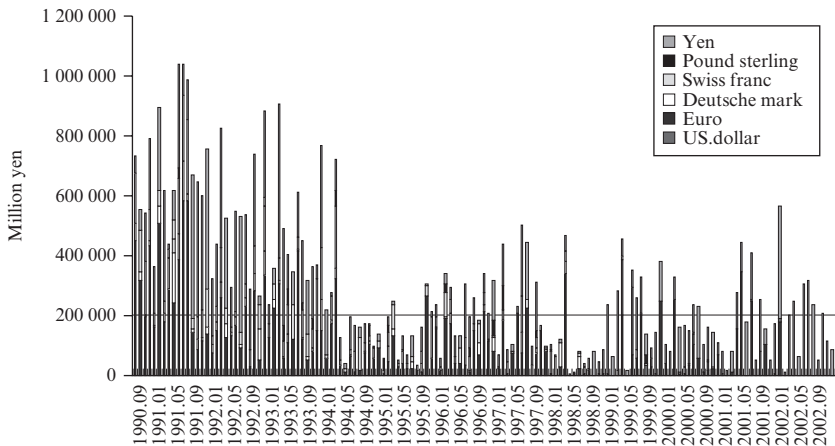
been steadily larger than the gross outward investments in stocks, which reflects the fact that Japan has been a capital exporter to foreign countries over time.

3.9 Inward and Outward Investment in Bonds

The first internationalization of financial markets in 1984 and the Japanese Big Bang in 1998 is also reflected in rapid growth in gross inward and outward investments (in terms of acquisition and disposal) in bonds. Figure 7.6 shows asymmetric movements in gross inward and outward investments in bonds.

Figure 7.7 shows movements in currency classified bonds issued overseas. It shows that certain quantities of US dollar-denominated bonds as well as the Japanese yen-denominated bonds were issued in the 1990s. However, the US dollar denominated bonds have decreased in the recent years while the Japanese yen-denominated bonds have been dominant in the bonds issued overseas by Japanese firms.

There was a very rapid growth of gross outward investments in bonds in 1986, but they have decreased after that peak during a period from 1987 to 1994. Although they increased again from 1995 to 1997, there were marked decreases in 1999 and 2000. In contrast, inward investments in bonds surged during the first period from 1985 to 1987 and the second period from 1998 to 2000. The two periods correspond to the first internationalization of financial markets and the Japanese Big Bang.



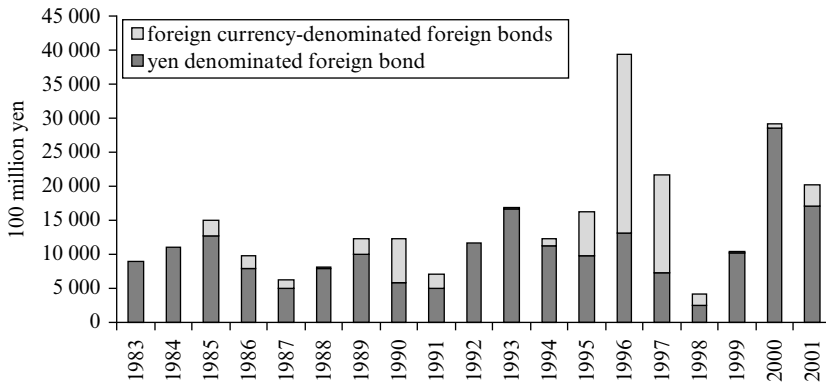
Source: Bank of Japan.

Figure 7.7 Currency classified bonds issued overseas (issue amount)

3.10 Samurai Bonds and Shogun Bonds

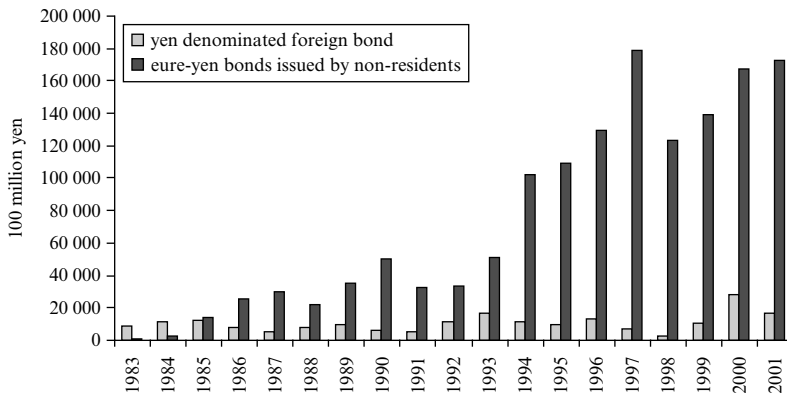
Both yen-denominated foreign bonds (Samurai bonds) and Tokyo foreign-currency-denominated foreign bonds (Shogun bonds) are issued in Tokyo financial markets by non-residents. The first Samurai bond was issued by the Asian Development Bank in 1970. The first Shogun bond, which was denominated in terms of the ECU, was issued by the World Bank in 1985. In recent years, no regular foreign-currency-denominated bonds, i.e. ones which use foreign currencies for all of payment, payment of interest, and redemption, have been issued. Rather dual-currency bonds (which use the Japanese yen in payment and payment of interest but foreign currencies in redemption) and reverse-dual bonds (using of the Japanese yen in payment and redemption but foreign currencies in payment of interest) have been issued.

Issuance rules have been eased for Samurai bonds and Shogun bonds in recent years. Eligibility requirements for Samurai bonds by non-residents were abolished in January 1996. The abolition of eligibility requirements broadened the range of issuers. It increased issuance of Samurai bonds by low-rated issuers in emerging market countries which included Latin America (Brazil, Mexico, and Argentina), Asia (Turkey), and East Europe (Romania). *Ex ante* notification was needed for issuance of them before 1998 when the revised Foreign Exchange Law became effective. Now only *ex post* reporting is needed for the issuance under the revised Foreign Exchange and Foreign Trade Control Law that was enforced in April 1998.



Source: Ministry of Finance

Figure 7.8 Yen denominated foreign bonds (Samurai bonds) and foreign currency-denominated bonds (Shogun bonds)



Source: Ministry of Finance (2001)

Figure 7.9 Samurai bonds and euro-yen bonds issued by non-residents

Figure 7.8 shows that issuance of Samurai bonds reached a peak in 2000 while that of Shogun bonds peaked in 1996. Both of them have fluctuated during the reported period from 1983 to 2001. Figure 7.9 shows comparison between the issuance of Samurai bonds and euro-yen bonds by non-residents. Issuance of the former was larger in 1983 and 1984 but has been consistently lower since 1985. Since 1994, in particular, Euro-yen bonds issued by non-residents have increased rapidly while issuance of the Samurai bonds has not increased so much.

Table 7.8 Life insurance markets at the end of 2001

	Absolute amounts (billion yen)	GDP ratio
Personal insurance	1 255 623.2	2.508
Personal pension	69 593.1	0.139
Group insurance	407 995.5	0.815
Total	1 733 211.8	3.462

Source: Japan Institute of Life Insurance.

3.11 Life Insurance Companies and Investment Trusts

Life insurance companies are the largest and most influential institutional investors in Japan. Table 7.8 shows that Japanese life insurance markets (total of personal insurance, personal pension, and group insurance) amount 1734 trillion yen at the end of 2001. Its GDP ratio is about 3.5. Personal insurance has a larger share in the life insurance markets and amounts 1256 trillion yen, with a GDP ratio of 2.5.

Japanese life insurance companies invest 60 percent of their total assets in securities which include Japanese government bonds (17.8 percent), foreign securities (14.3 percent), and Japanese stocks (13.4 percent) as shown in Table 7.9. They have 33 trillion yen of Japanese government bonds, 26 trillion yen of foreign bonds, and 25 trillion yen of Japanese stocks. They also make loans to Japanese and foreign firms 25.5 percent of the total.

Investment trusts are one of the relatively larger institutional investors in Japan with publicly offered investment trusts totalling 35 trillion yen in February 2003 as shown in Table 7.10. Their invest 25 percent of their total assets into stocks, 51 percent into bonds, and 24 percent into 'others'. They are categorized into stock investment trusts (16.3 trillion yen), bond investment trusts (15.5 trillion yen), and money management funds (5.5 trillion yen).

3.12 Derivatives

Japanese OTC foreign exchange derivatives have 10 percent of the world share. Table 7.11 shows the OTC foreign exchange derivatives turnover net of local inter-dealer double-counting in April 2001. Daily average turnover amounts 116 billion US dollars in Japan while there are 390 billion US dollars in the United Kingdom and 169 billion US dollars in the United States. The Japanese market has about US\$108 billion foreign exchange turnover in total. Its share in the world total is 9.7 percent. The largest

Table 7.9 Assets of Japanese life insurance companies in the end of 2001

	Absolute amount (billion yen)	Share in total assets (%)	Share in securities (%)
Cash and deposits	2882.8	1.6	
Money in trust	3587.5	1.9	
Call loan	3420.4	1.9	
<i>Loan</i>	<i>47 056.1</i>	<i>25.5</i>	
Foreign loan	4220.4	2.3	
<i>Securities</i>	<i>111 020.6</i>	<i>60.2</i>	<i>100.0</i>
Japanese government bond	32 832.4	17.8	29.6
Local government bond	7 177.2	3.9	6.5
Corporate bonds	17 926.4	9.7	16.1
Stocks	24 707.4	13.4	22.3
Foreign securities	26 419.5	14.3	23.8
Other securities	1 957.6	1.1	1.7
Real estate	7 974.9	4.3	
Others	8 428.6	4.6	
Total	184 370.9	100.0	

Source: Japan Institute of Life Insurance.

foreign exchange derivatives turnover is in the US dollar (US\$108 billion) and the second largest is the Japanese yen (US\$86 billion). Turnover of the Japanese yen has a market share of about 32 percent of the world total.

Table 7.12 shows the OTC single currency interest rate derivatives turnover net of local inter-dealer double-counting in April 2001. Daily average turnover amounts 16 billion US dollars in the Japanese market. Its share is no more than 2.3 percent of the world total. The largest interest rate derivatives turnover is the Japanese yen (US\$13 billion) and the second largest is the US dollar (US\$ 2 billion). Turnover of the Japanese yen, has a market share of about 33 percent of the world total.

4. EVALUATION OF THE ROLE OF THE TOKYO FINANCIAL MARKET

We now evaluate the role of Tokyo financial market as an international and regional financial center by focusing on access of foreigners to Japanese financial markets and to the securities settlement systems in Japan.

Table 7.10 *Assets of publicly offered investment trusts in February 2003
(billion yen)*

	Stocks		Bonds		Others		Total
	(bn yen)	(%)	(bn yen)	(%)	(bn yen)	(%)	(bn yen)
<i>Stock investment trusts</i>	8 766.9	53.8	5 895.2	36.2	1 639.9	10.1	16 302.1
Unit type	340.5	430	342.9	43.3	109	13.8	792.5
Open-end type	8 426.4	54.3	5 552.3	35.8	1 530.9	9.9	15 509.6
<i>Bond investment trust</i>			9 473.7	70.8	3 903.3	29.2	13 377.0
Unit type			327.0	81.0	76.5	19.0	403.5
Open-end type			9 146.6	70.5	3 826.7	29.5	12 973.4
Money management fund			2 474.0	45.1	3 012.2	54.9	5 486.2
Total	8 766.9	24.9	17 843.0	50.7	8 555.5	24.3	35 165.4

Source: Investment Trusts Association, Japan.

Table 7.11 *OTC foreign exchange derivatives turnover net of local inter-dealer double-counting in April 2001 (Daily averages in millions of US dollars)*

Country Currency	Japan	Share (%)	United Kingdom	United States	Total
Total	115 946	9.8	390 313	169 076	1 185 071
US dollar	107 599	9.7	364 844	160 195	1 105 192
Euro	19 156	4.6	151 292	58 423	420 945
Japanese yen	85 529	32.2	64 969	47 623	265 701
Pound sterling	4 053	2.5	100 215	16 269	159 811
Swiss franc	839	1.3	20 527	10 441	65 159
Canadian dollar	660	1.2	13 303	13 675	55 346
Australlian dollar	4 524	8.0	14 390	5 128	56 222
Other currencies	9 533	3.9	51 086	26 397	243 765

Source: BIS(2002) *Triennial Central Bank Survey* March 2002.

Table 7.12 OTC Single currency interest rate derivatives turnover net of local inter-dealer double-counting in April 2001 (Daily averages in millions of US dollars)

Country Currency	Japan	Share (%)	United Kingdom	United States	Total
Total	15 761	2.3	237 762	115 668	676 105
US dollar	2438	1.1	62 068	95 917	213 265
Euro	529	0.2	113 439	6802	317 381
Japanese yen	12 600	32.9	6975	7329	38 318
Pound sterling	134	0.3	39 896	1102	49 541
Swiss franc	0	0.0	2760	431	9822
Canadian dollar	1	0.0	479	2358	7698
Australlian dollar	8	0.1	2263	44	10 429
Other currencies	53	0.2	9892	1686	29 649

Source: BIS(2002) *Triennial Central Bank Survey* March 2002.

4.1 Money Markets

It is indispensable to open safe and liquid yen denominated money markets to non-residents for the purpose that non-residents should use the Japanese yen in financial transactions. The yen-denominated money markets have been deregulated in order to activate internationalization of the Japanese yen. Both issuance and transactions volumes of TBs and FBs have increased in Japan. They have been representative financial instruments in the Japanese money market. Some measures, which include introducing competitive price auctions and exempting withholding tax on original issue discounts have been taken in order to activate the TB and FB markets. The Study Group of Promotion of Internationalization of the Yen (2003) suggested that the Japanese government should relax requirements for exempting withholding tax on original issue discounts for TBs and FBs in order to further open the markets to non-residents further.

4.2 Bond Markets

Development of capital markets should depend on their extent and depth in terms of liquidity. A variety of market participants including non-residents should participate in them. For that purpose, it is necessary to provide market participants with a more favorable market environment as an incentive. Some measures, which include exempting withholding tax on

interest income of non-residents and foreign corporations accrued from interest-bearing Japanese government bonds, have been taken to provide a more favorable market environment for both issuance and secondary markets in these bonds. The Japanese government should improve the institutional environment, which includes the tax system and securities settlement system, for the government bond market in order to induce non-residents to invest in Japanese government bonds so that there are no obstacles.

4.3 Samurai Bond Market

It is desirable to provide a more favorable environment where financing money in terms of the Japanese yen goes more smoothly in Japanese capital markets, with lower financing costs, for non-residents. It is desirable also in terms of providing efficient yen-denominated investment instruments for non-resident investors who are making international portfolio investments. For this purpose, it is necessary to activate the Samurai bond market where non-residents can finance money in terms of the Japanese yen in Japan. However, issuance of Samurai bonds has tended to be inactive in recent years while the market in euro-yen bonds issued by non-residents has been relatively steadily expanding.

It must be pointed out that prompt issuance of bonds in the Samurai bond market is more difficult than the euro-yen bond markets and also that issuance costs in the Samurai bond market are greater than the euro-yen bond markets. Accordingly, it is necessary to reduce the obstacles for issuing bonds in the Samurai bond market. The Study Group of Promotion of Internationalization of the Yen (2003) suggested that the Japanese government should take some prompt measures which would include abolishing requirements for listing in stock and securities exchanges in Japan because the requirements impose substantial restrictions on non-residents' using the issuance registration system.

4.4 Japan Offshore Market

The Japan Offshore Market was established to form an open financial market with few regulations on international capital transactions in terms of not only internationalization of Japanese financial and capital markets but also the yen. Its market size developed steadily for some time, but it has reduced somewhat in recent years.

It is pointed out that it is desirable for the Japanese government to try to increase activity in the Japan Offshore Market, including extending the range of participants and transaction volumes there, because a function of

the Japan Offshore Market is to provide some measures for investing and financing in Japanese financial markets for non-resident investors and corporations (Study Group of Promotion of Internationalization of the Yen 2003). For this purpose, the Study Group of Promotion of Internationalization of the Yen (2003) suggested that the Japanese government should expand participation to companies such as securities and insurance firms. In addition, it is necessary to allow transactions of corporate bonds of foreign private firms as well as foreign public bonds in the Japan Offshore Market. Also necessary is approval for derivative transactions such as futures, option, and swap transactions, to meet needs by issuers and investors to reduce financial risks. It is expected that such improvements of the Japan Offshore Market should increase efficiency of investments and financing in Japanese financial markets by non-residents and that derivatives would make arbitrage transactions run more smoothly.

4.5 Stock Exchanges

Both the Tokyo Stock Exchange and the Osaka Securities Exchange have taken some measures to increase their efficiency providing attractive financial instruments and improving access of foreign investors, stock issuers, and financial institutions. It is necessary for the Japanese stock exchanges to try to strengthen linkages with foreign exchanges further in order to thicken the Japanese stock markets and increase their liquidity. For example, it is easier for foreign investors to access the Japanese stock exchanges and to trade Japanese stocks if foreign investors can trade Japanese stocks through stock exchanges in foreign countries. Moreover, it is expected that this would give foreign corporations the incentive to list their stocks in Japanese stock exchanges. International unification of listing and issuance requirements and trading rules are set forth as prerequisites for international and regional linkages of stock exchanges.

4.6 Security Settlement System

The security settlement system is an important infrastructure which supports securities markets. Accordingly, its safety, efficiency, and convenience affects the international competitiveness of securities markets. In Japan, some measures such as the introduction of paperless transactions for Japanese government bonds and corporate bonds have been taken in order to make securities markets efficient. Also the recent introduction of the new Real-Time Gross Settlement (RTGS) for Japanese Government Bonds and Bills has improved the security settlement system for them. However, there are three separate settlement systems for government bonds (the BOJ Net),

corporate bonds (the JB Net), and stocks (the JASPEC). It is necessary to unify the three settlement systems and to introduce a single central securities depository for Japanese government bonds, corporate bonds, and stocks because other major countries have unified security settlement systems. In addition, further shortening of the settlement period and realization of DVP for all kinds of securities should make the Japanese securities markets more attractive for foreign issuers and investors.

5. FUTURE PROSPECTS

In conclusion, we will show how the future prospects of Tokyo financial markets as an international and regional financial center would be enhanced by international and regional linkages between Tokyo and other East Asian financial markets. We suggest some measures for the Tokyo financial markets to play a central role as a regional financial center in East Asia.

The linkages among financial markets in East Asia can help to provide many savings and prospective investment chances within the region and to pool the financial market's liquidity. With a larger combined financial market there is greater scope to develop and promote new and innovative financial products. The possibility of cross-trading financial products listed in the financial markets may provide another investment opportunity for domestic as well as regional and international investors.

The development in linkages among the financial markets in East Asian countries may also enhance market efficiency and lower trading costs for investors. It provides financial institutions and investors with direct access to financial instruments traded in the financial markets, which lowers the costs of cross-border trading. This could in turn encourage greater cross-border trading, thus boosting liquidity in the financial markets in East Asian countries.

Cross-border clearing and settlement linkages are regarded as a useful area of possible cooperation. Three types may be pointed out. First, for the clearing of securities, close linkages among the central securities depositories of the East Asian countries will enable investors to settle their cross-border trades through existing facilities. Second, for the clearing of high value inter-bank funds transfers, linkages among the Real-Time Gross Settlements (RTGS) systems in financial markets of the East Asian countries will help to reduce the securities and foreign exchange settlement risks. Third, for the clearing of cross-border retail payments, an Asian Regional Clearing Mechanism will help speed up and reduce the cost of intra-regional payment flow.

East Asian countries would cooperate in facilitating cross-border bond trading by improving financial market infrastructure, including clearing and settlement systems. The Japanese financial market infrastructure has room for further improvement, which includes unifying securities clearing and settlements and central securities depositories within Japan. Nevertheless it is Japanese financial markets that will play a central role in linkage among financial markets in East Asian countries.

NOTES

1. Nakajima and Shukuwa (2002); Japan Bond Network's HP (<http://www.j-b-net.co.jp>)
2. Tokyo Stock Exchange's HP (<http://www.tse.or.jp/english/cash/clearing/index.html>)

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8. Can Hong Kong survive as an international financial center?

Yiping Huang

1. INTRODUCTION

Since the 1950s Hong Kong has been an important financial hub servicing the global markets, particularly the rapidly growing East Asian economies.¹ That role was further strengthened when China began its open-door policy. According to recent data, Hong Kong is the seventh largest foreign exchange market and tenth largest stock market in the world. It is also one of the world's major banking centers.

Doubts grew strongly in recent years about Hong Kong's ability to survive as a major international financial center. Difficulties of structural adjustments in the economy had constantly depressed confidence. Sustainability of the currency peg was frequently in question. Some political changes, such as amendments to the Article 23 of the Basic Law which was put on hold indefinitely by the government following the massive protest on 1 July 2003, also gave rise to concerns over the continuation of political and economic freedom. The rapid rise of Shanghai in the financial world also led many to believe that Hong Kong is playing a losing game.

In this short chapter, we take a glance at Hong Kong's financial markets and its future role in international financial markets. In the next section, we provide a brief overview of the financial markets, particularly its banking sector and stock markets. In section 3, we describe the factors – location and institutions – that promoted Hong Kong as an important financial hub. In section 4, we analyse the challenges facing Hong Kong in continuing its role as an international financial center. We make some concluding remarks in the final section.

2. AN INTERNATIONAL CENTER FOR FINANCIAL SERVICES

Hong Kong has relatively developed financial markets, especially in the Asian context (see Table 8.1). Both total bank assets and equity market

Table 8.1 Hong Kong's financial markets in international comparison (percentage of GDP, 2000)

	Bank assets	Equity market	Bond market
Hong Kong	214	206	47
China	150	45	25
Singapore	220	112	25
United States	65	158	141
Japan	145	64	101
Germany	273	51	97
South Korea	233	35	53

Note: The figure for China includes only domestic equity markets and that for Singapore includes only government bonds.

Source: CEIC database, Hong Kong

capitalization exceeded 200 percent of GDP in 2000. The bond market is relatively underdeveloped, compared to both the other forms of financial intermediation and to the other industrialized economies. The financial markets serve not only households and companies in Hong Kong but also those in the rest of Asia, particularly China.

Hong Kong has a three-tier system of authorized institutions in the banking sector: licensed banks, restricted license banks and deposit-taking companies. Only licensed banks can operate current accounts and accept deposits of any size and maturity. Restricted license banks are principally engaged in merchant banking and capital market activities. They may take deposits of any maturity of HK\$500 000 or more. And deposit-taking companies are mostly owned by or associated with licensed banks and engage in a range of activities, particularly consumer finance. These companies are restricted to taking deposits of HK\$100 000 or more with an original term to maturity of at least three months.

In a study conducted by the Heritage Foundation in 2001, Hong Kong was ranked at the top with the world's freest banking institutions. At the beginning of 2003, there were 134 licensed banks, 44 restricted license banks, 41 deposit-taking companies and 102 local representative offices of overseas banking institutions (see Table 8.2). The authorized institutions come from 38 countries in the world and include 75 out of the world's largest 100 banks. And about 54.6 percent of banking businesses is in foreign currencies. At the end of March 2002, the external assets of the banking sector reached HK\$3296.5 billion, making Hong Kong one of the largest banking centers in the world.

Table 8.2 *Composition of Hong Kong's banking sector (HK\$ billion, March 2003)*

	No. of institutions	Total assets	Foreign assets	Loans	Deposits
Authorized institutions		5999.0	3296.5	2072.8	3303.2
Licensed banks	134	5733.4	3199.4	1935.6	3266.5
Restricted license banks	44	224.0	87.7	110.1	31.2
Deposit-taking companies	41	41.5	9.4	27.1	5.5

Source: CEIC database, Hong Kong

Hong Kong has a mature and active foreign exchange market, supported by absence of exchange controls and favorable time zones. According to a survey by the Bank of International Settlements, Hong Kong was the world's seventh largest foreign exchange market in terms of turnover.

Hong Kong's stock market is the eighth largest in the world and the second largest in Asia, next only to the Tokyo market, in terms of market capitalization as of the end of September 2003 (see Table 8.3). In 2002 Hong Kong was behind China's stock markets. But the decline in stock prices led to shrinkage of the size of the markets in China by about 50 percent within two years. A wide range of products is traded in the stock market, including ordinary shares, options, warrants, unit trusts and debt instruments. In mid-2003, the market capitalization of the Hong Kong markets was about \$619 billion and the turnover was \$89 billion.

At the end of 2002, there were a total of 812 companies listed in the market with total market capitalization of HK\$3.6 trillion (see Table 8.4). Of these, 54 were Chinese companies (H-shares), which had raised more than HK\$176 billion through their initial public offerings (IPOs). A second market, the Growth Enterprise Market (GEM), was established in November 1999 to provide an alternative fund-raising channel for emerging growth enterprises. There were 166 companies listed with a total of market capitalization of HK\$52.2 billion at the end of 2002. But the GEM price index has been falling constantly (see Figure 8.1). Trading on the Stock Exchange of Hong Kong is executed through the Automatic Order Matching and Execution System.

For the derivatives market, there were a total of eight types of futures and options products traded on the Hong Kong Futures Exchange, including futures and options contracts on indices and interest rates and stock futures.

Table 8.3 *Hong Kong is among the world's top stock markets*
(July–September 2003)

	Market capitalization (US\$ billion)	Turnover (US\$ billion)
1. US (NYSE + NASDAQ)	12 759	4373
2. Japan (Tokyo)	2746	677
3. UK (London)	2111	934
4. Euronext ^(a)	1742	481
5. Germany (Deutsche Bourse)	841	351
6. Canada (Toronto)	771	121
7. Switzerland	626	154
8. Hong Kong	619	89
9. Spain ^(b)	579	246
10. Italy	524	199
11. Australia	496	103
12. Mainland China (SHSE + SZSE)	472	67

Notes:

(a) Comprises Euronext Amsterdam, Euronext Brussels, Euronext Lisbon and Euronext Paris.

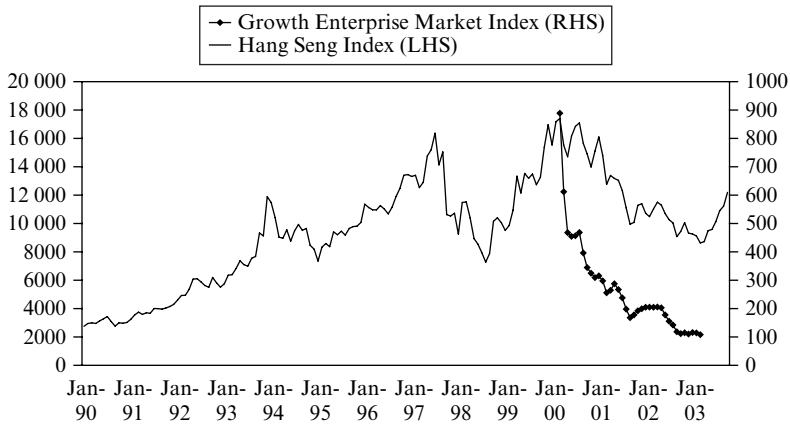
(b) Comprises Bolsa de Barcelona, Bolsa de Bilbao, Bolsa de Madrid and Bolsa de Valencia.

Source: CEIC database, Hong Kong

Table 8.4 *Hong Kong's stock markets*

As at end	Number of listed companies	Market capitalization (HK\$ bn)	Average daily turnover (HK\$ mn)	Number of listed companies	Market capitalization (HK\$ bn)	Average daily turnover (HK\$ mn)
1991	357	949.2	1 347	n.a.	n.a.	n.a.
1992	413	1 332.20	2 802	n.a.	n.a.	n.a.
1993	477	2 975.40	4 910	n.a.	n.a.	n.a.
1994	529	2 085.20	4 586	n.a.	n.a.	n.a.
1995	542	2 348.30	3 347	n.a.	n.a.	n.a.
1996	583	3 476.00	5 672	n.a.	n.a.	n.a.
1997	658	3 202.30	15 465	n.a.	n.a.	n.a.
1998	680	2 661.70	6 887	n.a.	n.a.	n.a.
1999	701	4 727.50	7 757	7	7.2	144
2000	736	4 795.20	12 338	54	67.3	341
2001	756	3 885.30	8 025	111	61	162
2002	812	3 559.10	6 474	166	52.2	178

Source: Hong Kong Exchange (HKEx)



Source: CEIC database, Hong Kong

Figure 8.1 Market indices of Hong Kong stock markets

The transactions on the two exchanges are cleared and settled through their three associated clearing houses – the Hong Kong Securities Clearing Company (HKSCC), the Stock Exchange of Hong Kong Options Clearing House Company and the Hong Kong Futures Exchange Clearing Corporation. Clearing and settlement of securities transactions in the stock market are carried out by the HKSCC through the Central Clearing and Settlement System (CCASS).

CCASS is a system to cater for the book-entry settlement of transactions in listed securities between CCASS participants, which include brokers, clearing agency participants, custodians, stock lenders, stock pledges, and investors. Securities deposited by participants into the system are reflected in the participants' stock accounts with CCASS. Book-entry settlement is done by debit and credit entries to participants' stock accounts. The settlement of brokers' trades concluded on the Stock Exchange of Hong Kong Limited (SEHK) forms a major part of the settlement activities in CCASS. To promote the efficiency and integrity of the marketplace, HKSCC has assumed the role of a central risk-taker by substituting itself as settlement counterparty for the vast majority of brokers' trades concluded on the SEHK. This is referred to as the 'continuous net settlement system'. Securities held in CCASS are treated as fungible and are not earmarked for particular participants or transactions although HKSCC keeps a record of the participants responsible for depositing particular securities into the system. This enables HKSCC to hold a participant responsible should defects be discovered with the securities deposited. Generally, all securities

deposited by participants into CCASS are immediately submitted upon receipt to the registrars of listed companies for registration in the name of HKSCC Nominees Limited, the nominee company of HKSCC, which provides the usual nominee services to the participants.

HKSCC is currently implementing a new generation of the system, CCASS/3. It will be built on an open, robust, secure and flexible modularized architecture. After its full implementation, CCASS/3 will bring about a wide range of benefits to the market and its participants. These benefits include (1) open interface and high degree of flexibility; (2) increased investment product variety; (3) operational efficiency; (4) lower cost; (5) improvement in market surveillance; and (6) convergence with international standards.

Hong Kong's debt market has developed into one of the most liquid markets in the region. Overall, Hong Kong's bond market amounted to 42 percent of GDP in 2002, up from only 14 percent in 1994. Debt issuers are rated by established independent international rating agencies, including Standard & Poor's and Moody's. Exchange Fund Bills and Notes are issued by the Hong Kong Monetary Authority (HKMA) for the account of the Exchange Fund and were first introduced in 1990 to facilitate the development of the local debt market. The total outstanding of these papers was HK\$70.4 billion and daily turnover averaged HK\$21.2 billion at the end of 2002.

Private sector bonds are issued by banks, corporations, multinational agencies, such as the World Bank and the Asian Development Bank, and statutory bodies/government-owned corporations such as the Hong Kong Mortgage Corporation (HKMC), and Airport Authority (AA). There are a wide variety of debt instruments, including floating rate notes, notes with retail tranche, retail bonds, mortgage-back securities, and other structured deals with step-up coupons or options. The total outstanding of local currency debt instruments reached HK\$532.4 billion at the end of 2002, with 3–5 years maturity dominating both fixed-rate and float-rate issuances (see Table 8.5).

Most private sector trading occurs in the over-the-counter (OTC) market, although many debt instruments are also listed on the stock exchange. Several private sector financial institution groups have set up an electronic bond trading platform for institutional investors, and individual banks and brokerage houses have been providing on-line bond trading on their retail clients. Exchange Fund Bills and Notes and private debts are cleared and settled through the HKMA's Central Moneymarkets Unit (CMU), a computerized clearing and settlement facility, which permits real time and end-of-day delivery versus payment (DvP) services. A system interface between the CMU and the US dollar clearing system in Hong Kong has

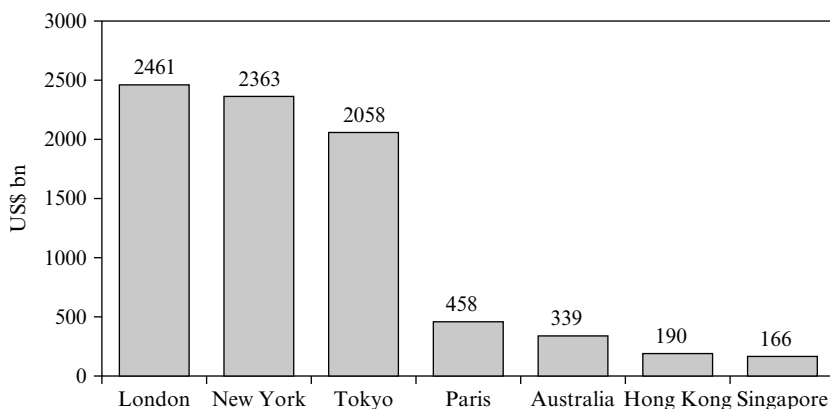
Table 8.5 *Hong Kong dollar debt instruments, outstanding and new issues (HK\$ bn)*

	1997	1998	1999	2000	2001	2002
Outstanding						
Exchange fund	101.7	97.5	101.9	108.6	113.8	117.5
Statutory bodies	2.3	11.4	21.6	20.5	36.2	48.3
Multilateral dev. banks	26.2	69.4	61.3	57.1	51.1	40.8
Other overseas borrowers	10.0	14.8	43.8	81.8	102.9	139.1
Authorized institutions	188.4	183.3	177.9	165.7	151.0	149.0
Local corporations	26.2	22.4	37.3	38.4	38.9	37.6
Total	354.7	398.8	443.8	472.1	493.8	532.4
New issues						
Exchange fund	379.9	316.9	261.4	275.0	234.0	216.2
Statutory bodies	0.0	9.2	10.4	8.3	24.3	21.6
Multilateral dev. banks	8.7	44.5	15.9	19.3	7.5	5.2
Other overseas borrowers	2.5	7.7	34.4	57.1	56.9	73.1
Authorized institutions	76.9	33.3	70.3	79.8	57.8	71.4
Local corporations	12.8	6.2	24.1	16.1	5.6	8.9
Total	480.8	417.8	416.5	455.6	386.1	396.4

Source: CEIC database, Hong Kong

been established since December 2000 to provide DvP settlement services for US dollar-denominated debt securities. Another system interface between the CMU and the forthcoming Euro clearing system is under development to enable euro-denominated debt securities to be settled on a DvP basis in Hong Kong.

Hong Kong is also one of the regional centers of the fund management industry in Asia. At the end of 2001, Hong Kong fund managers, combined, had US\$190 billion under their management (see Figure 8.2). While it was still less than 10 percent of the amount in London, Tokyo or New York, it was ahead of Singapore's \$166 billion. The development of the fund management industry in Hong Kong may be characterized as largely market-driven, which is particularly distinctive from the government-led



Source: Hong Kong Exchange (HKEx)

Figure 8.2 *Assets under management in selected fund management centers, 2001*

model in Singapore. The Hong Kong Government has generally left the growth of the industry to market forces, and although it has subjected the industry to regulation, the government has not sought to deliberately promote the industry through policy.

3. LEGAL AND REGULATORY FRAMEWORKS

The emergence of Hong Kong as an international financial center during the post-war period was helped by two broad factors – location and institutions. Many global financial institutions, including commercial banks, investment banks, fund management firms, insurance companies and other financial service companies, established their Asia Pacific headquarters in Hong Kong.

Since the 1950s, East Asian economies have maintained collective success in achieving rapid economic growth, first Japan, from the immediate post-war years, then the newly industrialized economies of Hong Kong, Korea, Singapore and Taiwan from the early 1970s, and China, Malaysia and Thailand from the early 1980s. Although Japan fell into deep economic troubles in the 1990s and the growth trajectory for the other economies in the region was briefly disrupted by the financial crisis in the late 1990s, East Asia as a whole already represents one of the major economic and market blocks of the world – Japan is the world's second largest economy, next only to the United States, and China now ranks the sixth.

Table 8.6 Hong Kong's key institutional strengths

Area	Policies
Law and enforcement	Good legal system protecting property rights and enforcing contracts
Political/economic freedom	Minimum government intervention ensuring both political and economic freedom for corporations and individuals
Exchange rate	Stable exchange rate system through introduction of the peg to the US dollar from 1983
Open economy	Free flow of international capital and low barriers for entry of domestic and foreign businesses
Governance	Almost non-existence of corruption at the policy-making level in the government
Labor market	Simple procedures for relocation or migration of financial professionals
Taxation	Flat income tax rate at 15 percent

Rapidly growing economic activities generate huge demand for financial services, and this demand produced three world-class financial centers in the region – Hong Kong, Singapore and Tokyo. The unique geographical location of Hong Kong, sitting at the doorstep of China and close to other Southeast and Northeast economies, gave it an edge over other cities in the neighboring economies. This explained in particular the expansion of Hong Kong's financial services in the 1980s and 1990s when China opened up.

Institutional factors are, however, more important explanatory variables for Hong Kong's ascendancy as an international financial center (see Table 8.6). Here, the *laissez-faire* philosophy adopted by the British colonial government played a critical role as it ensured free market, free capital flows and free flow of information. The free market system and the associated low barriers to entry provided a good competition environment. This not only reduced transaction costs for everybody but also forced participants in the market to constantly improve their efficiency.

Hong Kong's legal system was largely clean and effective. Corruption was almost non-existent at the policy-making level, although it was occasionally reported at the implementation level. Most studies on corruption ranked Hong Kong among the cleanest governments in the world.

In 1983, the government introduced a new exchange rate policy regime to peg the local currency to the US dollar. This effectively minimized exchange rate volatility, which is a common feature of small open economies, and

Table 8.7 Regulators of Hong Kong's financial markets

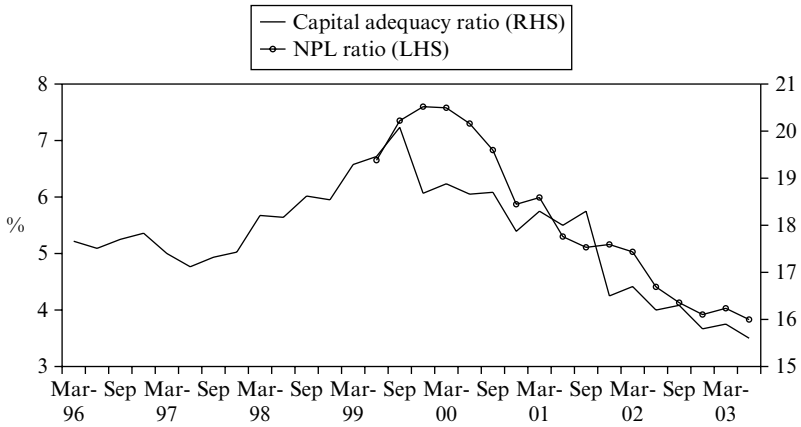
Regulator	Responsibility
Hong Kong Monetary Authority (HKMA)	Bank supervision, maintenance of currency stability and promotion of the efficiency, integrity and development of the financial system
The Securities and Futures Commission (SFC)	To maintain and promote the fairness, efficiency, competitiveness, transparency and orderliness of the securities and futures industry and to provide protection for investors
Office of the Commissioner of Insurance (OCI)	To administer the legislation governing the operation of insurance companies and to exercise prudential supervision with a view to protecting the interests of policyholders
Mandatory Provident Fund Schemes Authority (MPFA)	To regulate, supervise and monitor the operation of the MPF system

provided stable expectations. Although Hong Kong had a rigid and strict migration policy for unskilled labor, the policy for skilled workers, particularly those professionals in the financial sector, is very flexible. Procedures for relocation of financial professionals to, and away from, Hong Kong are simple and quick. Hong Kong's flat income tax was also an important incentive for many professionals wanting to be located in the city.

Hong Kong also had a sound and sophisticated regulatory framework, with four regulators at the core of the system – the Hong Kong Monetary Authority (HKMA), the Securities and Futures Commission (SFC), the Office of the Commissioner of Insurance (OCI) and the Mandatory Provident Fund Schemes Authority (MPFA) (see Table 8.7).

The legal framework for banking supervision in Hong Kong is in line with international standards, and the objectives of which are to devise a prudential supervisory system to preserve the general stability and effective operation of the banking system, and to provide sufficient flexibility for banks to take commercial decisions.

Authorized institutions have to comply with the provisions of the banking ordinance which, *inter alia*, requires them to maintain adequate liquidity and capital adequacy ratios; to submit periodic statistical returns to the HKMA; to adhere to limitation on loans to any one customer or to directors and employees; and to seek the HKMA's approval for the appointment of directors, chief executives and for changes in control. Overseas



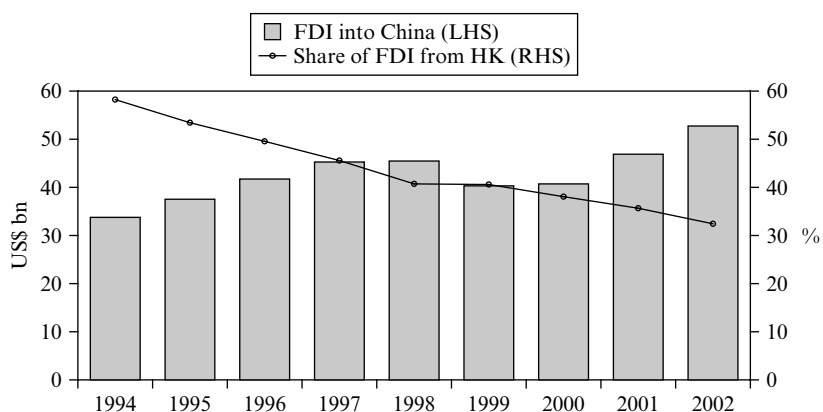
Source: CEIC database, Hong Kong

Figure 8.3 *NPL ratios and capital adequacy ratios, foreign and local banks*

banks which operate in branch form are not required to hold capital in Hong Kong and are thus not subject to capital ratio requirements or to capital-based limits in large exposures.

Banks in Hong Kong, both foreign and local, are generally in very good condition, helped by the sophisticated regulatory system and competition among banks, despite the collapse of the property market and negative equity incurred by many households in recent years. At the end of 2002, outstanding residential mortgage loans accounted for 25.7 percent of total outstanding loans and advances of the banking system. The average non-performing loan (NPL) ratio continued to decline in recent years, from 7.6 percent in December 1999 to 3.9 percent in December 2002 (see Figure 8.3). The average capital adequacy ratio, though edging down in recent years, remained a very healthy 16 percent in 2003.

The policies towards the securities industry are to provide a favorable environment in the industry and a level-playing field for market participants, with adequate regulation to ensure, as far as possible, sound business standards and confidence in the institutional framework. To further strengthen the competitiveness of Hong Kong as an international financial center, the government proposed three-pronged reform in early 1999 – enhancing the infrastructure for the market, modernizing the market structure through demutualization and merger of the two exchanges and their three associated clearing houses, and modernizing and rationalizing the legal framework for the regulatory regime.



Source: CEIC database, Hong Kong

Figure 8.4 *Hong Kong as an important middleman in China's huge FDI inflow*

The China Factor

Hong Kong's role as an international financial center has been greatly enhanced by the emerging Chinese economy after 1978. When China opened up in the late 1970s, it lacked experience and connections in international trade, finance and technology. At the same time, outsiders wishing to enter the Chinese market also lacked local knowledge. Thus, Hong Kong served as a middleman. This was in the early years reflected in high proportions of Hong Kong re-exports in China's exports and imports. In the early 1990s, close to 60 percent of FDI into China was from Hong Kong (see Figure 8.4).

A large part of this investment from Hong Kong was actually made by investors in other economies, particularly Taiwan. Part of it was mainland money in order to qualify for the preferential policy treatment for foreign investment. The proportion of Hong Kong investment in total FDI into China declined over years, but it still stood at above 30 percent in 2002.

As China maintained capital account control, Chinese corporations and other institutions also tapped Hong Kong markets for international capital. At the time of writing, 54 Chinese state-owned enterprises (H shares), together with many China-related companies incorporated in Hong Kong (red chips), are listed in Hong Kong's stock market. From 1998 there was frequent Chinese hot money floating across the border, driving the H-share prices up and down.

Recently, however, the impact of the China factor on Hong Kong's financial markets have become more mixed. Many local residents, in fact, are pessimistic about Hong Kong's ability to remain as a competitive international financial center. This is related to changes in three broad areas.

First, China resumed its sovereign rights over Hong Kong on 1 July 1997. I believe that the Chinese government has been quite successful in maintaining Hong Kong as a free society and economy. But there have been lots of concerns among financial professionals about how long this will continue. Here, the government's recent proposal to revise the 23rd article of the Basic Law, which intends to improve security through tighter controls, provides a point a reference. Political controls, though not designated to target economic activities, could affect free flow of information, which is in effect an important part of the foundation for efficient financial activities.

Concerns by many financial professionals have also been deepened by the lack of accountability of the government, particularly at a time when society and economy are experiencing significant changes. Hong Kong's chief executive is elected by the elite 800-member Election Committee. The new minister system introduced in 2002, which was intended to improve the accountability of senior public servants, doesn't really work as the ministers do not answer to the general public.

Second, the Hong Kong economy faces tough challenges of structural change, due in part to rising competition from China. In recent years, Hong Kong has been constantly losing businesses to the mainland, particularly in retail, ports and finance. The overheated property market collapsed sharply, with property prices fell more than 63 percent between May 1997 and November 2002. Even after that, properties in Hong Kong are still 3–5 times more expensive than those comparable ones in Shenzhen across the border. Although Hong Kong has benefited from the recent growth of trade and tourism, the economy as a whole is still deeply troubled by high unemployment, persistent deflation and rising fiscal deficits.

The large fiscal deficits in recent years are mainly due to falling property prices and growing social welfare spending. This has been a concern for both the government and some rating agencies, although we believe that the problem was exaggerated by the economic downturn. The government is determined to bring the fiscal system back to balance in 4–5 years, contemplating a raft of revenue generating measures including increasing fees and charges for public services, introducing a goods and services tax (GST), a tax on foreign domestic helpers, and raising payroll and social security taxes. These measures, even if all implemented, will likely have very limited impact on tax incentives for financial professionals and institutions.

A more devastating issue is the sustainability of the Hong Kong dollar peg to the US dollar. The peg is critical in maintaining stable expectation for investors, but it probably was also responsible, at least partly, for price deflation and loss of competitiveness in recent years. Although we believe that the ultimate destination for the Hong Kong dollar is to peg to the Chinese yuan once the latter becomes freely convertible, and that any interim change does not justify the costs in terms of damages to confidence, speculations about and calls for de-pegging emerge in the market almost fortnightly. Such disturbances often cause fluctuations in financial markets and affect investors' expectation.

And, third, the rising Shanghai is posing direct competition pressure on Hong Kong. Since 1992, Shanghai has been the crown of the China growth miracle and has emerged quickly as a new financial center for China. Lots of financial operations have been transferred from Hong Kong to Shanghai in recent years. Many people feel that Hong Kong is playing a losing game with Shanghai.

Hong Kong's loss of some financial businesses, especially those middle-man services, is inevitable. China's opening up for the twenty or so years since the 1980s, particularly after it joined the WTO in late 2001, has meant that the Chinese are more confident and have more experience in dealing with the outside financial markets. In the early years, many global financial institutions also based their China operation headquarters in Hong Kong. And now they are all moving to Shanghai. We can expect that Hong Kong's business will further be affected once the direct-links are established between China and Taiwan.

Is Shanghai ready to overtake Hong Kong as the new international financial center? While the trend may be true, we think that the process may take a very long time. Shanghai's role is mainly a domestic financial center, not an international financial center. It is difficult to imagine that Shanghai can catch up with Hong Kong any time soon in terms of good legal system, clean government, sophisticated regulatory framework, open economy and free capital account (see Table 8.8).

Table 8.8 Hong Kong's advantages and disadvantages over Shanghai

Advantages	Disadvantages
Good legal system and clean government	Distance from the center of economic growth
Sophisticated regulatory systems	High costs
Open economy and capital markets	
Low income tax	

Hong Kong's main disadvantages, compared to Shanghai, are mainly in two areas: distance from the center of China's rapid economic growth, the Yangtze River delta, and high costs, including both fixed assets and professionals. These, however, are probably less critical for Hong Kong to remain as an international financial center. While Hong Kong is not at the center of the most dynamic Yangtze River delta economy, it is at the doorstep of the whole mainland economy. And costs are high not only in Hong Kong but also in most other major international financial centers, Tokyo, London and New York.

The key challenge for Hong Kong is, therefore, to maintain the institutional advantages, including a free society and economy. In competition with Shanghai, Hong Kong can position itself to re-specialize in international financial services. Hong Kong even has geographical advantages over Shanghai in servicing the Pearl River delta, another major dynamic economy in China.

If Hong Kong has the risk of losing international financial businesses, it will mainly result from unfavorable changes in its institutions. And even if that happens, it is likely to lose to other international financial centers, such as Singapore, not Shanghai.

4. CONCLUDING REMARKS

Hong Kong is one of the world's major international financial centers, particularly in banking services, foreign exchange transactions and securities markets. Its ascendancy during the post-war period was mainly helped by two factors – geographical proximity to the rapidly growing East Asian economies and institutional advantages in terms of good legal system, clean government, sophisticated regulatory framework, open economy and free capital account.

Although the worries that Hong Kong is playing a losing game are probably overblown, Hong Kong does have to fight an uphill battle in maintaining its role as an international financial center. Challenges, however, come mainly from within, not outside. The government does need to maintain the tax incentives for the financial industry while attacking the fiscal deficit problem. The exchange rate policy is another important area in maintaining stable expectation. Due to our expertise limitation, we are not able to comment on the political arrangements and their changes. But political and economic freedoms, including free flow of information, do form an important part of the foundation for efficient financial activities. If the government is not careful enough, location of financial services can shift quickly.

Will Hong Kong eventually lose out to Shanghai? It is possible in the very long run. But certainly it is not likely in the coming decade. While Shanghai is rapidly taking over businesses from Hong Kong, most of these are domestic-oriented businesses. Shanghai still lacks the necessary institutions to serve as an international financial center. For instance, the capital account control, which is unlikely to go away in the next 5–10 years, seriously constrains Shanghai's ability in financial services. The poor legal system, frequent government corruption and backward regulatory framework also work against Shanghai's role in the financial world. The only advantages Shanghai enjoys over Hong Kong at the moment are its location right at the center of the dynamic Yangtze River delta economy and its relatively low costs.

Therefore, Hong Kong can still strengthen its position as an international financial center in the coming years. In the near term, if Hong Kong loses international financial businesses, it is likely to be to other international financial centers, such as Singapore.

NOTE

1. The views expressed are those of the author's and do not necessarily represent those of the Citigroup or any of its subsidiaries.

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9. Recycling Asian savings within the region: The role of Singapore

Ngiam Kee Jin

1. INTRODUCTION

A source as well as a sink for internationally mobile capital, Singapore has successfully created a financial hub within the Asian region wherein efficient, well regulated capital markets co-exist with adequately capitalized and financially sound banking groups.¹ The country can boast of an established and well-oiled market infrastructure within which market makers, clearing systems, settlement procedures and knowledgeable investors set high standards for the region and beyond. A liberalized financial system which provides easy access to foreign investors as well as issuers results in a cosmopolitan business environment. The freedom for foreigners to invest here is evidenced by the fact that 92 per cent of the non-Singapore dollar debt issued in the offshore market is held by foreigners.

Foreign firms and professionals are welcomed into the country. Firms originating in nations across the globe operate in this island nation. The importance of the country to their activities is underscored by the fact that of the 6000 foreign companies presently in Singapore, 60 per cent use the country as their Asian headquarters.²

Active and effective governmental participation and encouragement with regards to the development of domestic capital markets as well as networks with markets and economies regionally and globally create a unique financial center that can function as a springboard to developed markets of the West. Singapore is blessed with an unassailable record of political and financial stability and low corruption. This combined with the Monetary Authority of Singapore's (MAS) commitment to adequate disclosure and greater transparency in the markets, creates the global reputation of Singapore as a reliable and efficient financial center and results in inflows of funds from western countries and institutional investors from within the region.

The unique characteristics of the Singaporean financial system equip it with the power and the means of carrying out the critical role of recycling

domestic savings within Asia. The equity, debt and derivative markets provide a platform for resource allocation and price discovery that helps create realistic valuations and costs of capital. This function is especially essential in Asia given the tendency of banks to lend at economically irrational rates on the strength of relationships rather than economic fundamentals. This chapter will thus examine the role of Singapore's equity and debt markets as agents that can attract regional savings and aid in the allocation of these savings to the long-term development of the region.

In an uncertain economic environment, governments are taking a longer look at the role of entrepreneurs within society and economy. Singapore has hitherto made concerted efforts at developing an environment for the genesis and nurture of technopreneurs. This chapter shall also attempt to analyse how the existing market for venture capital in Singapore can be harnessed to benefit local and regional start-ups.

The rapid move of the Asian populace up the ladder of affluence creates demand for asset management by professional funds. Here also Singapore has created a large pool of internationally renowned and connected funds mandated to invest in the Asia Pacific region. If the source and investment of these funds can be largely confined within the region, it should aid in the function of recycling of savings for economic progress in Asia.

The chapter examines the following vehicles in Singapore which are used to recycle Asian savings within the region: bank intermediation, capital markets, asset management industry and venture capital industry.

2. CURRENT STATUS OF THE SINGAPORE FINANCIAL MARKETS

2.1 Banking

Banks in Singapore can maintain a non-Singapore dollar denominated transactions book that is termed the Asian Currency Unit (ACU). ACU liabilities are exempted from any minimum cash or liquidity reserve requirements. In contrast, the Domestic Banking Unit (DBU), which deals with Singapore dollar denominated claims, is subject to 3 per cent (of liability base) minimum cash reserve requirements and 18 per cent liquid asset ratio requirements.

The first ACU was granted to the Bank of America in 1968. Since then, in a bid to encourage greater foreign participation in the ACU market, the withholding tax on interest paid to non-residents for the placement of foreign currency deposits has been done away with. In 1970, the tax on bank profits from the ACUs was cut from 40 to 10 percent. By 1988, ACU licenses

have been granted to 25 of the 26 full license banks. Currently all restricted license and offshore license banks have approval to operate the ACUs.

The ACU assets grew steadily since its inception in 1968 (with a minor interruption in 1992) and reached its peak in 1997 when it registered some US\$557.2 billion. After the Asian financial crisis in 1997, it declined all the way to US\$471 billion at end-2001. The predominant currencies for the ACU deposits include the US dollar, the euro, yen, pound sterling, and the Swiss franc. As is the practice at the London offshore market, ACU transactions are typically short-term and are pegged to the London Interbank Offer Rate (LIBOR).

Table 9.1 lays out the funds lent out by Singapore banks in developed countries in June 2002. The striking feature within these numbers is the predominance of developed countries as the destinations of funds from Singapore banks. Singapore banks' claim on developed countries constituted almost 80 per cent of their total foreign claim, of which the United Kingdom accounted for 23.2 per cent, Japan 15 per cent and the United States 13.3 per cent. Only a small fraction (roughly one-fifth) of the

Table 9.1 Consolidated foreign claim of domestically owned banks in Singapore, as at end June 2002

	Amount (US\$ billion)	Percentage
Portugal	0.006	0.0
Finland	0.179	0.1
Spain	0.185	0.2
Austria	0.229	0.2
Sweden	1.052	0.9
Canada	1.597	1.3
Belgium	2.565	2.1
Italy	2.97	2.4
Netherlands	5.081	4.1
France	5.43	4.4
Switzerland	6.123	5.0
Germany	7.926	6.4
United States	16.386	13.3
Japan	18.457	15.0
United Kingdom	28.637	23.2
Others	26.461	21.5
Total	123.284	100.0

Source: BIS *Quarterly Review*, December 2002

lending by Singapore banks went to developing countries. It is likely the bulk of this 20 per cent was channeled to Hong Kong as part of the inter-bank transactions within the euro-dollar market. It would therefore appear that Singapore banks do not lend much to Asian countries outside Japan and Hong Kong. There is thus much room for the recycling of funds within Asia if Singapore can attract more funds from the region and re-direct more into the region. The ACU market is poised to play this important role as it has a well-developed market infrastructure and a conducive tax and regulatory regime. In addition, the ACU market is backed by banks that are well capitalized beyond BIS requirements and have a failure-free record.

2.2 Stock Market

Apart from bank intermediation, Singapore has well-developed capital markets (*viz.* equity and debt markets) which provide alternative channels for the flow of funds within the region.

Asia Pacific's first demutualized and integrated securities and derivatives exchange, the Singapore Exchange (SGX), was the result of a merger between two established and well-respected financial institutions – the Stock Exchange of Singapore (SES) and the Singapore International Monetary Exchange (SIMEX). The exchange is the first fully electronic and floorless securities exchange in Asia. High standards of corporate governance and compliance standards create an institution that provides opportunities for corporations and investors across Asia to engage in capital-raising and investment objectives within a sound, transparent and efficient marketplace.³

The presence of a well-defined and established adjudication system combined with tough disclosure standards imply that 'companies and investors [at SGX] don't face the challenges that they do in some other countries' (Carolyn Kay Brancato, Director, US Conference Board).⁴ Singapore, as a regional financial center, has a pool of expatriate financial analysts who, trained and educated in the regional countries, are familiar with their economies. Analysis of the stocks of corporations from Asia is thus carried out by people knowledgeable about the business models and operating environments of the companies under analysis. SGX also has an international reputation for transparency and efficiency. Thus a listing at SGX, aside from raising international capital, also endows regional corporations with an enhanced reputation, access to over 700 fund managers, operations in a sound financial system as well as multi-currency trading and international disclosure norms.

Since the early 1990s, SGX has increased its efforts towards instituting regional alliances and cross-trading agreements. It has also successively

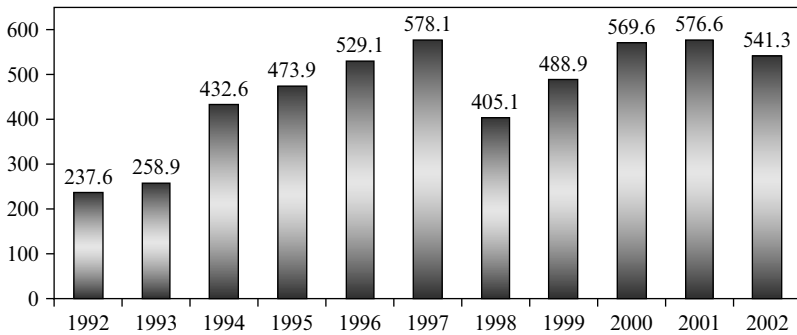


Figure 9.1 Total market capitalization at SGX (US\$ billion)

liberalized listing requirements and actively wooed regional and international companies with the aim of cross-border listings. Currently of the 494 companies listed on the exchange, 96 are foreign and make up 34 per cent (S\$114 billion) of the total market capitalization.⁵ The market capitalization has been recovering well from the effects of the Asian crisis as evidenced in Figure 9.1.

International networks and alliances sealed by SGX include the following:

- A joint venture with the American Stock Exchange (Amex®)
- A co-trading link with the Australian Stock Exchange (ASX)
- A Heads of Agreement with the Tokyo Stock Exchange (TSE)
- A collaboration with Bloomberg
- Mutual Offset System with the Chicago Mercantile Exchange (CME)
- A co-operation agreement with the Tokyo Commodity Exchange (TOCOM).

The joint venture with Amex® promotes listing and trading of exchange traded funds and HOLDRS in the region. Under this agreement, five of the most popular and actively traded Amex® exchange traded funds are listed on the SGX. The Heads of Agreement with the TSE aims at broadening, distributing and enhancing the liquidity of products on both markets. In the aftermath of the agreement, talks have also been ongoing to explore initiatives with regards to cross-access arrangements for co-trading and clearing of products, new product development, marketing, information technology development and information sharing.

The linkage with the ASX is the world's first securities co-trading link. Formalized in December 2001, this facility allows brokers in each country

to directly enter orders at the other exchange. Moreover, the orders are executed at local commission rates. The year 2002 saw A\$250 million (S\$256.5 million) worth of trading over the link. Initially 50 stocks were available for cross-trading from each side. However, come March 2003, this number was expected to double to 100 and new instruments such as Australian warrants may be introduced on the link.⁶

Collaboration with Bloomberg ensures easy access to SGX products and tools for over 250 000 investment professionals using the Bloomberg worldwide, while the agreement with TOCOM concerns the launch of crude oil futures on the SGX. The Mutual Offset System with CME, initiated in 1984, has proven to be the world's first and most successful futures trading link. 24-hour trading of Euro-dollar and Euro-yen futures and options can be carried out on this facility.

The alliances serve to crystallize SGX's position as one of Asia's leading exchanges. They increase the depth and liquidity of the market and allow risk management and investment tools to be accessed by a large base of investors. The internationally connected, well managed and transparent exchange thus holds tremendous appeal for foreign companies to list and access the financial infrastructure that is characteristic of the exchange. Cross-border listings are also beneficial for the stock exchanges of the regional economies as they lead to an enlargement of investor base, enhanced liquidity of individual stocks and access to a larger pool of financial expertise. The search for the cheapest source of funds is encouraged and investors become aware of markets beyond their domestic ones. Administratively, cross-border listings lead to congruence in standards and rules of security transactions, trade systems, listing criteria and information disclosure.

Drastic liberalization of listing rules in Singapore over the past three years has further increased the attractiveness of the SGX. The reduction in requirements includes the abolition of any minimum earnings or share capital requirements for a listing on Sesdaq, the secondary board. The costs of listing at the SGX are also more conducive to initial listings than most other financial centers in Asia. Even after the increases in fee that were planned for March 2003, SGX still retains its lower-cost status to the Tokyo and Hong Kong exchanges (see Table 9.2). Regulatory hurdles to cross-listings such as are present in Thailand are also absent at SGX. (Foreign companies listing at the Stock Exchange of Thailand are required to seek the permission of the Bank of Thailand beforehand and subsequently keep the central bank informed of capital inflows and outflows.)

Active participation from the SGX management in promoting the advantages of listing in Singapore to corporations in regional countries has led to an increase in the number of foreign listings on the exchange. Road shows

Table 9.2 Relative costs of listings on major stock exchanges in Asia

	Mainboard SGX		Sesdaq		Kuala Lumpur Stock Exchange		Hong Kong Exchanges and Clearing		Tokyo Stock Exchange	
	Existing (SGD)	(eff) March 2003 (SGD)	Existing (SGD)	(eff) March 2003 (SGD)	(Mainboard) (MYR)	SGD Equivalent (SGD)	(Big board) (HKD)	SGD Equivalent (SGD)	(Domestic market) (JPY)	SGD Equivalent (SGD)
Initial listing fee										
Minimum	2000	25 000	1000	10 000	2000	918	150 000	33 600	No cap	–
Maximum	20 000	100 000	5000	–	50 000	22 950	650 000	145 600	14 000 000	203 560
Additional listing fee										
Minimum	2000	5000	1000	3000	2000	918	25 000	5600	No cap	–
Maximum	20 000	100 000	5000	–	50 000	22 950	240 000	53 760	13 500 000	196 290
Annual listing fee										
Minimum	400	10 000	200	5000	1200	551	145 000	32 480	150 000	2181
Maximum	2000	25 000	1000	–	9000	4131	1 190 000	266 560	No cap	–
Exchange Rate to the SGD (One unit of currency)					SGD 0.459		SGD 0.224		SGD 0.01454	

Source: 'SGX to jack up listing fees by up to 24 times', *Straits Times*, 28 December 2002.

and investment forums have been organized in China and India with the aim of encouraging companies in these fast-developing nations to utilize Singapore for meeting their funding needs. So far 19 Chinese corporations have been listed on the SGX. These include the likes of China Aviation Oil, People's Food and United Food. The queue for listing on the China exchange is oftentimes long enough (up to 3 years) to be prohibitive for fast-growing firms in urgent need of expansion capital. In comparison, the pre-listing period at SGX is around nine months. Value-added services such as seminars held to profile Chinese firms to Singaporean investors also help increase the attractiveness of a listing on SGX.

Governmental efforts have also contributed to the increasing emphasis on regional cross-listings. An inter-agency group comprising members from the SGX, MAS, and the International Enterprise Singapore (a trade promotion government body) has been set up to study ways to attract more foreign listing. Translation of a manual on listing requirements to Chinese is currently in progress as is the development of a Chinese language website for information dissemination to mainland firms.

The presence of lower listing costs, knowledgeable and active market participants, an encouraging government and well-established financial and legal systems results in the creation of a truly world-class exchange accessible to corporations across the region. The determination of the SGX management towards establishing regional and global ties increases the reach and networking of the exchange, creating ever more opportunities for investors and capital-hungry corporations in Asia. The potential exists and efforts are being directed towards the creation of a nexus at SGX that can connect Asian corporations and investors to each other and to the developed markets of the western world.

2.3 Bond Market

Singapore, with its inherent advantages such as location, infrastructure, reputation and proactive governments, has long aimed at emulating Switzerland as a regional bond hub wherein foreigners are active issuers of domestic currency as well as foreign currency denominated bonds. The reasons for the success of Switzerland as a regional centre for the issuing and trading of bonds, are to a large extent also present in the Singaporean context.

Singapore's political and social systems have long been characterized by their harmony and stability. Labor-governmental relations are peaceful even unto the head of the National Trade Union Congress being a minister in the national cabinet. The Singapore dollar has had a lower volatility compared to the currencies of neighboring countries even through the worst of the financial crisis of 1997, except for the Chinese Renminbi, and Hong Kong

dollar. This low volatility increases the attractiveness of the currency as a safe haven in times of regional upheaval much as the Swiss currency is a haven for western investors. The policy of non-internationalization of the Singapore dollar advocated by the MAS is similar to that prevalent in Switzerland 20 years ago when the Swiss National Bank desired a firmer grip on its currency. However subsequent liberalization of the Swiss franc (CHF) has not resulted in Euro CHF bonds, implying that reports concerning the evils associated with the internationalization of currencies need to be examined more carefully.

The banking sector in the country is robust due to the presence of a stringent regulatory environment and large capital, cash and liquid reserve requirements. Interest rates are low and stable, and the country has a record of high savings much as the Swiss do. The government in Singapore has also encouraged the development of bond markets and the participation of non-residents and foreign institutions within these markets. The presence of tax incentives combined with the commitment of the MAS towards gradual liberalization of the markets and institutions in Singapore creates opportunities for Asian corporations, governments as well as investors to avail of the existing financial infrastructure to meet their funding and investment needs.

The Singapore Dollar Corporate Bond Market (SDCB) was made accessible to foreign issuers in August 1998 with MAS Notice 757. This notice was amended in November 1999. In the following 13 years, there were more than 122 issues by foreign entities totaling \$7.3 billion. Typical issue sizes range from S\$25 million to S\$300 million and tenures from 1 to 10 years. Currently, of the 25 major foreign issuers only five hail from the Asia Pacific region. The international institutions that make up these 25 include the likes of General Electric Capital Corp., Ford Motor Credit Co, Freddie Mac, ABN Amro Bank, Ericsson, Korea Development Bank and IFC. The freedom granted to foreign entities to issue bonds includes no approval or minimum size requirements.

Notice 757 allowed only foreign entities with 'good credit standing' to issue SDCB. However the amendment to the notice in 1999 allowed for the following to also issue bonds in the SDCB market:

- All rated foreign corporations
- All sovereigns, rated or unrated
- Unrated foreign corporations provided the investor base is restricted to sophisticated investors.

MAS defines sophisticated investors as individuals whose net personal assets exceed S\$1 million or whose annual income is not less than S\$200 000.

The term also applies to corporations with net assets exceeding S\$5 million. However, in recent years MAS has attempted moving towards a market philosophy of 'caveat emptor' (or buyer beware). It is making attempts at helping investors make informed decisions by promoting adequate disclosure and greater transparency in the market. In the presence of such a philosophy, perhaps the demarcation of sophisticated versus non-sophisticated investors should be done away with due to redundancy.

Incentives provided to non-residents for participation in the non-Singapore dollar debt market or the Asian Dollar Bond Market (ADB) are even greater. Conceived in December 1971 with the issuance of a US\$10 million note by the Development Bank of Singapore, the ADB has enjoyed rapid growth, with growth rates dependent yearly on the demand for funds by foreign investors. The issuer base comprises banks and corporations both Singaporean and foreign as well as national governments and multilateral organizations. Issuance in 2001 was S\$50 billion, marking an increase of 39 per cent over the previous year (See Table 9.3). Denominations of bonds in the ADB are concentrated in a few currencies. 92 per cent of the market is in US dollars with the yen (3 per cent), EUR (3 per cent) and *exotic* currencies such as the baht and the rupiah making up the remainder. The incentives for foreigners to participate in this market are structured so as to appeal to both investors and issuers. To address demand for such bonds, interest income earned on these bonds, by non-residents with no permanent establishments in Singapore is exempted from withholding tax. On the supply side, banks are granted a concessionary rate of 10 per cent on income derived from arranging such bonds.

Governmental efforts have also resulted in a well-established yield curve derived from the Singapore Government Securities (SGS) market. Having sustained fiscal surpluses for a number of years prior to 2001 the government of Singapore has had no need to raise money via the issuance of debt.

Table 9.3 Issuance of SGS, SDCB and ADB in Singapore

	SGS T-Bill	SGS T-Bond	Total SGS	SDCB	ADB
1996	21.3	4.2	25.5	2.3	3.1
1997	22.5	3.5	26.0	6.7	1.7
1998	27.5	7.8	35.3	3.9	5.2
1999	35.3	7.4	42.7	9.2	10.3
2000	41.9	12.1	54.0	14.4	36.1
2001	44.4	14.2	58.6	22.0	50.0

Source: MAS (2001b).

However the commitment to the development of bond markets in Singapore has led to gross issuance of the order of S\$58.6 billion in 2001. To boost liquidity in the SGS market, in May 2000 MAS declared that all benchmark issues would be at least S\$2–2.5 billion in size (MAS 2001a, p. 54).

The development of an active SGS market also helps educate investors with regards to the nitty-gritty of bond investment. Another beneficial aspect of growth in the SGS market concerns the confidence foreigners have in the currency. The possession of a large number of SGS by the investing community in Singapore creates a powerful constituency against any surprise inflation engineered by the government (Eichengreen and Hausmann 1999). Foreigners are thus more comfortable investing in bonds denominated in the currency.

The Singapore dollar proceeds from bond issuance have to be converted or swapped into foreign currencies before they can be remitted to outside the country. A liquid swap market thus becomes essential to boost the attractiveness of the SDCB market to foreign issuers. To facilitate ease of swapping and liquidity in the swap market, MAS declared in 1999 that banks were no longer required to set aside reserves against the Singapore dollars received from non-banks on swaps of more than one year in maturity.

These regulations were further watered down in March 2001, and banks weren't required to set aside reserves even against Singapore dollar swap transactions, with non-bank financial institutions and corporations, of less than one-year maturity. The relaxation of the regulation also allowed for offshore banks and securities dealers to engage in Singapore dollar swap transactions.

Concentration on bank lending as a source of capital and the maturity mismatch inherent in financing long-term investment with short-term capital flows have been identified as the primary causes of the financial contagion that swept through Asia six years ago. Over-dependence on bank lending leads to allocation of capital on social rather than economic or financial considerations. The resultant pile of non-performing loans has traditionally been hidden via the accumulation of larger and possibly more dubious loans. Accessing a developed and liquid bond market for funds for long-term investment reduces the maturity mismatch that so many corporations in Asia witnessed the worst evils of. Also the imposition of discipline with continual assessment from an unforgiving market replaces the complacency of toying with money that is borrowed from a lenient bank. The economically and financially fair cost of capital that issuers have to pay in the bond market also creates efficient allocation of funds and the generation of economic value added. Diversification in funding sources is also one of the many advantages of tapping well-developed bond markets for financing.

Given the fact that a large number of the countries in Asia suffer from the 'original sin' problem and thus cannot borrow internationally in their domestic currencies, the option to issue in a currency that has low volatility, a stable government and financial system backing it, and the assurance of moving relatively in tandem with other regional currencies in the event of crisis, creates an opportunity that more Asian corporations and governments can avail themselves of. As the liberalization of the Singaporean financial center progresses, the island-state can well develop into the regional hub for the issuance, trading and rating of bonds, denominated both in Singapore dollar as well as a host of other currencies, hard as well as exotic.

2.4 Asset Management Industry

Increasing affluence across the Asian countries has led to demand for the management of accumulating assets. The high savings rate prevalent in Asia has hitherto been invested mainly within the confines of bank deposits (See Table 9.4). The emergence of professional asset management firms creates an avenue for the recycling of Asian savings within the region. This is illustrated by the fact that approximately 65 per cent of the private equity funds in Asia are regional in coverage. Of the assets managed in Singapore, 30 per cent are invested in Singapore, 9 per cent in Japan and 48 per cent in the rest of the Asia Pacific region.

Recognizing early the potential for the asset management industry, Singapore has prepared the infrastructure and regulatory regime necessary

Table 9.4 *Predominance of bank financing in Asian economies (% GDP)*

	Bank assets		Equity market		Bond market	
	1998	2001	1998	2001	1998	2001
China	139	160	25	45	12	28
Hong Kong	214	215	206	313	32	28
India	69	133	24	26	21	28
Japan	145	139	64	55	101	153
Korea	233	233	35	46	53	67
Singapore	220	243	112	135	20	41
Taiwan	226	262	97	104	41	20
Thailand	176	134	30	32	23	39
Germany	273	155	51	58	97	90
US	65	63	158	136	141	148

Source: Sheng (2002).

for efficient operation of such funds. The resultant development of Singapore's asset management industry has been praiseworthy. Assets under management by Singapore based funds grew from S\$18 billion in 1990 to S\$66 billion in 1994 and S\$150.6 billion in 1998. Marking an increase of 84 per cent in two years, this statistic stood at S\$276 billion in 2000. Assets under management in 2001 were S\$307 billion, an 11 per cent increase over the previous year (Economic Review Committee 2002). The increase in assets has partially been accounted for by the fact that 'assets that were previously managed elsewhere move to Singapore' (Teo Swee Lian, Assistant Managing Director, MAS).⁷ Better incentives and lower taxes as compared to financial centers such as Hong Kong are the driving forces behind the emigration. At end 2001, 215 asset management institutions, employing 1114 professionals, operated out of Singapore.

The role of the government in the development of the asset management industry in Singapore has been singular. Licensing requirements for fund managers have been modulated and tax incentives developed for firms managing significant volumes of discretionary funds out of Singapore. MAS and the Government of Singapore Investment Corporation (GIC) have placed S\$35 billion with external managers. This marked a drastic change from the traditional policy of in-house management of reserves by both these institutions. In 1998, MAS announced the outsourcing of S\$10 billion of investments to external managers while in the same year GIC announced that it would place S\$25 billion with fund managers operating out of Singapore in the next three years. The rationale for this placement was the development of peer-group benchmarks for the in-house managers at GIC and MAS as well as the lack of internal expertise in certain asset classes.

Liberalization of the rules regarding investment of CPF funds has also aided the growth of the fund management industry. In an environment wherein bond investment is an unfamiliar arena for the individual investor, CPF members have been encouraged to hold their investible funds (in excess of stipulated minimums under CPF schemes) in funds approved by the government.

One of the government's incentives to encourage regional and global investors to invest in funds managed from Singapore, the enhanced fund manager status, has been instrumental as a powerful inducement for fund managers to set up operations in the country. This status endows tax incentives and is based both on size and source of assets under management. Eligibility is subject to minimum S\$5 billion of foreign investors' funds being managed in Singapore. Qualifying funds must apply for the status and upon successful inclusion are given a complete tax holiday on fee income from providing investment management or advisory services to

foreign investors. Currently half a dozen firms enjoy this status, while a few more qualify but chose not to apply for the tax concessions.

Hitherto the focus has lain in encouraging large international funds to set up establishments in Singapore. However recommendations from the Financial Services Working Group indicate that the government should enhance incentives for the further development of small and medium sized funds in Singapore. This initiative should bring investment in such funds closer to regional individual investors for whom minimum investments in large funds might be prohibitive. Thus the development and further expansion of the asset management industry in Singapore provides a marketplace for the investment of funds from the region to within the region without taking a circuitous path through the western economies.

2.5 Venture Capital Industry

Investment in firms in their nascent stages with unproven profit records is termed venture capital (VC). It is a comprehensive mentoring package combining financial support, governance, management expertise and business networking. By nature it is a long-term investment with very low liquidity and a high minimum investment requirement. Thus large VC firms concentrate on niches wherein they acquire considerable expertise with regards to the dynamics and players of that particular industry. Given the high levels of risk involved and the colossal failure rate, these large firms typically tend to finance expansion of established firms as opposed to investment in embryonic start-ups. Business angels on the other hand, are individual investors, hailing from varied professional backgrounds, who provide assistance to start-ups in their seed and embryonic stages. These amounts provided by business angels typically are of smaller magnitudes.

An increasing emphasis on the development of entrepreneurial activity in Asia has led to a large number of VC firms setting up establishments in the region. In Singapore, 20 VC firms set up new operations in 1999, raising the cumulative pot of VC funds managed in Singapore to S\$8.84 billion. Of this amount S\$50 million was invested in seed and early stage start-ups which represented a hefty increase of 60 per cent over the previous year. Continuing the expansion, by 2001 there were more than 100 firms operating from Singapore, funds under management had risen to S\$13.7 billion and 635 companies had been recipients of VC financing. Table 9.5 show the Singapore dollar values and the growth rates of VC funds under management from Singapore (Koh and Koh 2002).

The growth of the VC industry in Singapore has been fueled by the encouragement received by regional and local entrepreneurs for setting up cutting

Table 9.5 Venture capital assets under management in Singapore

	S\$ million	Annual rate of growth (%)
1983	48	
1985	162	83.7
1990	1 245	50.4
1995	5 319	33.7
1996	6 232	17.2
1997	7 381	18.4
1998	7 712	4.5
1999	8 843	14.7
2000	11 500	30.0
2001	13 700	19.1

Source: Koh and Koh (2002).

edge technology start-ups in the country. An open-door policy towards global talent, an excellent knowledge infrastructure, an achievement-oriented culture, conducive to business climate, strong linkage to regional economies, a sensible approach to intellectual property rights, and increasing sophistication of venture financing services have added up to create an attractive location for the setting up of high tech firms.

The attractiveness of the Singaporean market for the venture capitalists lies in the financial infrastructure that permits exit from investment via IPOs or mergers with larger companies. The well-developed capital markets and presence of analysts capable of deriving realistic valuations combined with encouraging listing rules make the launching of IPOs or mergers and acquisitions easier and more profitable. Among the other rationales for investment in start-ups in Singapore are the benefits of diversification with investments in companies whose returns have a low correlation with the public market returns. VC is also primarily dependent on the continuing belief among the investors that private investment combined with active mentoring and governance generates higher risk adjusted returns relative to the market investments.

The average investment per company in Singapore is the highest in the Asia Pacific Region (See Table 9.6).⁸ Nexgen Financial Holdings, a Singapore-based structured financial services company, received US\$104 million in 2002 to acquire the second largest venture funding of the year. Singapore also ranks on the top with regards to sourcing of funds for

Table 9.6 *Venture capital funding in Asia Pacific*

	Invested US\$ million	No. of companies	Average/company US\$ million	% investment
Australia	450.43	137	3.29	24.25
India	405.94	33	12.30	21.85
Singapore	226.87	18	12.60	12.21
South Korea	207.07	79	2.62	11.15
Taiwan	199.53	19	10.50	10.74
China	161.92	27	6.00	8.72
Hong Kong	141.90	21	6.76	7.64
Thailand	29.30	12	2.44	1.58
New Zealand	15.83	10	1.58	0.85
Malaysia	15.79	4	3.95	0.85
Vietnam	3.00	1	3.00	0.16
Indonesia	n.a.	1	n.a.	–
Total	1857.58	362	–	100.00

Source: 'Venture capital still backing tech firms', *Business Times*, 22 January 2003

venture capital. Of the US\$ 0.4 billion (S\$2.4 billion) sourced in Asia in 2002, 36 per cent hailed from Singapore.

Government efforts at the promotion of entrepreneurship are not restricted to merely invitations and speeches. Concrete measures taken in Singapore to encourage VC firms and technopreneurship are far in excess of those taken in most economies in Asia. The thrust of these efforts under the Industry 21 initiative (spearheaded by the Economic Development Board) has been towards the development of new capabilities in technology development, innovation development and market development.⁹ Financial support from the government is evidenced in the fact that of the US\$7.4 billion VC present in Singapore in 2000, 19 per cent had origins in government funding.

The Technopreneurship 21 initiative is aimed at the creation of a pro-enterprise environment to aid in the growth and development of high tech start-ups in Singapore. This initiative is under the management of the Agency for Science, Technology and Research (A*STAR). Under this initiative, a US\$1 billion Technopreneurship Investment Fund (TIF) has been set up with the purpose of investment in top tier VC firms in return for the funds establishing operations in Singapore and allocating fractions of their funds to Singapore based start-ups.

A*STAR also announced in April 1999 the launch of a S\$10 million Business Angel Fund. This fund was expanded to S\$20 million in May 2000.

Under this fund, each qualified business angel receives investments worth S\$1 million for three years. Also for every S\$1.5 that the business angel pumps into start-ups, the fund contributes S\$1. A*STAR actively organizes seminars, forums and panels discussions on topics pertaining to the VC industry. Networking sessions and brokerage events provide platforms for the interaction of angels and seed stage start-ups requiring financing and guidance.

The Government of Singapore has also been working continuously at removing regulatory impediments to business growth and development. The number of licenses and licensing requirements for the establishment of firms are being thoroughly reviewed. The bankruptcy laws have been modified in order to encourage the creation of a culture more tolerant to risk-taking and failure. The corporate and top-tier personal income tax has been reduced to 22 per cent in 2002 along with ongoing deliberation on further reduction to 20 per cent by 2005. Tax incentives and regulatory changes have also been instigated to further the migration of VC funds to the country. The EDB VC program established in 1985 is one such initiative. The influence of the preferential tax treatments for investment gains, subject to the fulfillment of certain requirements is apparent in the high percentage of funds invested in early-stage start-ups.

The encouragement provided by the government towards the establishment of start-ups in Singapore is skewed towards technopreneurs. The obvious reason for this inclination is the lack of resources in Singapore for the development of labor and land-intensive industries. Therefore, the financing of such ventures in countries surrounding Singapore, wherein both labor and land are at fractions of their cost in Singapore, is also a feasible option. Towards this end, a 'matchmaking service' can be created, the job of which essentially would be to maintain a database of companies requiring financing and VC finds looking for companies to invest in and diversify their exposure to the vagaries of the technological cycles. Such a database can also provide a useful source of data for research into success rates, factors influencing funding decisions and factors influencing success in this part of the world. Such data would help encourage further the development of an entrepreneurial environment in Singapore and the region.

3. CONCLUSIONS

Interest in Singapore as a financial centre arises partly out of its advantageous location and history, and partly because the infrastructure created as a result of decades of active and effective planning and deliberation is truly

a haven for investors, corporations and governments alike. The strategic alliances with markets around the globe ensure connectivity and innovation in financial products that is unrivaled by financial centers across the region. Tax incentives combined with lower costs (administrative and transactional) of carrying out business, listings, investment as well as the presence of world leaders in investment banking, loan and share origination, treasury activities, fund and asset management as well as venture capitalists create a center where any need, financial, operational or information related, can be met quickly, cheaply and reliably. Singapore thus is ideally positioned to perform the role of recycling the hard-earned savings of the Asian people into development for a richer, stronger and happier Asia.

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10. Korea as a financial hub

Jang-Yung Lee

1. OVERVIEW OF THE KOREAN FINANCIAL SYSTEM

Korea has a large, diversified financial system, which consists of banks, various non-bank deposit-taking institutions, securities firms, and insurance companies. As shown in Table 10.1, the banking sector has nine nationwide commercial banks, six regional banks, five specialized and development banks, and 42 branches of foreign banks. Compared with the pre-crisis numbers of 16 nationwide commercial banks and 10 regional banks, the banking sector now seems significantly consolidated.

Korea's financial reform between 1998 and 2002 also entailed a significant consolidation of non-bank financial institutions (NBFIs). Over 600 of some 2100 financial institutions have closed down: 467 exited from the industry while 153 merged with other healthier institutions.

Since the 1997 crisis, Korea has made major progress in economic adjustment through a wide range of structural reforms in the financial sector. In particular, the efforts to address the pre-crisis problem of non-performing assets and the widespread insolvencies of financial institutions were remarkably successful.

As indicated by Table 10.2, the ratio of non-performing loans to total loans in the banking sector was drastically reduced to 1.9 per cent by June 2002 from 8.3 per cent at end-1999. It is worth noting here that the banks' asset classification standards were upgraded in December of 1999 to bring them into conformity with international best practices.¹ As the banks' asset quality continued to improve, so did their profitability and capital positions, with a return on equity (ROE) of 15.9 per cent at end-2001 and a BIS capital adequacy ratio of 10.6 per cent reported as of June, 2002. The banking sector's total assets increased from 661 trillion won at end-1999 to 840 trillion won by end-June 2002, amounting to about 180 per cent of the nation's GDP.

As a result of the second stage of banking sector reform, which focused more on the 'software' aspect of bank restructuring, the management of Korean banks is now much more profit-oriented. Important steps were

Table 10.1 Consolidation of Korea's financial institutions (1997–2002)

	Number of institutions as of the end-1997	Restructured		Newly established	End of March 2002
		Exited	Merged		
Banks	33	5	9	1	20
Securities	36	6	2	16	44
Insurance	50	9	6	9	44
Others ^(a)	1982	447	136	32	1431
Total	2101	467	153	58	1539

Note: (a) Merchant Banks, Investment Trust Funds, Mutual Funds, Credit Unions, Lease Companies, etc.

Source: Financial Supervisory Service (FSS).

Table 10.2 Financial soundness of Korean Banks (1998–2002) (in trillions of won and in percentage)

	1998	1999	2000	2001	June-2002
BIS capital ratio	8.2	10.8	10.5	10.8	10.5
Non-performing loan (NPL) ratio ^(a)	7.4	8.3	6.6	2.9	1.9
Sub-standard or below loans (SBL) ratio	–	13.6	8.9	3.3	2.58
Total credit exposure ^(b) to <i>chaebols</i> (tril. won)	–	–	57.5	45.7	43.8
Total credit exposure to <i>chaebols</i> percentage of total loans	–	–	24.8	16.9	13.6
Return on equity (pretax net income)	–52.5	–23.1	–11.9	15.9	13.49

Notes:

(a) Non-performing loans are defined as loans overdue for more than three months plus non-accrual loans

(b) Total credit exposure to top 30 Large Business Groups

Sources: FSS/FSC, Bank of Korea.

taken to improve risk management, lending practices, and the pricing of credit risk. Efforts were also made to improve the corporate governance and management systems of banks. Although some concerns were raised about additional corporate failures and the banks' potential bad assets toward the end-2001, Korean banks' total credit exposure to large business

groups (*chaebols*) was further reduced to 43.8 trillion won (13.6 per cent of total loans) as of June 2002. Stress tests on the banking sector's loan portfolio undertaken as a part of the subsequent Financial Sector Assessment Program suggest that it can handle shocks without compromising its soundness. This was due mostly to the aggressive provisioning and significant progress made in the corporate restructuring.

Among the non-bank financial institutions, the priority of reform was initially on resolving problems in the merchant-banking sector. The large concentration of credit risk at the troubled *chaebols*, together with the exposure to the currency, bond and equity markets, had led to widespread distress in this sector in late 1997. A bridge merchant bank was formed to assume the responsibility of paying depositors and disposing of the assets of closed institutions. Among 30 merchant banks, 16 have been closed and three have merged with commercial banks and securities companies. The rest have been placed under rehabilitation and are closely monitored by the Financial Supervisory Commission (FSC). The remaining merchant banks have been performing better than expected; their capital adequacy ratios range from 8.5 per cent to 14.5 per cent.

Korea's insurance sector is large, but not generally profitable. The total assets of insurance companies (life and non-life) stood at 98 trillion won at the end of 1999, about 20 per cent of GDP. Given their deteriorating condition in late 1997, the government has taken a number of measures to strengthen the industry: The EU solvency margin standard for life insurance companies was adopted in 1999, and the pricing of insurance products was liberalized in 2000; investment guidelines for insurance companies were tightened to curtail bank-like lending activities; the FSC has decided to liquidate four previously suspended insurance companies, and it also put the seven distressed life insurance companies up for sale.

Among the non-bank financial intermediaries, the investment trust industry, consisting of investment trust companies (ITCs) and investment trust management companies (ITMCs), posed the most significant systemic risk. One previously suspended ITC was liquidated after transferring its trust business to a healthy ITC. The execution of rehabilitation plans by the remaining six ITCs has been monitored by the FSC. In addition to these six ITCs, there are more than 30 ITMCs, which offer both bond and equity open-ended funds. As shown in Figure 10.1 the total assets of investment trusts increased dramatically between end-1997 and end-1999, rising from 84 trillion won (19 per cent of GDP) to 251 trillion won (52 per cent of GDP). Investment trust holdings of corporate paper account for about 40 per cent of the total listed bond issues, and the industry accounts for 30 per cent of average stock market trading volume. To improve accounting transparency, the bond funds of ITCs and ITMCs are now marked to market.

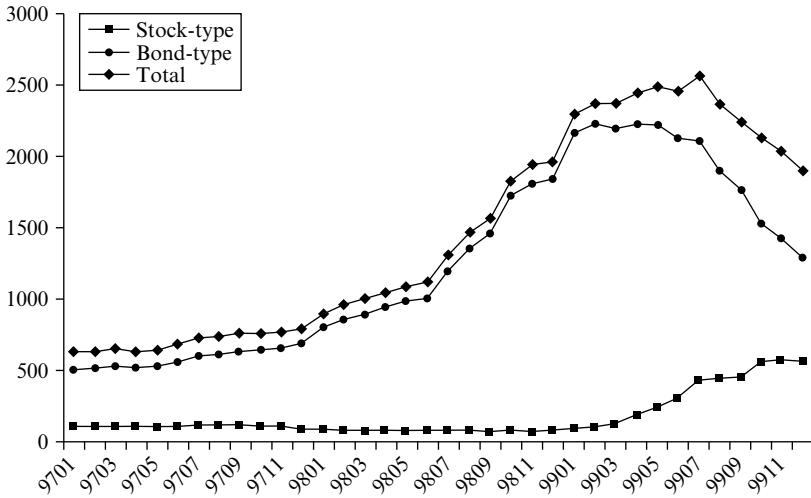


Figure 10.1 Trust assets of investment trust companies (unit: billion won)

The post-crisis financial sector reforms have also broadened and deepened the local capital markets. The government took a number of steps to allow Korean companies direct access to foreign capital markets and expand the range and volume of financial instruments available for foreign investors.

In mid-1998, the government took early action to open the bond and equity markets to foreign investors by eliminating the ceiling on foreign ownership. In order to promote corporate restructuring, foreign investors were allowed for the first time to undertake hostile takeovers. Thus, foreigners are now able to invest in local bonds, equities, and short-term money market instruments without any restrictions. The government also took steps to facilitate direct overseas borrowing by domestic corporations. As part of its overhaul of the Foreign Exchange Law, the government lifted the restriction on foreign borrowings of over three-year maturity and eased remaining restrictions on borrowings of one-three year maturity.

In order to deepen Korea's bond market, the government introduced new policy initiatives in 1999, which were designed to establish a benchmark and build a yield curve by consolidating various government bonds and issuing the bulk of government bonds with a maturity of three years. The initiatives also introduced a primary dealer system, and opened up the credit rating service to foreign competition. Subsequently, Korea developed an institutional framework for mutual funds so that the funds could function as a key instrument for long-term financing. This was also a significant step in

Korea's effort to augment the role of institutional investors in securitizing corporate debt. Also in late 1998, a new law provisioning for asset-backed securities (ABS) was enacted, which provided an effective institutional environment for the disposal of NPLs by financial institutions.

To summarize, Korea has active money and bond market, but further market development hinges upon overcoming some structural problems.

2. KOREA AS A REGIONAL FINANCIAL HUB: FEASIBILITY ASSESSMENT

In April 2003, President Roh Moo-Hyun announced the new administration's vision for Korea to become a major business hub in Northeast Asia: Korea will transform itself over the next 10 years into a significant regional hub based on logistics and financial services.² Subsequently, a presidential commission was appointed with a mandate to map out a strategy and action plan to accomplish this vision. The commission proposes that Korea become a *regional financial center* actively focusing on developing regional niches in financial services to support the increasing trade, investment and capital flows in the region. Various branches of the government, in consultation with research institutions, are currently in the process of identifying a few strategic thrusts as regional niches that Korea should exploit in the next 10 years, and will soon present attainable objectives as well as core strategies for the development of such niche markets.

Why are we so concerned with the idea of developing Korea as a financial center in Northeast Asia? Does it make sense for Korea to aspire to become an international financial center? The truth becomes clear in the following discussion of the rationale and potential for the vision of Korea as a regional financial hub.

2.1 Rationale and Potential for the Vision

The basic rationale for the development of a regional financial hub is simple: an international financial center in Korea is a realistic and achievable goal and a benefit to all sectors of the Korean economy.

One of the major benefits of becoming a financial center is the development of a more competitive domestic financial sector: as Korea's financial service providers compete with the global players, the soundness of financial institutions and the structure of Korea's financial service industry will be strengthened further. This will contribute to a greater efficiency in the allocation of investment and overall high growth of the economy. In addition, Korea's becoming a financial center will lead to an increase in the

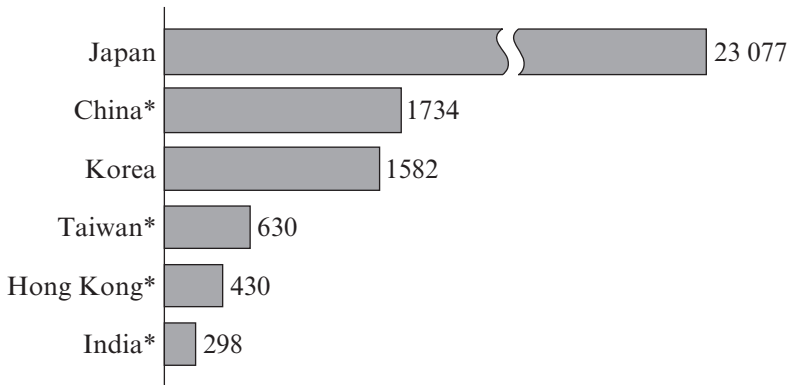
number of high value-added jobs. Other key benefits can include: substantial increase in the growth of service industries, a reinforced role as an international business hub, greater resilience to withstand external financial shocks; and enhanced national image and international influence.

Korea also has the potential to become a leading financial center in Asia. In fact, there are at least four key factors that bode well for Korea's future as a financial center.

First, the *size of the domestic market* and its growth potential is the most important factor determining the success of a financial center. According to a recent survey, this is exactly what the CEOs of financial service companies would consider when they decide where to locate their regional headquarters. Korea is the world's thirteenth largest economy, has a large population of some 46 million with a per capita GDP of US\$10 000, and is home to a large number of Asia's top corporations. Its high domestic savings rate (32.4 percent of GDP in 2001) provides a strong market for financial services as the high savings need to be channeled by financial intermediaries into the most productive uses. The strength of its industrial and commercial base is another key advantage for Korea; high demand from large corporations for financial products and services is yet another critical factor determining the relative strength of a financial center.³ In addition to the domestic market, Korea's proximity to the two biggest markets in Asia, Japan and China, will be another competitive advantage. In particular, the emerging cities located on the east coast of China, in which prospects for growth seem bright, will provide valuable business opportunities for Korea-based financial companies.

Second, as indicated by Figure 10.2, Korea has *a large pool of financial assets*. Measured by the ratio of financial assets outstanding relative to GDP, Korea's financial interrelation ratio currently stands at 6.91, as compared with Taiwan's 6.2 and the US's 9.0. More specifically, Korea has one of the largest markets for debt, equities, and insurance products, so the country is attracting borrowers, investors, and financial intermediaries who seek to access some of Asia's most liquid markets. Korea's bond market, in particular, is the second largest in Asia surpassed only by Japan: the outstanding value of Korea's bond market was 563 trillion won (US\$440 billion) as of end-2002, which amounted to 94.4 per cent of GDP, and an increase of 11.7 percent compared to 2001.

Korea's equity market also has sufficient depth and breadth: the Korea Stock Exchange (KSE) has 683 listed companies with a market capitalization of about 258 trillion won (US\$201 billion) and an average trading volume of 3041 million shares as of end-2002. The newly established Korea Stock Dealers Association Automated Quotation (KOSDAQ) stock



Note: *Total volume of deposits in financial institutions

Source: McKinsey analysis

Figure 10.2 Volume of financial assets in Asia (USD billions, 2001)

market has become an active marketplace for high-tech firms and venture businesses, with its average daily trading value of 2.42 trillion won or roughly 92 percent of KSE's trading value in 2001. Along with the most active markets for financial derivatives, these securities markets offer a broad set of savings, investment, and financial and risk management instruments.⁴ Thus, Korea's capital market can be selected as a regional niche with good growth potential and competitive advantage.⁵

The presence of a large number of different domestic and foreign financial institutions of substantial size is another important determinant of the success of an international financial center. Not only does the concentration of large financial intermediaries support the large pool of domestic capital, it also allows clients ready access to international capital markets. With consolidation of the financial sector gaining momentum since the financial crisis, there are now nine Korean financial institutions among the top 100 financial institutions in Asia in terms of assets, and they will play much more prominent roles in the region in the coming years. The merger between Kookmin Bank and the Housing and Commercial Bank occurred in 2001, producing the eleventh largest financial institution in Asia. Two financial holding companies, Woori FHC and Shinhan FHC, were formed in 2001 and now are fully operational. In 2002, Seoul Bank was sold to Hana Bank, thereby creating another top-20 financial institution in Asia. These four newly-formed financial groups accounted for 54 per cent of total bank assets in Korea as of end-2002.

In addition to the Korean financial institutions, the presence of foreign financial institutions in Korea has increased substantially since the 1997 crisis.⁶ The average foreign ownership in commercial banks increased from below 10 per cent at end-1998 to more than 30 per cent by end-2001. The number of foreign financial institutions in Korea has increased from 84 at end-1998 to 98 by end-2001. As shown in Figure 10.3, measured in terms of assets, the market share of foreign banks in Korean banking increased from 6 per cent at end-1998 to 26.7 per cent at end-June 2003. This notable improvement in the degree of openness to foreign influence will help modernize Korea's financial system and improve overall market efficiency due to the increased competition that it will bring to bear.

Third, first-rate IT facilities and IT-expertise is another important advantage that Korea possesses in the age of globalization. About 24 million people, or more than 51 per cent of the population, now log on to the Internet, and the percentage of the population using broadband, high-speed Internet services in Korea is over 13 per cent higher than countries such as the US and Canada. With its high quality, reliable telecommunications infrastructure and ability to access and process information, Korea can support 24-hour trading of securities, foreign currencies and wire transfer of funds across national boundaries. Many Korea-based financial services firms will also likely to reduce costs significantly by turning to outside providers to fulfill their information technology needs rather than do the work in-house. For example, banks and insurance companies can enjoy cost advantages by outsourcing back-office operations such as data processing, clearing and settlements, call centers, and other routine clerical operations. Korea is also likely to be an innovator in IT-related or supported financial services. One possibility that should be considered is

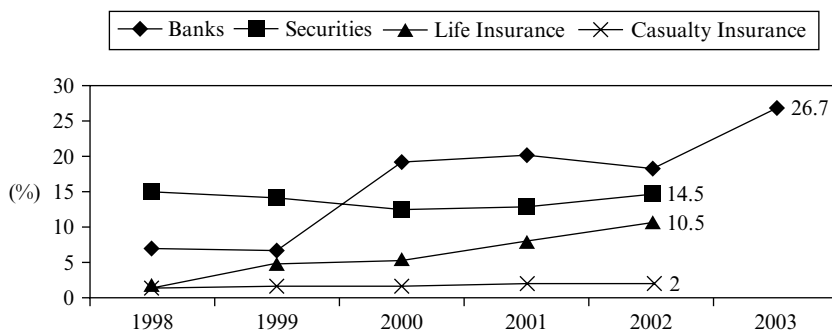


Figure 10.3 Market Share of Foreign Financial Institutions in Korea
(unit: percent)

that Korean IT service companies and research institutions could forge partnerships with multinationals to establish a new software development center that could meet the new information technology needs of the largest financial service firms operating in Asia.

Fourth, highly trained human resources are the heart of any service industry, and Korea has a well-trained, sophisticated workforce with the skills and work ethic needed to perform financial services. Korea is known for having one of the highest literacy rates in the world and the largest number of PhDs per capita. The increasing sophistication of financial services jobs is placing new demands on education and training institutions. Thus, once recruited by financial institutions, college-educated workers should have opportunities for continued training throughout their careers. In this regard, Korea's ability to keep abreast of rapid innovations in the industry should not be underestimated. The Korea Banking Institute (KBI) and Korea Securities Training Institute (KSTI), for example, offer an array of training courses in credit analysis, securities analysis, loan approval, fund management, M&As, OTC derivatives, international finance, and financial risk management. Since 1976, the KBI has trained new workers in the skills needed and produced 17 362 graduates bearing the 'Financial Expert Certificate.'

2.2 Key Challenges To Overcome

These factors will bolster Korea's future as an important financial center. Yet Korea must face many challenges in its effort to transform itself into a financial center. In Korea, there is an inadequate regulatory and supervisory framework, unduly burdensome tax regime, rigid labor market practices and a small pool of legal talent, and there are emerging opportunities in other parts of Asia. All of these are challenges to Korea's competitive strength.

First, to compete as a leading financial center, Korea needs to improve its regulatory and supervisory system governing the operation of financial services companies and provide a business-friendly legal environment.

There is fairly broad agreement that Korea's supervisory oversight has been significantly improved and that prudential regulations are now closer in line with international best practices as expressed in the Basle Committee's Core Principles. By consolidating far-flung supervisory functions under a single independent agency, the Financial Supervisory Commission (FSC), the problem of 'regulatory arbitrage' has been largely resolved. In an environment of comprehensive, balanced regulation, there is little incentive to exploit regulatory loopholes and test the boundaries of permissible activities between banks and non-bank financial institutions. In order to conform to the global standards of banking supervision, the FSC

introduced more stringent rules regarding loan classification, loan provisioning, and capital adequacy, effective at the end of 1999 (Table 10.3). The FSC also adopted prudential regulations limiting banks' foreign exchange exposures, connected lending, and single borrower and group exposures. Accounting and disclosure standards for financial institutions are now fully compliant with the requirements of International Accounting Standards.

However, the legal and regulatory system still has serious shortcomings. The first is that Korea's legal environment is not yet sufficiently business

Table 10.3 Improving standards in prudential regulation and supervision

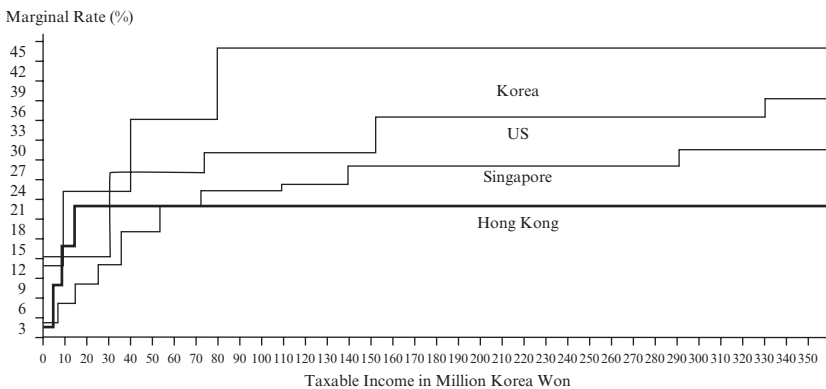
Objectives	Measures	Schedule
Mark-to-market for securities	<ul style="list-style-type: none"> • Introduction of mark-to-market for securities • Change in securities' classification from categorizing by currency (domestic, foreign currency) to maturity (investment securities, marketable securities) 	June 1998 – Completed
Banking sector disclosure	<ul style="list-style-type: none"> • More information to be disclosed to meet the International Accounting Standards 	April 1998 – Completed
Loan classification and provisions	<ul style="list-style-type: none"> • Revision of loan classification procedures to incorporate the findings of diagnostic reviews, and to ensure that classifications by management, as well as reviews by examiners, fully reflect capacity to repay and not simply past performance 	July 1998 – Completed
Improvement in BIS capital ratio calculation	<ul style="list-style-type: none"> • Removal from Tier 2 Capital of all provisions except those with respect to assets classified as normal and precautionary 	January 1999
Prudential rules for foreign exchange liquidity and exposure	<ul style="list-style-type: none"> • Risk management for short-term foreign currency risk (short-term assets of less than 3-months maturity of at least 70% of short-term liabilities) • Report maturity mismatches for sight to 7 days; 7 days to 1 month; 1 to 3 months; 3 to 6 months; 6 months to 1 year; and over 1 year • Management of country exposures (set exposure limits for each country based on international credit ratings) 	July 1998 – Completed
Trust accounts	<ul style="list-style-type: none"> • Introduction of rules providing full disclosure to trust beneficiaries, and precluding any possibility of payment by managing banks to make good or guarantee any loss • Introduction of restrictive rules to be applied to all trust accounts ensuring segregation for management as well as accounting purposes 	January 1999

friendly: the legal framework for the Korean capital market is still characterized by overly broad, prescriptive, or vague rules that are difficult to comply with. The FSS Regulations on Business Delegation, for example, impose complex documentation requirements and review procedures by the FSS on the financial institutions' outsourcing of operations to third parties.

A more serious problem is the wide discrepancy between the regulatory framework and actual business practices. The supervisory authorities are not monitoring share price manipulation and other violations (e.g. trading errors) as closely as they should. This reflects, in part, regulatory forbearance and limited the supervisory capacity.

And the division of responsibilities between the Ministry of Finance and Economy, FSC, and FSS as well as the frequent change in the positions of staff and senior members of these organizations create confusion. Thus, consistent regulatory enforcement requires more transparent arrangements vis-à-vis regulator/supervisor and it also needs the authorities to step-up their efforts and possibly for supervision to be expanded. It is also important to upgrade the quality of the supervisory staff through additional training.

Second, to emerge as a center of financial services activity, Korea needs to make its tax regime more favorable, a key factor in an area's costs of doing business. Not only is Korea's corporate income tax rate (29.7 per cent) higher than its regional competitors (e.g. Singapore's 25.5 per cent, Hong Kong's 16 per cent), but taxable income is much more broadly defined (Figure 10.4). Furthermore, Korea's personal income tax rates are high (the combined state and local tax rate is 39.6 per cent), and its rate structure is overly



Note: Taxable incomes of countries other than Korea have been converted into won at the 1 August 2001 exchange rates.

Figure 10.4 Comparison of personal income tax rates

progressive. To attract financial services activity and employment to Korea, it needs to reduce the income tax rate and make its rate structure less progressive. The rate should be brought down to the rates of competitor countries (e.g. Singapore's 28 per cent, Hong Kong's 20 per cent) or lower.

Third, Korea needs to increase the flexibility of its labor market. From the perspective of foreign CEOs contemplating the establishment of a business presence in Korea, labor market rigidity, or the inability to hire and fire, is still the single greatest concern. As a useful point of reference, Dublin emerged as a regional financial hub as CEOs shifted their regional service centers in Europe to Ireland due to its low costs and flexible labor environment. The Korean labor laws impose excessively onerous conditions on employers seeking to hire, lay-off, or transfer workers for business restructuring purposes.⁷ Among the OECD member countries, furthermore, Korea is the only economy that has unionized employees in the financial industry. And managements rather than union members are still required to pay the salaries of workers who are devoted to full-time union activities. Many acrimonious management-labor disputes occur each year, and because many of them are highly politicized, only a few are resolved peacefully.

Fourth, there are not yet readily available world-class support services in Korea. Although some progress was made in opening up the local market to a variety of services, including accounting and consulting services, the legal services market is still closed to foreign competition. Foreign accounting firms operating in Korea must still rely too heavily on local partners. Foreign credit rating agencies also must rely on local partners, resulting in a two-track rating system, which is sub-optimal from the perspective of foreign investors.

Fifth, to rise beyond the role of a domestic financial center, Korea should deal with the emerging challenges posed by other financial centers in the region. In Northeast Asia, it seems that Shanghai is becoming a major contender as a financial center of the future. The city and its hinterland have already become the hot new favorite destination for foreign investors. China's accession to the WTO will further increase the competitiveness of foreign banks and financial institutions in Shanghai, and they will benefit from the opening of China's market. Most of the restrictions on business transactions conducted in renminbi (RMB) by foreign banks and institutions are being phased out. In other parts of Asia, Hong Kong and Singapore also are taking many steps to maintain or increase their competitiveness as regional financial centers. Hong Kong is still an important international capital market with a highly developed regulatory environment. Singapore is actively pursuing a new vision and strategy to develop regional and global niches in financial services, and increase its depth and international market share of select financial activities, such as wealth management, processing

and risk management. According to a recent survey of Asian financial services leaders by McKinsey & Company, Seoul ranked third with Beijing in terms of conditions to become a regional finance hub in Asia. Hong Kong and Singapore were placed first, while Tokyo and Shanghai were second.

This has clear implications for the financial sector's attractiveness. It also means that Korea should go to great lengths to improve the perceptions of foreign investors about the country and sharpen its edge over its competitors. To this end, both the central and provincial governments in Korea should make conscious efforts to create a favorable business and living environment for foreign financial services firms and their skilled professionals. Their efforts will directly impact both the cost and non-cost dimensions of competitiveness that are of interest to financial services firms in their location decisions. Policymakers should recognize the importance of having a strong base of English-speaking workers to ensure maximum efficiency in the financial markets, and English language education should be improved in the schools. Society as a whole should recognize the importance of maximizing the benefits of an international financial center and be more open-minded toward the presence of foreign firms.

3. VISION AND ACTION PLAN PROPOSAL

In articulating the vision and strategy for Korea's development as a financial center, we should consider the various factors, including the changing financial landscape in East Asia. In identifying the niche markets in which Korea should specialize, we need to take into account recent trends in international financial markets, such as the decline in traditional financial services. It is worth noting that the volume and significance of foreign exchange trading have declined as a result of global consolidation in the banking industry and the expanding role of electronic brokers. For this reason, the FX market was not selected as one of the niches to be developed in the proposed action program.

Additionally, we should consider the emerging business opportunities in Northeast Asia, such as long-term financing for infrastructure projects in China, Mongolia and North Korea. This implies the need for Korea to accelerate the development of the domestic bond market. In order to capture such opportunities, the bond market must be deep and liquid. The described challenges and opportunities also imply that there will be both potential competition and strategic cooperation among Hong Kong, Korea, Shanghai and Singapore. Thus, Korea's strategy should be oriented towards building connections and relationships with other significant financial centers across the region. In other words, Korea should identify

mutually-complementary niches, based on in-depth analyses of the region's financial markets and their comparative advantages.

3.1 Market Niches

In light of these considerations, many economists suggest that the bond, asset management, and equity markets are the three strategic niches that Korea should develop in the next 10 years (see Seoul Financial Forum 2003).

The *bond market* has been identified as a regional niche with good potential and competitive advantage for Korea's financial sector. The outstanding value of Korea's bond market was 563 trillion won (US\$440 billion) as of end-2002, or 94.4 per cent of GDP, which compares favorably to Hong Kong and Singapore (see Table 10.4). Owing to the post-crisis reforms, Korea now has a well-functioning bond market: there is a critical mass of players and sufficient liquidity in the bond market; diverse hedging instruments such as bond futures contracts, interest rate swaps now exist; and greater use of market-to-market accounting and combined consolidated statements has made the bond market more transparent. Korea now qualifies for inclusion in the global benchmarks used by international portfolio investors.⁸ New opportunities are also being created for the continued growth of the market. For example, the growing use of asset-backed securities (ABS), which has been fueled by the on-going corporate sector restructuring in Korea, will contribute to the growth of the bond market. Finally, given the increasing needs for long-term financing for infrastructure

*Table 10.4 Comparison of bond markets in Asia
(as of 2001) (US billion dollars)*

Emerging Asia	Size (\$bn)	As share of GDP (%)
China	138	14
Hong Kong	50	30
India	107	25
Indonesia	4	5
Korea	440	94
Malaysia	42	63
Philippines	21	32
Singapore	84	97
Taiwan	4	18
Thailand	14	12

Source: Korea Institute of Finance.

investments in China and possibly for the reconstruction of North Korea, the upside for further development of Korea's bond market is enormous.⁹

Notwithstanding these competitive advantages, there are many areas where improvement is needed. Korea must promote an active secondary market, which is essential to bring both investors and appropriate pricing to the primary market. Volume in the primary market should be further increased as the poor liquidity in the secondary market is a general sign of insufficient volume in the primary market. Allowing domestic branches of foreign banks to issue domestic bonds would add new financial issuance volume to the market and probably increase foreign investor interest. Concerns of foreign investor over transparency and governance issues should be reduced by allowing dual rating of issues. Finally, aggressive restructuring and consolidation of weak investment and trust companies (ITCs) would expand the demand base of the bond market as well as strengthen the long-term financial position of the non-bank financial institutions.

The *asset management industry* is identified as another source of competitive advantage for Korea's financial sector. Assets under management (AUM) totaled US\$190 billion as of end-2002, and will continue to grow in the coming years. Continued strong GDP growth and high savings rates (31 per cent of GDP) promise good growth potential, while the absorptive capacity of the domestic capital market will soon be outstripped by domestic growth rates. Korea represents the second largest wealth market in Asia outside Japan, with the highest relative proportion of households in the affluent (US\$0.25–1 million) and middle wealthy (US\$1–5 million) segments.¹⁰

Rapidly changing demographics, i.e., the aging of the population, is another driving force of the development of asset management activity in Korea. Much of the pension needs are still unmet. The government plan to implement a 'corporate pension' in 2004 will substantially increase the assets available for management. The need for a critical mass of professional players in Korea is increasing as consumers become more and more sophisticated and have greater interest in non-Korean assets. Currently, there are about 30 investment management companies in Korea, with the six largest accounting for 55 per cent of total AUM. There are also over 100 companies engaged in investment advice including both pure investment advice and discretionary advice.

Yet the government could play a more active role in developing the asset management industry by attracting international fund management companies to Korea. Like Singapore's GIC, the Korea National Pension Corp (KNPC), for example, could outsource fund management to attract foreign fund managers and provide seed capital for start-ups and small

and medium-sized fund managers.¹¹ In the end, Korea-based financial institutions will actively gather and allocate financial assets within the region as well as serve as a conduit to and from global financial markets.

Third, Korea should become a leading *international equity market* in Asia. The Korean stock market has a market capitalization of US\$221 billion and 671 listed companies, so Korea already has a very active market for large domestic corporations. In 2002, trading activity at the Korea Stock Exchange was second highest in the world, next only to the NASDAQ market. The rapid development of the KOSDAQ market over the last few years is providing greater access for smaller, new domestic corporations. The Korean equity market meets most of the criteria for becoming a successful capital market hub: a large pool of liquidity; concentration of intermediary talent; and broad availability of financial instruments including derivative products. The only negative aspect is the lack of an international dimension. Foreign investors' share in equity transactions is still small (see Figure 10.5). The equity market is not yet open to foreign equity issuers, and it is still not possible for Korean companies to place equity offshore except as depositary receipts, though Korean corporations have successfully raised equity and equity-linked finance in the international markets via DRs and convertible bonds listed on a foreign exchange. Thus, the

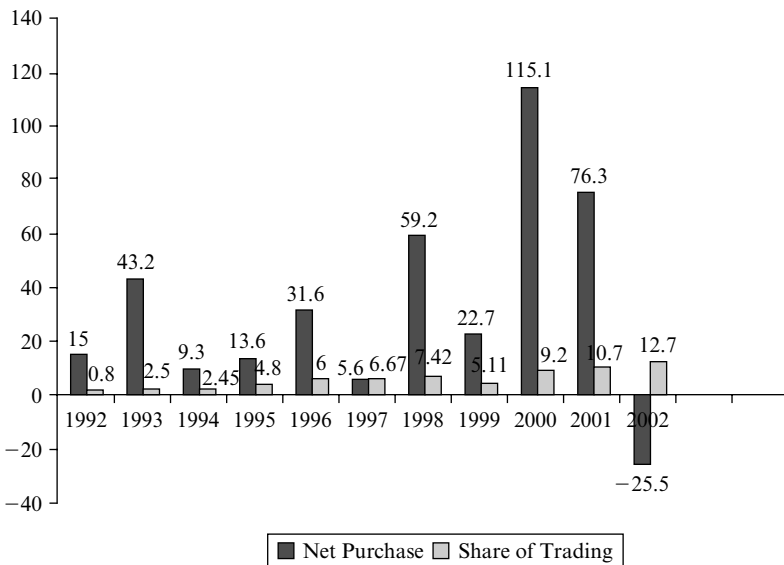


Figure 10.5 Foreign investors' share in equity transactions (unit: 100 billion won, percentage)

benefits of an internationalized equity market are enormous. It could give domestic companies greater access to foreign capital just as foreign companies gain access to domestic capital. As investor concerns over accounting transparency and corporate governance recede, it also settles the issue of the *Korea discount*, i.e., Korean equity issuers facing lower valuations than their regional and global peers. Eventually, it enhances Korea's image and attractiveness to foreign corporations and regional headquarters.

3.2 Attainable Objectives

A clear vision should, in addition to identifying a few strategic niche markets, present attainable objectives for the development of the selected niches in a quantifiable form. However, it is difficult to forecast accurately the long-term objectives in a quantifiable form, as the final outcomes depend on actual progress made in implementation of a variety of action plans. For this reason, we present the following multi-staged objectives with a specific time schedule under a neutral scenario of 'fairly good' progress made in the primary and secondary action plans needed to support the strategic initiatives.

Internationalization of the bond market

By 2004:

- US\$1 billion in international bonds issued in Korea
- Government bonds in domestic market increase by 20 per cent
- 5-year and 10-year government and corporate bonds issued
- 20-year infrastructure bonds issued
- Bond interrelation ratio increased from 80 per cent to 100 per cent (ratio of outstanding bonds to GDP)
- Bond circulation ratio increased from 0.7 to 1.0 (ratio of bond transaction volume to outstanding bonds).

By 2007:

- US\$10 billion in international bonds issued in Korea
- Government bonds in domestic market increased by 60 per cent
- 5-year and 10-year government bonds reach 10 per cent of volume outstanding
- 20-year government bonds issued
- 30-year infrastructure bonds issued
- Bond interrelation ratio increased to 120 per cent
- Bond circulation ratio increased to 1.5.

By 2010:

- Leading international bond market in Asia, equivalent to 10 per cent of foreign exchange reserves in Northeast Asia
- Volume of government bonds in domestic market increased by 150 per cent
- 5-year and 10-year government bonds reach 30 per cent of volume outstanding
- 20-year government bonds reach 20 per cent of volume outstanding
- Bond interrelation ratio increased to 140 per cent
- Bond circulation ratio increased to 2.0.

Internationalization of the fund management industry

By 2004:

- Undertake thorough restructuring of investment trust industry
- Increase Korea-based Assets Under Management (AUM) from 228 trillion won to 300 trillion won
- Domestic fund managers commence investment in international bonds.

By 2007:

- Increase Korea-based AUM to 500 trillion won
- Korea-based fund managers hold 2 per cent of domestic investments in international securities
- Korea-based fund managers hold US\$50 billion of AUM.

By 2010:

- Leading international fund management market in Asia, equivalent to 20 per cent of foreign exchange reserves in N.E. Asia
- Increase Korea-based AUM to 1 000 trillion won
- Korea-based fund managers hold 5 per cent of domestic investments in international securities
- Korea-based fund managers hold US\$250 billion of AUM.

Internationalization of the equity market

By 2004:

- Market capitalization ratio increased from 60 per cent to 90 per cent (ratio of market capitalization to GDP).

By 2005:

- Commence issuance of foreign corporation equities in Korea.

By 2007:

- Market capitalization ratio increased to 110 per cent.

By 2010:

- Market capitalization ratio increased to 140 per cent.

3.3 Primary action plans

Korea should pursue the following primary action plans to support the development of the above strategic niches, i.e., a strong bond market, a wealth management market, and an internationalized equity market.

Liberalization of the foreign exchange system

Korea must, first, further liberalize its foreign exchange system. Five years after the financial crisis, there is no doubt that the Korean foreign exchange regime has been liberalized greatly. Most international current transactions are now liberalized, but there are some remaining restrictions on capital account transactions, which limit the free flow of foreign exchange. In April 2002, the government announced a new FX market liberalization plan, which contains a specific time schedule for the complete liberalization of the FX system, including the full convertibility of Korean won under the capital account in 2011. However, Korea should facilitate the process of the won's internationalization and other FX liberalization plans because active trading and easy conversion of international currencies are vital to a vibrant capital market. Among many deregulatory measures required, an increase in the local currency funding limit for non-residents is critical to improve flexibility and encourage capital flows. More specifically, non-residents should be permitted to take out won-denominated bank loans of up to 1 billion won and issue up to 5 billion won in won-denominated securities by the end-2004. Opening up the FX brokerage service market to foreign competition is a very important task for improving the efficiency of the local FX market.

Globalization of the regulatory framework

Despite recent improvements, Korea's regulatory system is still a *positive-list based system*, which permits only those financial products on the list. This regulatory framework renders the introduction of new financial products in

the market very difficult, which in turn hinders efforts to keep pace with rapid changes in the market and new financial technology. In other financial centers with flexible regulatory environments, financial products and services are increasingly coming to a convergence, and the traditional firewalls separating the banking and securities markets are being eroded. This situation calls for the quick conversion of the legal and regulatory system into a *negative-list based system*. Such a system would be essential to allow the market to offer the full range of financial products that are available in other financial centers. Thankfully, the Financial Industry Development Committee, an advisory body of the Ministry of Finance and Economy, has undertaken a comprehensive study on ways to improve the legal and regulatory framework on finance, whereby permissible financial activities will be regulated on the basis of financial functions instead of by type of institution in the financial industry. This will greatly facilitate the move to the negative list system.

Another area for improvement is regulatory *transparency*. Unlike other advanced financial centers, Korea still does not publish all the applicable laws, regulations, and administrative guidelines for all to see. Oftentimes, it is not so clear which kinds of transactions are subject to approval requirements, and if they are subject to approval, the standards of approval are not clearly explained. Together with the language barrier, it becomes extremely difficult for foreign firms to correctly understand and fully comply with the applicable regulations. We, therefore, recommend that the regulatory authorities publish all regulations, modifications and any communications pertaining to the financial industry in English. The authorities should also reduce the latitude for interpretation of the regulations by making notification of and clarifying what is subject to the approval requirements and standards of approval.

The last, though equally important, area of improvement is *equal treatment*. To create a level playing field, Korea's regulatory oversight needs to ensure that all foreign financial institutions are treated no less favorably than domestic institutions in every respect. This is the well-established principle of 'national treatment' which is widely accepted by the WTO member countries. The Enforcement Decree of the Real Name Law is one example, which prohibits the sharing of customer trade information with foreign affiliates through the global IT system, while domestic companies are allowed. This should be modified to permit foreign financial institutions to operate on roughly the same basis as in other jurisdictions.

An open legal services market

A reliable judicial system and a pool of legal talent is another essential element for the success of an international financial center, because it

provides certainty in structuring and executing financial transactions. London's resurgence as the financial center of Europe owes much to the business-friendly legal environment: its legal system and practices have been strengthened dramatically in the aftermath of the Big Bang of 1986.

Despite some progress, many international corporations still prefer to have contracts governed by jurisdictions other than Korea. In Korea, the court system is not yet effective enough to resolve corporate disputes. Judges and lawyers with experience in bankruptcy proceedings, M&As, and shareholder grievance are still in short supply (Fallows 2002, p. 2).

As explained earlier, Korea's legal services market is still closed to foreign competition, limiting the pool of available legal talent in Korea. It is interesting to observe that even Shanghai had permitted international law firms to establish branch offices and provide legal services as early as 1987. Thus, it is imperative that Korea opens up its legal services market without delay and permit fair competition among domestic and foreign law firms.

3.4 Supplementary Action Plans

There are always undesirable side-effects associated with an aggressive financial sector liberalization and market opening. Instances may arise where banks are incapable of managing certain risks that are associated with the new activities permitted to them by financial liberalization. At the same time, allowing foreign banks to borrow freely in local currency heightens the risk of a financial crisis, because local currency funding can be used as an instrument to wage speculative attacks on a currency that is anticipated to weaken. In order to minimize such side-effects, the government should develop well-designed supplementary action plans: firstly to enhance the capacity of policymakers to monitor and prevent a banking crisis and other forms of speculative attacks on the won; and secondly to improve education and training programs to meet the growing demand for skilled human resources in the financial sector.

Increase crisis management capabilities

The ability of policymakers to prevent banking crises would depend on two classes of *ex ante* measures: measures to strengthen the supervision and regulation of the financial system and economic-policy strategy to reduce macroeconomic instability and inconsistency.

The first has already been explained in earlier sections, and elements of sound prudential regulation are well known. The only concern here is that the authorities often lack of the capacity to identify those financial institutions that are incapable of managing the new risks associated with full capital account liberalization. Because of the increasingly complex financial

market structure, even politically independent, powerful bank supervisors may not be able to determine which banks do not properly manage liquidity and foreign exchange risk. This implies that the supervisory oversight should be reinforced by promoting even greater *market discipline*. That is, the authorities need to put in place a strong incentive structure that compels financial institutions to adequately manage their risks and at the same time helps depositors, creditors, and investors of the financial institutions differentiate the good from the bad ones, thereby limiting the tendency for unsound banks to take on additional risk.

The second set of measures to prevent financial crises is straightforward: stronger economic fundamentals and sound economic policies that ensure macroeconomic stability. This requires internal consistency among the monetary, exchange rate, and fiscal policies as well as refinement of economic policy instruments that can effectively reduce macroeconomic imbalances in an open economy environment.

Improve education and training programs

In order to support the development of the strategic niche markets, Korea needs to expand and upgrade the domestic pool of financial sector expertise. Currently, there is a serious mismatch between the supply and demand for professional staff in finance, especially in the field of innovative international financial activities, such as project financing, and the dealing of derivative products. In a typical Korean commercial bank, there are only about 10 professional FX and capital dealers, while there are about 150 professional staff in a Japanese bank. Clearly, there is an urgent need to improve the education and training programs in the field of finance. Upgrading the training program at domestic vocational training institutions (e.g. Korea Banking Institute) would be one way. A better way to raise the quality and standards of education and training programs is to allow foreign schools and training institutes to provide their services in Korea. This could be done by establishing independent accredited institutions specialized in MBA-level finance. To this effect, we recommend that Korea open up its education services market without delay.

4. CONCLUSION

What makes a financial center? Location cost and advantage in terms of proximity to markets and cost of doing business are the key factors that determine how a financial center will succeed. Human resources, telecommunications and technology, and regulation and taxation are also important factors. In these key areas, Korea holds many competitive

advantages for the future. Korea, however, has major policy challenges to be overcome: among others, it should globalize its regulatory framework; further liberalize its foreign exchange system; and open its legal service market to foreign competition. Yet, the attributes that define a successful financial center are not limited to these. As noted earlier, a favorable living environment for expatriates, available talent pool, a strong base of English-speaking, open-minded population all provide support for a financial center.

If Korea succeeds in overcoming these challenges in economic and non-economic fields, it can receive enormous benefits in terms of higher economic growth, increased efficiency of investment allocation, high value-added jobs and enhanced national image and international status.

NOTES

1. Upgrading of the banks' asset classification standards entailed an early recognition of the 'precautionary loans' and the introduction of 'forward-looking criteria' (FLC), which reflects not only the past repayment performance of borrowers, but also their future debt repayment capacity.
2. This vision was based in large part on the original master plan report, 'Korea As An International Financial Center: Vision and Strategy,' released by the Seoul Financial Forum in November 2002.
3. As of end-2001, the number of large companies including the multinational corporations (MNCs) in Korea is 896, more than its competitors, such as Taiwan's 717 and Hong Kong's 796.
4. The average daily turnovers for the stock index futures (KOSPI 200 futures) and index options (KOSPI 200 options) reached 111 000 contracts and 2.4 million contracts, respectively, in mid-2001.
5. In addition, Korea's insurance market is large in global terms, ranking seventh in terms of premium income to insurance companies. The degree of *insurance penetration*, as measured by gross premiums as a percentage of GDP, currently stands at 13.1 per cent, the third highest in the world. Life insurance accounts for the largest segment of the market, with 22 companies in operation.
6. In 2000, a 51 per cent stake in Korea First Bank was sold to New Bridge Capital (U.S.), while 53.2 per cent of KorAm Bank was sold to the Carlyle Fund (U.S.). More recently, a 51 per cent stake in Korea Exchange Bank was acquired by the Lone Star Fund (U.S.).
7. Article 31 of Labor Standard Law stipulates that the employment adjustment should be justified by 'inevitably urgent managerial necessity'.
8. JPMorgan Broad Government Bond Index has Korea in the benchmark index alongside Japan, Australia, and Singapore in Asia.
9. According to the Korea Development Institute, the total cost of rebuilding North Korea's infrastructure is estimated to be as large as 400 trillion won (US\$363 billion).
10. According to the BCG Wealth Market Sizing Database, the size of Korea's wealth market is US\$582 billion (versus China's US\$636 billion at end-2001), and the two segments account for 73 per cent of the wealth market in Korea.
11. The Singaporean government has played an effective role in building up a critical mass of players in the asset management industry through the GIC's extending fund management mandates and taking equity stakes in start-ups and small and medium-sized fund managers.

12. See p.2 of Thomas Fallows (2002), *Regional Hubs from the Corporate Funding and Treasury Perspective: Lessons learned by Citigroup in Asia* for details.

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11. Financial centres in East Asia: The Malaysian perspective

Mahani Zainal Abidin and Chung Tin Fah

1. INTRODUCTION

Malaysia's growth, particularly in the 1990s, was very much predicated on a high-investment strategy. As a result, the high national savings rate was unable to provide all of the investment requirements. For example, in 1996 the savings-investment gap was 5 per cent. This gap was partly funded by inflow of both short and long-term foreign capital. The domestic sources of funding were mainly the banking sector and the equity market. The pattern of financing in Malaysia was not unlike that in other countries in East Asia, in that it was heavily reliant on the banking sector because businesses were mainly based on networks and relationships (Yoshitomi and Shirai 2000).¹

This form of financing proved to be unsustainable as shown during the Asian crisis in 1997–98. Loss of market confidence and the prospect of deep economic downturn in the region triggered a large capital outflow from the Asian region. This in turn caused a severe shortage of capital to support on-going projects. Adding to the woes was the raising of interest rates; a tool used to overcome the crisis. The resulting shortage of liquidity and higher cost of funds caused the Malaysian economy to contract by 7.4 per cent in 1998 and the non-performing loans to increase from 4.1 per cent in December 1997 to 7.8 per cent in April 1998.

Some analysts (Wing et al. (2000), Arthukorala (2001)) have argued that the Asian crisis was to a degree brought about by a liquidity crunch and outflow of foreign funds. Indeed, the rapid recovery of some of the crisis economies was due to the injection of liquidity – for example, Malaysia lowered the statutory reserves requirement from 13.5 per cent to 4 per cent to inject RM38.3 billion into the banking system and lowered the interest rate from 12.3 per cent to 7.75 per cent. This had stopped the rise of non-performing loans and allowed the private sector to function again. The flow of foreign capital into the equity markets from the third quarter of 1998 had also helped the recovery of share prices: Many borrowers had used shares as loan collateral and this had to be topped when shares fell in

market value. When borrowers failed to top-up the value of their collateral, banks sold these shares, thus adding further to the downward pressures on the stock market.

In view of the large savings in Asia, there is a case to be made that these savings should be recycled and effectively used to finance investment in East Asia. The reliance on capital from outside the region can be detrimental. When this capital is pulled out, including withdrawals of loans by foreign banks it can expose these economies to similar crises in the future. There is a need to broaden and deepen the sources of financing to provide a more stable investment condition.

This chapter will begin by determining the sources of savings and size of financing in Malaysia. Domestic savings in Malaysia is large relative to its GDP. Sources of financing include the banking sector, equity market, bond market and foreign capital flows. A convenient point of analysis is pre- and post-Asian crisis where there are significant differences in the pattern of financing investment. The chapter will also discuss the development of the Malaysian bond market and issues that influence its future development. If Asian savings are to be recycled, it is important to examine the likely links between Malaysia and the other regional financial centres and its future role in international financial markets.

The irony about the funding of the Malaysian economy is that it has experienced a large capital inflow to finance its investment needs, despite having one of the highest savings rates in the world. The manufacturing sector's development and financing, especially for export-oriented industries, are dependent on foreign direct investment while domestic funding, as reflected by bank loans to manufacturing sector, is still small. In the 1990s much of the locally generated savings found the stock market and property sectors to be more attractive than manufacturing or infrastructure. This caused a huge over-investment in property development and a boom in the stock market. Large portfolio inflows, primarily to the stock market, added to the phenomenon of an asset-price bubble as seen just before the 1997–98 crisis.

In the Malaysian development process, not much financing was raised from the capital market. The bond market was dominated by government bonds and even this source of financing was reduced in the 1990s. After the crisis, the advantages of bonds as a form of financing appear more convincing and the corporate bond market is expanding. However, there are some aspects and measures that have to be dealt with if the corporate bond market is to be sustainable.

Although Asian countries may have large savings, recycling these savings will need strong market infrastructure, good systems of governance and market depth. Minimal restriction on capital flows is also an important component of a successful regional bond market. A more interesting

proposal is that Malaysia's position in the Islamic world may place it ideally as a centre for Islamic capital market investment vehicles and this can complement the region's vision to be a vibrant centre for raising capital.

2. MOBILIZATION OF SAVINGS

Malaysia has one of the highest saving rates in the world, and in 1998 the average rate reached a peak of 40 per cent of GDP, as shown in Table 11.1.² The savings to GDP ratio has subsequently fallen to 34 per cent, as GDP expanded as a result of economic recovery. The gross national savings rose steadily from RM33.6 billion (US\$12.5 billion) in 1990 to RM127.6 billion (US\$33.6 billion) in 2002. These savings came from the public and private sectors, the latter being larger than the former, in most years. For example in 2002, private savings formed 63 per cent of the total national savings. A large part of the public sector's savings came from its financial surpluses during the first half of the 1990s – in 1991, 1992 and 1994, public savings were larger than the private sector's. This surplus was the result of smaller development expenditure requirement: the private sector had taken over the role of infrastructure investment through the privatization policy of the government. These savings provided the flexibility and resources for the government to embark on the fiscal stimulus programmes as a response to the Asian crisis.

The bulk of the private sector savings are in the form of deposits in the financial system such as demand deposits, savings and fixed deposits as well as contractual savings such as insurance, provident and pension funds. During the period 1988–98, excluding demand deposits, a total of RM432.3 million was collected (Bank Negara Malaysia 1999). In line with the robust economic growth, total deposits grew at an average annual rate of 18.3 per cent during the period 1988–96 and they rose 20 per cent in 1997. However, following the economic downturn, the growth of total deposits moderated, to 5.7 per cent in 1998. This slowdown in the growth of deposits has persisted in the subsequent years, with the exception of 1999. In 1999, deposits in the financial system, excluding demand deposits, increased by 9.9 per cent, in 2000 by 3.3 per cent and in 2001 by 1.6 per cent. With these increases, the deposits rose to RM500.5 billion by the end of 2001.

In addition to commercial banks, savings institutions also complement the mobilization of savings particularly among the middle and lower-income groups. The main savings institution is the National Savings Bank, which is based on the post office savings system and thus has an extensive network of branches in all parts of the country, and co-operative societies.

Besides voluntary savings, the provident and pension funds are also major contributors to the high savings rate in Malaysia through the mobilization

Table 11.1 Composition of savings (RM million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
RM million													
Private Savings	18684	16623	21967	30612	28773	40737	54259	48412	69264	66640	66691	59172	80630
Public Savings	14988	21039	24515	26922	35973	32765	39761	55986	43650	48084	56522	47986	47002
Gross National Savings	33672	37662	46482	57534	64746	73502	94020	104398	112914	114724	123213	107158	127632
Percentage of GDP													
Private Savings	12.95	15.89	16.50	16.30	18.90	16.10	15.67	19.87	15.34	16.01	16.59	14.43	12.70
Public Savings	16.15	12.56	14.79	18.53	15.12	18.60	21.38	17.18	24.35	22.19	19.57	17.79	21.79
Gross National Savings	29.10	28.45	31.29	34.83	34.02	34.70	37.05	37.05	39.69	38.20	36.16	32.21	34.49

Source: Bank Negara Malaysia

of compulsory savings. These institutions accounted for 14.3 per cent of total national savings in 1998. Among the key institutions are the Employees Provident Fund (EPF) and the Social Security Organisation (SOCSO). The EPF is a provident fund, which provides retirement benefits for members through management of their savings.³ Members of the EPF are private sector or non-pensionable public sector (government) employees. Every month, employers and workers make contributions to the EPF based on a percentage of the employee's salary. At present, employers contribute 12 per cent of their workers' salaries, while the workers themselves contribute 11 per cent. As at 31 December 2001, the EPF holds RM191.6 billion (US\$50.4 billion). Each month, the EPF collects contributions of about RM18 billion (US\$4.7 billion). SOCSO, the workmen's compensation insurance scheme also expanded rapidly (by 16.1 per cent per annum) during the 1988–98 period, but its fund of RM6.7 billion as at end of 1998 remains modest by comparison with EPF.

Another source for mobilization of savings is the insurance industry. The insurance industry has accumulated assets totalling RM44.8 billion (16 per cent of GNP) in 1999. Since then it has registered a significant growth with its assets increasing to RM66.6 billion (20 per cent of GNP) in 2002. This growth is reflected in the amount of premium collected: in 2002, the premium collected increased to RM16.8 billion (5 per cent of GNP) from RM11.6 billion (4.2 per cent of GNP) in 1999. As at end-1998, there were 58 insurance companies writing direct insurance business in Malaysia, of which 51 were locally-incorporated. With the implementation of the Insurance Act in 1997, all licensed foreign-incorporated insurers (with the exception of professional insurers) were required to transfer their Malaysian insurance businesses to public Malaysian companies. Consequently, five foreign insurers completed their domestication exercises by January 1999. Thus there remained only two foreign-incorporated insurers in Malaysia. Further consolidation among local insurers has resulted in the number of insurance companies being reduced to 44 in 2002.

Another increasingly important source of mobilization of saving are asset management companies. As at 31 December 2001, the total funds managed by fund management companies amounted to RM52.2 billion, comprising RM49.6 billion local funds (an increase of 20.5 per cent from end-2000) and RM2.6 billion foreign funds. The majority of the local funds were in unit trusts, reaching RM36.8 billion at end December 2001 or about 74 per cent of funds under management.

There were 75 licensed fund management companies. Sixty of these companies were fully local-owned, 11 were joint ventures with majority local ownership, one was fully foreign-owned and 3 were joint ventures with majority foreign ownership. The industry is dominated by large

companies – the five largest fund management companies managed more than 70 per cent of the total funds under management. Most of the assets were invested in equities (2001: 62.9 per cent, 2000: 67.3 per cent) while investment in fixed income instruments is relatively smaller (2001: 18.7 per cent, 2000: 11.4 per cent).

The control on domestic capital outflows, which came with the selective capital controls in 1998, has resulted in a smaller investment outside Malaysia by the asset management companies. The funds invested outside Malaysia as at the end of 2001 was RM1 billion, a decline of 51 per cent compared with end 2000.

3. FINANCING THE MALAYSIAN ECONOMY

3.1 Sources of Financing

There are five major sources of financing the Malaysian economy, namely bank loans, government bonds, private debt securities, equity markets and foreign capital. There is a marked difference in the pattern and size of financing before and after the 1997–98 Asian crisis.

The pattern of financing Malaysia's economic development changed markedly when the Malaysian government shifted its role as the engine of economic growth in the mid-1980s. Prior to 1985, the public sector led the growth process by funding rural and infrastructure development as well as selected industrial projects. To fund these developments the government had tapped the relatively cheap domestic funds held by the EPF and other provident and pension funds, through the issue of government bonds. The economic crisis in 1985 saw a new strategy, where the government passed to the private sector the role of leading economic growth. The privatization policy was introduced for this purpose and consequently most of the infrastructure development projects were done by the private sector, especially those that required long-term financing such as roads, ports and power plants.

While the public sector's development financing needs were reduced as a result of the privatization policy, the funding requirements by the private sector had substantially increased. It was estimated that the funding needs for privatized projects for the period 1995–2000 (Seventh Malaysia Plan) was US\$140 billion. The bond market comprised mainly government bonds (few corporate bonds were issued) so the banking sector was the main source of finance for business and economic activities. Deregulation and high economic growth increased further the role of the private sector in the national economy, and that in turn increased the demand for financing. In addition, raising money through the banking system was considered easier

than going to the capital market with its many regulatory requirements. The prominence of the banking sector as the major source of financing is common in Asia where many businesses were family owned, and where trust and personal relationships facilitate capital raising activities.

The equity market, which emerged as an active marketplace for public trading of shares in the 1960s, is another important source for raising capital. In the 1980s, a number of capacity-building initiatives were put in place in the equity market, and many of these helped to increase its capacity as a source of capital. These include the introduction of the Second Board in 1988 and structural improvements, especially in trading, clearing and settlement systems. The Second Board enabled smaller companies that are viable and have strong growth potential to tap the market for capital. The listing requirements such as capital and profit performance are lower than that of the main Board. The equity markets experienced accelerated growth in the 1990s and a dramatic increase in liquidity during the 'super bull-run' of 1993–94 and the Second Board run-up in 1996. During that period, several government organizations were corporatized and listed as well. All in all the overall KLSE capitalization rose from RM132 billion in 1990 to RM890.9 billion in 1997, an increase of over 500 per cent in seven years.

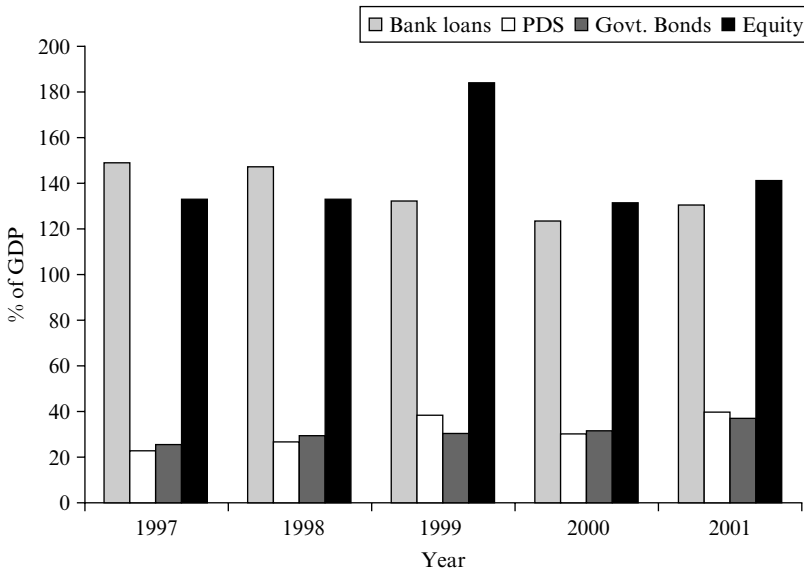
The corporate bond market began to play an increasing role from the late 1980s – the size of outstanding private sector bonds (known as private debt securities or PDS) had risen from RM395 million (0.5 per cent of GDP) in 1989 to RM32 billion (22 per cent of GDP) in 1995. Apart from the lack of demand for PDS, the delay in emergence of a private bond market was due to absence of a reliable and efficient benchmark yield curve, the illiquid secondary market and narrow investor and issuer bases. The 1997–98 Asian crisis focused attention on the underdevelopment of the private bond market, and the corresponding over-reliance on the banking sector. It was believed to have created unnecessary strain in the system, because of the abnormally high potential of credit withdrawal. Maturity mismatch brought another problem because projects with long gestation periods were exposed to short-term interest rate variation. The limited opportunity of investors to diversify their Malaysian portfolio risk arguably aggravated capital flight as well. All of these factors made it a matter of urgency to accelerate the development of the corporate bonds market.

Another source for financing the Malaysian economy is from foreign capital, mainly private sources. Long-term foreign capital inflow in the form of Foreign Direct investment began to come to Malaysia from early 1970s. FDI was concentrated in the manufacturing sector, in particular the electronic industry and it came mostly from the US, Japan and Europe. FDI inflow surged after the middle of 1980s because of the relocation of

Japanese investment to seek cheaper production location as a result of the yen appreciation following the Plaza Accord. In addition, Malaysia had also introduced investment incentives and liberalization measures, including the relaxation of the equity condition. Short-term foreign capital started its inflow in early 1990s, reaching the peak in 1993 when it briefly exceeded FDI. These short-term capital inflows went mostly into the stock market and they quickly turned into a net outflow in the following year.

3.2 Size of Financing

The size of financing sourced from the banking sector and equity market is far larger than that from the combined government and corporate bonds. At the height of the Malaysian economic boom, outstanding amount of equity was over 300 per cent of GDP in 1996 while outstanding bank loans touched 161 per cent of GDP in 1997 (Shirai 2001). As shown in Figure 11.1, this pattern still persisted during the post-crisis period when the outstanding amounts of bank loans and equity amounted to more than 100 per cent of GDP. During most of the 1990s, the size of the outstanding amount from



Source: Bank Negara Malaysia

Figure 11.1 Outstanding amount of equity, bank loans, govt. bonds and PDS

the equity market has always been larger than that of the banking sector, with the exception of 1997 and 1998 when the equity market experienced a drastic fall.

PDS became an important source of financing for the restructuring of corporate debt, which had become distressed because of the Asian crisis and its emerging prominence could be seen clearly in 1999 with the outstanding amount of PDS outstripping those of government bonds. But, in 2000 and 2001, the government had also issued a substantial quantity of bonds to recapitalize the banking sector and solve the problem of non-performing loans. These developments have increased the importance of the capital market as a source of financing.

Table 11.2 gives a more detailed comparison on the sources and size of financing. It is interesting to note the high rate of growth registered by PDS as compared to the other sources of financing. From 1988 to 2001, PDS had an average annual growth rate of 55.6 per cent as compared to 14.7 per cent

Table 11.2 *Financing of the economy (RM million)*

	Loans by the banking system	Private debt securities	Public	Equity (stock market capitalization)
1987	72 830	395	54 796	99 100
1997	421 202	63 350	70 930	375 800
1998	413 526	75 403	81 866	374 520
1999	393 678	111 776	89 695	552 690
2000	416 297	100 734	103 410	444 350
2001	432 357	124 459	117 450	464 980
2002 (Oct)	451 613	–	–	489 930
Percentage of GDP				
1987	91.5	0.5	68.8	124.5
1997	149.5	22.5	25.2	133.4
1998	146.0	26.6	28.9	132.2
1999	130.9	37.2	29.8	183.8
2000	121.7	29.4	30.2	129.9
2001	129.2	37.2	35.1	139.0
2002	127.0	–	–	137.8
Average annual growth				
1983–87	12.90%	–	13.80%	–
1988–97	19.18%	66.16%	2.61%	14.26%
1988–00	15.64%	58.69%	5.43%	13.32%
1988–01	14.68%	55.66%	6.04%	12.63%

Source: Bank Negara Malaysia

of the banking sector, 12.6 per cent of the equity market and 6 per cent of the government bonds.

Table 11.3 gives the amount of financing raised from domestic sources to fund investment needs. Up until 1997, the banking system found more than 60 per cent of the funds raised annually. The equity market provided about, on average, 20 per cent of total funding from 1990 to 1992 and its share has remained constant thereafter at about 16 per cent per annum. The net issue by MGS had shown a substantial decline from 1990 to 1997. In contrast, the share of corporate bonds has been increasing. The share of the four sources in financing the Malaysian economy has changed since the crisis – in 2002, the banking sector share stood at 34 per cent, while MGS and corporate debt shares rose to 27 per cent and 34 per cent each. The equity market contribution was only 2 per cent.

In 1988, outstanding PDS was only 4 per cent of the total outstanding bonds but by 2001, PDS share had increased to 46 per cent (Table 11.4). The share of corporate bonds is much larger if Islamic bonds are included – in 2001 the share of the combined outstanding conventional corporate and Islamic bonds was 58.4 per cent. In terms of size relative to GDP, in 2001, total government bonds were 41.2 per cent of the GDP, while conventional corporate bonds and Islamic bonds were 44 per cent and 12 per cent of GDP respectively. The share of combined private sector bonds (conventional and Islamic) in 2001 was 49.3 per cent of GDP.

The diversification of the bond market instruments took place after the middle of the 1990s. For government bonds, the Malaysian savings bonds were launched in 1993 while Khazanah bonds were issued in 1997. Both these bonds were not strictly for government investment purposes: the savings bonds are to promote the culture of savings and the Khazanah bonds are for benchmarking. Although the quantity of government bonds has increased, their relative proportion to GDP has decreased. In 1995, government bonds were 69 per cent of GDP but by 2001 the share was reduced to 42 per cent.

The deepening of the PDS market was due to a number of reasons. The two main factors are first, as a funding instrument to solve the problems brought about the crisis and second, to meet new investment criteria. Danamodal bonds (to recapitalize distressed banking institutions), Danaharta (to manage the non-performing loan problem) and other bonds related to corporate restructuring (such as PLUS bonds) were issued as crisis response measures. On the other hand, the Islamic bonds are utilized to meet new investment needs that satisfy Islamic investment criteria.

The importance of the equity market as source of financing for Malaysian companies is reflected by its market capitalization relative to GDP, number of companies listed and the number of initial public offerings (IPOs) made. During the 1990–99, the KLSE market capitalization almost quadrupled

Table 11.3 Financing of the Malaysian economy 1990–2002

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Equity	8650	4391	9182	3433	8458	11438	15924	18358	1788	6096	6013	6124	1018
% of total financing	24	11	29	13	17	14	15	18	18	96	10	11	2
Bank loans	21500	29383	17558	18928	30824	64032	77075	67470	-7676	-19848	22619	16060	19256
% of total financing	60	76	56	70	62	76	71	66	-76	-312	36	29	36
Net issue of bonds	2129	1873	3324	3640	9033	8339	14534	17632	6175	13808	20638	17577	18178
% of total financing	6	5	11	13	18	10	13	17	61	217	33	32	34
Net issue of MGS	3816	3157	1531	1181	1778	-35	1331	-1407	9804	6297	13659	15213	14410
% of total financing	11	8	5	4	4	0	1	-1	97	99	22	28	27
Total	36095	38804	31595	27181	50093	83773	108864	102053	10091	6353	62929	54974	52862

Source: Bank Negara Malaysia

Table 11.4 Total outstanding bonds (RM million and as percentage of GDP)

Year	MGS	GICs	Malaysian savings bonds	Khazanah bonds	Danaharta bonds	Danamodal bonds	Cagamas bonds	Private debt securities (PDS)		Total PDS	Total bonds	Total govt. bonds	GDP (nominal)
								Conventional	Islamic				
1988	55 831	1000					1300	976	2276	59 107	56 831		
1989	58 213	1000					2500	1629	4129	63 342	59 213		
1990	62 106	900					2900	3359	6259	69 265	63 006		
1991	65 263	900					2900	5232	8132	74 295	66 163	1 35 124	
1992	66 643	1000	48.30%	0.67%			4265	7191	11 456	79 099	67 643	1 50 682	
1993	66 018	2000	44.23%	0.66%			5015	10 081	15 096	84 387	69 291	1 72 194	
1994	64 969	4800	38.34%	1.16%			8925	15 131	24 056	95 003	70 946	1 95 461	
1995	64 719	5050	33.24%	2.46%			9312	22 701	32 013	102 913	70 900	2 22 473	
	62.89%	4.91%	1.10%				9.05%	22.06%	22.06%		68.89%		

Table 11.4 (continued)

Year	MGS	GICs	Malaysian savings bonds	Khazanah bonds	Danaharta bonds	Danamodal bonds	Cagamas bonds	Private debt securities (PDS)		Total PDS	Total bonds	Total govt. bonds	GDP (nominal)
								Conventional	Islamic				
1996	66910	4150	1092				13227	33528	46755	118907	72152	253732	
	56.27%	3.49%	0.92%				11.12%	28.20%	28.20%		60.68%		
1997	66262	2750	918	1000			16756	46594	63350	134281	70930	281795	
	49.35%	2.05%	0.68%				12.48%	34.70%	34.70%		52.82%		
1998	75012	2000	4	4850	2601	11000	15064	46737	75402	157268	81866	283243	
	47.70%	1.27%	0.00%	3.08%	1.65%	6.99%	9.58%	29.72%	29.72%		52.05%		
1999	78336	2000	379	8980	10334	11000	13019	77413	111776	201471	89695	300764	
	38.88%	0.99%	0.19%	4.46%	5.13%	5.46%	6.46%	38.42%	38.42%		44.52%		
2000	89050	2000	4	10000	11140	11000	17312	100734	140186	241240	101054	342157	
	36.91%	0.83%	0.00%	4.15%	4.62%	4.56%	7.18%	41.76%	41.76%		41.89%		
2001	103450	4000	4	10000	11140	11000	18427	90573	165026	282480	117454	334589	
	36.62%	1.42%	0.00%	3.54%	3.94%	3.89%	6.52%	32.06%	58.02%		41.58%		

Table 11.5 Kuala Lumpur Stock Exchange: Selected indicators

	1999	2000	2001	2002 (Oct)
Price indices				
Composite	812.3	679.6	696.1	659.6
Second board	180.6	133.0	134.1	103.2
Total Turnover				
Volume (million units)	90.1	75.4	49.7	50.0
Value (RM billion)	199.6	244.1	85.0	105.8
Average daily turnover				
Volume (billion units)	363.5	208.1	204.4	157.0
Value (RM million)	805.0	911.1	349.8	267.9
Market capitalization (RM billion)	552.7	444.4	465.0	489.9
Market capitalization/GDP (%)	184.0	129.9	139.0	137.8

Source: Bank Negara Malaysia

from RM131.7 billion to RM500.5 billion. At its height, the market capitalization reached RM890.9 billion in February 1997, representing nearly 300 per cent of GDP. Since the crisis, the KLSE market capitalization has declined substantially to RM489 billion (October 2002) or 137.8 per cent of GDP (Table 11.5).

The total number of listed companies grew steadily from 285 in 1990 to 859 in 2002. A total of RM100.8 billion was raised from the equity market during the period 1990–2002 (Table 11.6). Privatization of large monopolies such as telecommunication and electricity companies have raised large amount of funds through the equity market. However, the amount of funds raised has been declining since 1998. For example RM18.4 billion (6.5 per cent of GDP) was sourced in 1997 as compared to only RM6.1 billion (1.8 per cent of GDP) in 2001.

KLSE's total turnover was relatively small during 1988–92, with an annual transactions of less than 20 billion units and valued at less than RM52 billion. The highest total turnover in volume terms was recorded in 1993 (108 billion units) and in value terms in 1996 (RM463 billion). This total turnover volume has considerably reduced since 1999 (90 billion units) to reach only 50 billion units in 2002 (up to October). A similar pattern is observed for the average daily turnover. KLSE's average daily trading volume rose from 6 million units a day in 1980 to a peak of 432.7 million units in 1993. Even during the financial crisis in 1997 and 1998, the average daily trading volume remained at 331.5 million and 247.4 millions units respectively. But in 2002, the average daily trading volume has decreased to less than 200 million units a day.

Table 11.6 *Funds raised in the equity market 1990–2002*

	RM million	% of GDP
1990	8650	7.26%
1991	4391	3.25%
1992	9182	6.09%
1993	3433	1.99%
1994	8458	4.33%
1995	11 438	5.14%
1996	15 924	6.28%
1997	18 358	6.51%
1998	1788	0.63%
1999	6096	2.03%
2000	6013	1.76%
2001	6124	1.83%
2002	1018	0.29%

Source: Bank Negara Malaysia

Prior to and even during the Asian crisis period (1997–98), there was a large foreign participation in the KLSE, estimated at about 22 per cent of the market capitalization (Mahani 2002). However, in the post-crisis period, it is believed that the foreign shareholding has decreased due to various reasons such as limited market liquidity, relatively higher valuation as compared to the other regional markets and dull earning prospects of many listed companies. Presently, there is no foreign companies listed in the KLSE.

FDI began to flow into Malaysia from the early 1970s. It became more substantial after the middle of 1980s and reached its peak from 1994 to 1997, as shown in Table 11.7. During that period, on average Malaysia received about US\$3.5 billion per annum. The FDI inflow quickly declined with the outbreak of the crisis because of excess capacity and the bleak economic prospects for the region. As part of the regional production chain, the slower regional demand inevitably reduced the demand for products of Malaysia.

Private short-term capital began to come to Malaysia in the early 1990s. In fact, the large inflow in 1993 had resulted in the introduction of short-term measures to control such capital inflow. Interestingly, in 1993, for the first time, the short-term private capital inflow had exceeded FDI inflow. The volatile movement of short-term capital was seen by its large reversal (outflow) in 1994. After that, inflow of short-term capital was small – US\$ 1

Table 11.7 Malaysia net capital inflow^(a) (US\$ million), 1990–97

	1980–89 ^(a)	1990–92 ^(b)	1990	1991	1992	1993	1994	1995	1996	1997
Total capital flows	1449	8592	1790	5935	8551	10291	1242	7532	932	1590
% of GDP	4.9	12.8	4.2	11.7	15.0	16.8	1.8	8.8	9.6	2.2
Composition of total capital flows (%)	100	100	100	100	100	100	100	100	100	100
Official long-term capital	37.9	1.7	-69.8	-6.0	-11.9	2.2	4.7	25.7	2.4	53.0
Federal government	31.7	-10.0	-19.4	0.9	-13.1	-7.2	-26.2	-6.8	-7.0	-19.2
Non-financial public enterprises	6.8	11.8	-50.8	-6.6	1.6	9.8	31.6	32.5	9.1	72.6
Private capital flows	62.1	98.3	169.8	106.0	111.9	97.8	95.3	74.3	97.6	47.0
Corporate investment ^(c)	61.7	49.5	155.3	98.5	54.5	29.5	59.3	43.7	40.9	164.8
Private short-term capital	0.4	48.8	14.5	7.4	57.3	68.3	36.0	30.6	56.7	-117.8
Portfolio investment	-1.8	37.7	-11.9	-17.3	32.6	58.7	75.2	22.4	28.1	-324.3
Banking sector borrowing ^(d)	2.2	8.7	26.4	24.7	24.7	9.5	-41.1	6.1	18.4	173.6
Non-bank private borrowing ^(d, e)	-	2.4	-	-	-	-	1.8	2.1	10.2	32.9

Notes:

(a) Net capital flows comprise net direct foreign investment, net portfolio investment (equity and bond flows) and official and private bank borrowings. Changes in national foreign exchange reserves are not included

(b) Annual average

(c) Equity investment, long-terms loans by parent companies and undistributed earnings of foreign-affiliated companies

(d) Borrowing for a period of one year and below

(e) Mostly trade related

- Data not available.

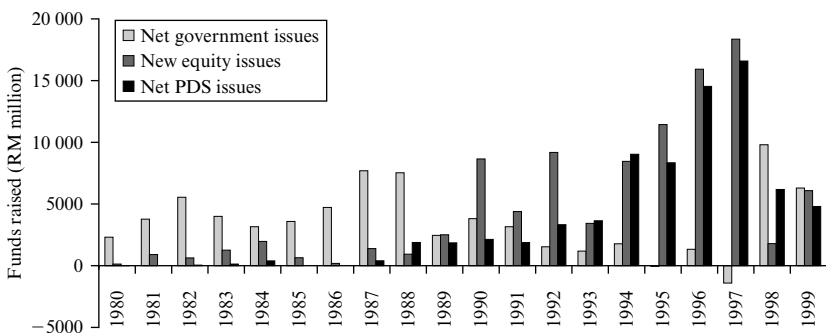
Source: Athukorala (2001) and Bank Negara Malaysia *Monthly Statistical Bulletin* (various issues)

and US\$ 4 billion in 1995 and 1996. As occurred in other parts of Asia, short-term outflow since the crisis has been large even after the Malaysia economy recovered – in 1999 the outflow was US\$10 billion.

4. THE DEVELOPMENT OF THE MALAYSIAN BOND MARKET

Government bonds dominated the early phase of the development of the Malaysian bond market when they were used as a means to finance the public sector development expenditure and fiscal deficit. The quantity of government bonds known as Malaysian Government Securities (MGS) issued increased steadily from RM4.88 billion in 1971–75 to RM12.3 billion in 1976–80, RM24 billion in 1981–85 and to RM31.03 billion in 1986–90. However, the size of the issues decreased from the middle of the 1980s because the government reduced its role in development financing. Most of the development expenditure was taken over by the private sector through privatization projects. When the privatization policy began to take effect, gross funds raised by the government via the issuance of MGS declined to RM22.13 billion in 1991–97. For example in the period from 1991 up to the onset of the Asian crisis (1997) the amount of government debt securities raised was less than 3 per cent of the GDP.

The Malaysian capital market underwent a significant transformation in the late 1980s and the 1990s. Its rapid growth was facilitated by the strong development of market infrastructure and by a comprehensive regulatory and administrative framework. Figure 11.2 shows the growth of the bond



Source: Bank Negara Malaysia

Figure 11.2 The growth of the capital market in Malaysia

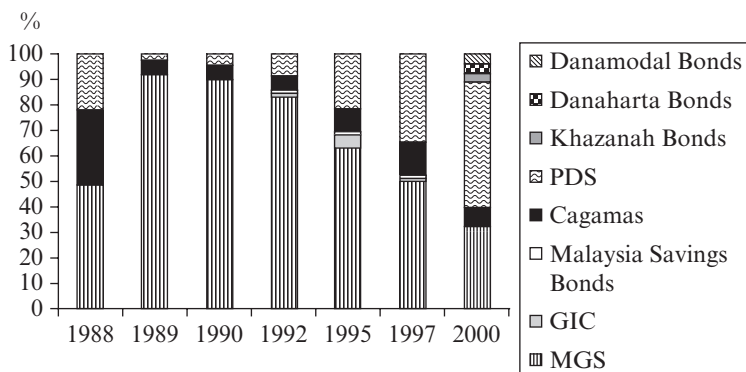
market from 1988 to 1999, while Figure 11.3 indicates the composition of the market.

The private sector emerged as the single largest mobiliser of funds, raising RM160.33 billion in 1987–97, which accounted for 25 per cent of the total funds raised from the capital market. As the economic conditions worsened in 1998 and early 1999, the issuance of private bonds initially declined but turned around from May 1999 onwards when the private sector resumed fund-raising activities in response to the economic recovery. The share of the private sector in the capital market rose to 59.8 per cent (RM48.6 billion) in 1998 and 1999.

In 1998 and 1999, the public sector once again emerged as the largest single issuer of debt papers, with the total value of government bonds issued exceeding that raised through the private sector. The government had raised about RM25.0 billion in new MGS consisting of maturities ranging from 3 to 20 years. A total of RM6 billion of the new MGS were issued through private placement to the Employee Provident Fund (EPF). Until September 2000, a total of RM14.5 billion of MGS and GICs were issued against redemption of RM3.55 billion. The large MGS issues were to finance the government’s fiscal deficit.

4.1 Government Bond Market

Government bonds are either issued directly by the government or government-related institutions. They include Malaysian Government Securities (MGS), Government Investment Certificates (GICs), Khazanah⁴



Source: Bank Negara Malaysia

Figure 11.3 Composition of the ringgit bond market

bonds and Malaysian savings bonds. Malaysian Government Securities or Treasury bonds are debt instruments issued by Bank Negara Malaysia (BNM) on behalf of the Government of Malaysia as a means of raising long-term funds from the domestic capital market to finance public expenditures.

1983 saw the first Government Investment Certificates (GICs), non-interest bearing securities following the introduction of Islamic banking in Malaysia and are issued to Bank Islam and other Islamic-based institutions for their liquidity and statutory requirements based on Islamic principles. In an effort to inculcate and promote the savings culture and to educate the public on investing in bonds, the first series of Malaysia Savings Bonds (MSBs), the RM1 billion five-years tenure was introduced in 1993. Incentives offered included a guaranteed return of 48 per cent on maturity, tax-exempt returns and no limit on the amount purchased. (Table 11.4 showed the amount of government debt securities issued and outstanding since 1990).

One significant development in terms of benchmark securities was the issuance of Khazanah bonds. As Malaysia moved towards a diminishing government financing requirement, there was a fall in the level of government securities being issued. This lack of supply was affecting efforts to sustain an efficient benchmark yield curve. Khazanah is the Malaysian government's investment corporation, and these bonds were designed to provide an alternative to Malaysian government securities as the benchmark bond. The Khazanah bond was introduced in 1997 to provide a regular issue of paper.

Until the mid-1950s, Government domestic debt market was insignificant. There was little need to borrow as the government generally kept the overall account of its budget in balance, reflecting the pro-cyclical stance of fiscal policy. The issue of MGS began mostly to meet the investment needs of the Employees Provident Fund (EPF). The amount of MGS outstanding initially was small, reaching only RM120 million by the end of 1961. In the late 1970s and early 1980s, MGS were floated mainly to finance the rising level of public development expenditure and fiscal deficit. As a result, the amount of MGS issued had increased steadily, from RM4.88 billion in 1971–75 to RM12.3 billion in 1976–80 and RM24.0 billion in 1981–85.

The total outstanding for MGS expanded nearly fivefold to RM16.8 billion by the end of 1980 compared with only RM3.5 billion in 1970. The MGS market then expanded steadily to RM55.8 billion at end-1988. However, due to the downsizing of the government's borrowing programme, net issuance of MGS dropped to RM9.6 billion for the period 1991–97 against RM25.5 billion in 1986–90. Hence, total MGS outstanding rose marginally to RM66.3 billion in 1997 against RM62 billion in 1990.

To finance recovery from the Asian crisis, new MGS issues increased from RM8.8 billion in 1998 to RM11.1 billion (a total of RM23.2 billion

of MGS were issued for the period 1998–2000). The second series of Malaysian Savings bonds was launched in 1999 and a total of RM2 billion three-year tenure bonds were offered for sale.

4.1.1 Investor base for government securities

The demand for MGS is captive to the extent that certain classes of investors have been and are required to hold a specified portion of their funds in MGS by statutory requirement.⁵ Social security institutions, the traditional holders, continued to absorb the major portion of the outstanding MGS issued, with the EPF remaining as the single largest holder. EPF's market share of total outstanding MGS before the crisis was 58–61 per cent.

The dominant position of the pension and provident funds in the MGS market poses a constraint to the development of a liquid and competitive bond market and, hence the benchmark yield curve. This concern relates not only to the sizeable volume that is held by the entity but also to the high concentration that increases the possibility of market squeezes, thereby deterring other participants from entering the market.

Before the crisis, banking institutions remained the second largest holders, accounting for 13–19 per cent of MGS outstanding. MGS are classified as eligible liquid assets of commercial and merchant banks and finance companies and as such a major portion of the supply are held long-term in the portfolios of these institutions. Their large holdings are also due to their role as principal dealers where they are obliged to take up new issues of MGS, as well as the excess liquidity situation prevailing in the banking system. After the crisis, their holding of MGS increased to 16–20 per cent following higher investment in MGS.

Other financial institutions, including the National Savings Bank and insurance companies which are also required by law to invest a specified portion of their funds in Government securities and other approved assets, collectively held about 5–12 per cent of total Government outstanding. Holdings of MGS by insurance companies constituted about 2–8 per cent, partly due to the amendments made to their statutory investment guidelines on 1 October 1990, whereby newly acquired government guaranteed loans will no longer qualify as investment in MGS. After the crisis, their holding of MGS have hovered around 10–12 per cent.

4.1.2 Maturity profile

With the government's effort to promote an active secondary market in MGS, the maturity profile of total MGS outstanding shifted to shorter-term securities (up to 10 years). The share of outstanding MGS with maturities of up to 10 years rose from 21.5 per cent in 1990 to 28.4 per cent in 1997. However, long-term MGS with original maturities of more than

10 years continued to dominate the market, although the share has declined from 78 per cent in 1995 to 72 per cent in 1997.

In the post-crisis period, the share of outstanding MGS with maturities of up to 10 years rose even more, from 32 per cent in 1998 to 48 per cent in 2000. In contrast, the share of long-term securities however declined from 68 per cent in 1998 to 52 per cent in 2000.

4.1.3 Secondary market for MGS

Despite the rapid growth of the MGS primary market, secondary market trading was low due to the holding bias created by legal provisions required for provident and pension funds and financial institutions to invest a minimum proportion of their funds in such securities. The stable and regulated rates of interest payable on MGS prior 1990 and the limited supply of MGS also discouraged the development of an active secondary market in these securities.

Since 1998, trading activities in the secondary market for MGS improved significantly. Some RM33.1 billion of MGS was traded in 1998, rising to RM63.8 billion in 1999 (41 per cent) and RM83 billion (35 per cent) in 2000 (Table 11.8). The monthly average for MGS increased significantly during the 1998–2000 period as compared with 1995–97. For example, the highest average monthly turnover in the former period was RM6.9 million (2000), which was more than three times the turnover for 1996, the peak of the latter period. The sharp increase in trading volume after the crisis was due mainly to the lower interest rates, ample liquidity, a larger issue size and regular supply of MGS and liberalization of compliance requirements for institutional investors.

4.2 Private Debt Securities (PDS) Market

The outstanding amount of PDS (including Cagamas bond) at the end of 1987 amounted to only RM395 million. The impetus to promote the PDS market began in the mid-1980s to complement the more mature and sophisticated market in equities and government securities market. But this effort

Table 11.8 Turnover for MGS (RM million)

	1995	1996	1997	1998	1999	2000
Turnover of MGS	3846	25 373	12 367	33 085	63 838	83 058
MGS outstanding (million)	64 719	66 910	66 262	75 012	78 336	89 285
Average monthly turnover	320.5	1952	951	2 545	4911	6921.50
Turnover ratio (%)	5.94	37.92	18.66	44.11	81.49	93.03

was not very successful. The PDS market blossomed only after the crisis when it was proven that raising funds from the banking sector and the equity market had exposed companies and the national economy to serious vulnerability.

As a first step to promote the development of a viable and liquid PDS market, the national mortgage corporation, Cagamas Berhad was set up, in December 1996. Cagamas Bhd functions as an intermediary between primary lenders of housing loans and investors who wish to invest in mortgage bonds. It plays the role of an issuer of mortgage securities or what are more commonly referred to as 'Cagamas notes and bonds'. Until December 2000, Cagamas Bhd was by far the largest single issuer of PDS in Malaysia with an outstanding value of RM17.3 billion and one of the most successful for the following reasons:

- Stature of the organizational set-up enables it to raise funds at low yields enabling Cagamas to purchase housing loans at competitive prices;
- Central Bank recognises Cagamas bonds as liquid assets for the purposes of statutory reserve requirements;
- Proceeds from the sale of housing loans by financial institutions are permitted by the Central Bank to be free from statutory reserve requirements. This lowers the cost of funds for financial institutions;
- Stamp duty exemptions given on Cagamas bonds lower transaction costs.

In 1988 BNM issued a set of guidelines, 'Guidelines on the Issue of PDS', to clarify the basic legal and administrative framework for bond financing. Prior approval from BNM has to be sought for all issuance of PDS. This enables BNM to ensure that the issuance of PDS is consistent with the prevailing objectives of monetary and financial policies. The issuance of PDS required the approval of both the Central Bank and the Securities Commission (SC). Additional approval from the Registrar of Companies was necessary where a public offer was involved. The regulatory approval approach for bond proposals was also merit based. This regulatory approval process could take up 6 to 9 months to complete, and has discouraged many corporations from accessing the PDS market.

The first domestic rating agency, Rating Agency Malaysia Berhad was incorporated in November 1990. Starting in 1992, only the issuance of bonds rated by RAM with at least BBB for long-term papers and P3 for short-term papers were given regulatory approval by BNM. The SC also imposed a similar mandatory rating requirements on the issuance of PDS. RAM was the sole provider of credit rating services in Malaysia until September 1996

when the second rating agency, Malaysian Rating Corporation Berhad or MARC commenced operations. Starting July 2000, the SC waived the investment grade-rating requirement for all new PDS issues.

Several tax measures were also implemented to promote the development of the PDS market, including the following:

- Waiver of stamp duty for PDS issuance and transfer (January 1989).
- With effect from 1992, interest income earned from bonds issued by public listed companies is exempt from income tax for individuals; and from 1993, the tax exemption was extended to bonds issued by non-listed companies as well, but ones rated by RAM or MARC.
- Withholding tax for foreign investors on interest earned was reduced from 20 per cent to 15 per cent (October 1994).
- Tax exemption on interest income received by unit trusts and listed closed-end funds from corporate bonds (other than convertible loan stock).

PDS can take many forms such as underwritten facilities, notes issuance facilities, straight or conventional bonds, convertible bonds, bonds with warrants and Islamic bonds as shown in Table 11.9. The main difference between all these instruments would be the tenure, the interest payment and principal repayment.

A number of measures have been taken to further develop the PDS market:

- A new liquidity framework was introduced in July 1998 to promote efficient liquidity management. Under this framework, the concept of liquidity is based on matching the short-term liquidity requirement arising from maturity mismatches in each individual banking institution.
- The National Bond Market Committee was established in June 1999 to provide policy direction and to rationalize the regulatory framework for the bond market.
- A new legal framework was put in place in July 2000 centralizing the issuance process for PDS with a single regulator to avoid fragmentation and duplication. Powers over prospectuses and debentures now lie with the SC. The SC's Guidelines on the offering of PDS has replaced the BNM's guidelines on the issue of PDS.
- New guidelines were introduced to liberalize regulatory requirements and facilitate a speedy approval process for PDS within 14 days. This framework is premised on a facilitative disclosure-based regulation for the approval of PDS. Approvals from the Central Bank and the Registrar of Companies are no longer necessary in most cases.

Table 11.9 Corporate bonds raised domestically (RM million)

Debt securities	1995	1996	1997	1998	1999	2000	2001	2002
Straight bonds	3929.90	2675.40	4209.00	10 238.00	18 182.00	12 940.00	14 359.60	3577.90
Bonds with warrants	3607.70	5563.70	2950.30	150.00	947.40		912.80	300.00
Convertible bonds	863.10	1794.60	2018.90	98.80	1269.20	1943.70	1493.20	1447.10
Islamic bonds	800.00	2350.00	5249.70	345.00	1734.00	7666.10	13 501.30	12 240.20
Asset backed securities							1235.40	916.20
Cagamas bonds	3022.00	4665.00	5169.00	3320.00	4425.00	8547.00	6430.00	8985.00
New issues of debt securities	12 222.70	17 048.70	19 596.90	14 151.80	26 557.60	31 096.80	37 932.30	27 466.40
Less: Redemptions								
Private debt securities	1249.10	1765.00	1368.50	2964.40	6279.50	6205.20	15 040.00	19 164.30
Cagamas bonds	2635.00	750.00	1 640.00	5012.00	6470.00	4254.00	5315.00	5047.00
Net issues of debt securities	8338.60	14 533.70	16 588.40	6175.40	13 808.10	20 637.60	17 577.30	3255.10

- To cater for the varied financial needs of issuers as well as investors in their access to a diversity of investments, assets securitization transactions in the bond market are promoted.
- At the same time, secondary market liquidity for PDS was enhanced with the removal of the restriction on corporations engaging in repo transactions in PDS. With effect from 1 July 2000, all persons may enter into repo transactions, whether or not the person is a licensed institution or corporation.

4.2.1 Maturity profile

The maturity is broadly classified as short term (between 2 and 5 years), medium or intermediate (6 and 10 years) and long term (11 years and above). The most common maturity is 4 to 5 years, with a market share of 57 per cent for the period 1995–97. PDS with maturity of 6 to 10 years comprised about 56 per cent, while longer-term PDS constituted about 26 per cent.

The share of PDS with tenure of 4 to 5 years dropped to 14 per cent in 1998–2000. However, the share of PDS with tenure of 6 to 10 years increased to 61 per cent while longer term PDS constituted about 24 per cent.

4.2.2 Issuers and investors of PDS

Listed companies accounted for 62 per cent of the total number of issuers. About 36 per cent of the 180 issuers are private limited companies while the remaining issuers are state economic development corporations. In terms of industry sector, issuers were predominantly from the manufacturing, construction and transport/storage and communications sectors. In the years immediately after the crisis, the financial sector was dominant (largely due to the issue of bonds by Danamodal and Danaharta) as well as issuers from the transport/storage and communication and utilities sectors (Table 11.10).

Due to the lengthy approval process and high issuance cost, public offers were not attractive to issuers. Hence, most issuers issued their PDS via bought deal or private placements since they could save on the high cost of issuing prospectuses and the approval process.

Provident and pension funds, insurance companies, commercial banks, finance companies, merchant banks and discount houses absorbed about 81.1 per cent (RM25.5 billion) of total PDS outstanding in 1995 against 69 per cent (RM4.9 billion) in 1990. The investors profile remains unchanged in the post-crisis period. Financial institutions constituted about 25.1 per cent of total PDS outstanding in 2000, while other institutions such as EPF and insurance companies held about 73.4 per cent. However, foreigners now hold about 1.4 per cent of the total bonds outstanding (Table 11.11).

Table 11.10 New issues of private debt securities (excluding Cagamas bonds) by sector (RM million)

	1995	1996	1997	1998	1999	2000
Agriculture, forestry and fishing	165.0	0	214.1	0	0	42.5
Mining and quarrying	0	0	0	0	0	0
Manufacturing	878.4	3244.5	3604.2	125.0	1114.5	1133.1
Construction	1882.5	2598.2	2069.1	1473.3	9011	1868.6
Electricity, gas and water	1530.4	1017.2	2236.7	529.0	63.8	4564.1
Transport, storage and communications	2424.0	2886.0	2260.0	0	20.0	7320.3
Finance, insurance, real estate and business services	1250.4	319.4	3923.8	7704.5	2258.8	5237.0
Government and other services	25.0	436.4	0	1000	0	0
Wholesale, retail trade, hotels and restaurants	1045.0	1882.2	120.0	0	660.0	2130.8
Total	9200.7	12 383.9	14 427.9	10 831.8	13 128.1	22 296.4

Table 11.11 Major buyers or investors of corporate bonds as at end-Nov 2000 (excluding short-term and medium-term papers)

	RM (million)	%
Commercial banks	16 910.90	17.22
Financial companies	2 336.90	2.38
Merchant banks	3 388.70	3.45
Discount houses	2 015.50	2.05
<i>All Financial institutions</i>	<i>24 652.00</i>	<i>25.11</i>
Foreign holders	1 425.70	1.45
Others	72 114.52	73.44
Total	98 192.22	100.00

Note: Others include major bond holders i.e. Employee Provident Fund (EPF) and insurance companies

Source: Bank Negara Malaysia

4.2.3 Secondary market for PDS

The secondary market for PDS improved significantly in 1999 and 2000. The turnover ratios for PDS in 1999 and 2000 were 67.9 per cent and 101 per cent respectively as compared to less than 15 per cent annually for the three preceding years. The strong secondary market activity after the crisis was due to lower interest rates, ample liquidity, improving credit sentiment, growing supply of PDS, bigger investor base and measures introduced by government to boost the development of the bond market.

4.2.4 Islamic private debt securities

In 1983, the government enacted the Government Investment Act to enable the authorities to issue Government Investment Certificates (GICs) on an Islamic basis to meet the liquidity needs of the Bank Islam Malaysia Berhad (BIMB). However, when the Islamic banking system was expanded beyond BIMB, the GICs were no longer adequate to meet the liquidity needs of the Islamic banking system, thus, new Islamic financial instruments such as Islamic private debt securities (IPDS) were introduced in 1990. These instruments are based on acceptable Syariah concepts and principles approved by the Securities Commission's Syariah Advisory Council. There are three broad categories of IPDS distinguishable by the tenure and maturity of the securities:

- Short-term commercial papers of 1 to 12 months based on Islamic financing principles of Murabahah (cost plus), Bai Al-Dayn (debt trading) and Ijarah (leasing);
- Medium-term notes of 2 to 5 years based on the principles of Bai Bithaman Ajil (deferred payment sales) and Bai Al-Dayn; and
- Long-term debt securities of more than 5 years based on the principles of Bai Bithaman Ajil and Bai Al-Dayn.

The IPDS has seen strong growth since 2000. Table 11.12 shows the amount of outstanding conventional corporate bonds in 2002 was RM95.7 billion while the amount for Islamic bonds was RM64 billion. In view that the IPDS were only recently introduced, performance is impressive. The share of Islamic bonds in the total of new insurance of corporate bonds has increased from 6 per cent in 1995 to 44.5 per cent in 2002 (Table 11.9).

However, conventional bond issues dwarf Islamic issues when it comes to sovereign and near-sovereign bonds. The outstanding amount of sovereign and near-sovereign bonds in 2002 was RM155 billion as compared to only RM7.6 billion for Islamic sovereign bonds. The total outstanding Islamic bonds (sovereign and corporate) amount of RM71.7 billion is about 22 per cent of the total outstanding amount in the Malaysian bond market.

Table 11.12 Amount of outstanding bonds (2002)

	Conventional (RM million)	Islamic (RM million)
Asset backed securities	3094	
Asset backed securities (CP)	105	
Bonds	87 083	56 653
Medium term notes	1880	2570
Commercial papers	3539	4837
<i>Total corporate issues</i>	<i>95 701</i>	<i>64 060</i>
Bank Negara bills	10 000	1885
Cagamas bonds	22 101	
Cagamas notes	2375	
Govt. investment papers		5000
Islamic Cagamas papers		754
Loan notes	1133	
Loan stocks	5763	
Malaysian government securities	109 550	
Malaysian treasury bills	4500	
<i>Total sovereign & near-sovereign issues</i>	<i>155 422</i>	<i>7639</i>
Total of sovereign and corporate bonds	251 123	71 699

Source: Bank Negara Malaysia

Demand for Islamic bonds is sustainable because of the following:

- Demand for Islamic corporate bonds is expected to remain strong due to the larger estimated size of Islamic funds compared to conventional funds.
- Islamic bonds attract a wider investor base – both Islamic and conventional funds can invest in Islamic bonds. However, Islamic funds cannot invest in conventional bonds.
- Overall, the quantity of Islamic funds in Malaysia has been growing at a more rapid rate with the launching of more Islamic unit trusts and bond funds.
- Perceived ‘stronger credit’ – by definition under the funding concept, Islamic bonds must have an underlying asset, hence the transactions are collateralized. For conventional bonds, there are unsecured issues.

5. TRANSACTION AND SETTLEMENT SYSTEMS OF THE BOND AND STOCK MARKETS

5.1 KLSE

The KLSE has a fully computerized and integrated real-time trading and settlement system. A computerized central clearing system was introduced in 1984, named the Securities Clearing Automated Network Services (SCANS), which was followed by a real-time price and information dissemination system in 1987. Trading was soon automated through a screen-based trading system, the System on Computerized Order Routing Execution (SCORE) in 1989 that significantly improved the speed of transaction and the capacity to handle the volume of transactions. The implementation of this system was done in stages and by 1992 SCORE was fully automated. The SCORE system matches all orders and the system has been enhanced to link stockbroking companies' trading with KLSE's computerized broker front-end system known as WinScore. WinScore facilitates credit control management, order and trade routing as well as confirmation.

Market efficiency was further improved with the implementation of the Fixed Delivery and Settlement System (FDSS) in 1990. The Malaysian Central Depository (MCD), a subsidiary of KLSE was established in 1990 to enhance settlement and custodial arrangements in order to minimize risk. The MCD operates a central depository system (CDS), which among others handles the KLSE's scripless settlement system. Public issues of shares started trading through the CDS on 12 July 1993.

The KLSE also introduced an electronic Surveillance Information System in 1994 to enhance the Exchange's capability to be alerted to unusual market activities. In 1994, an improved real-time share price reporting system (WinStock) was introduced to provide better service to users of the Exchange.

5.2 The Bond Market

Before the crisis, almost all government debt securities had been traded on over-the-counter (OTC) market. The Central Bank introduced a computerized scripless trading system known as SPEEDS (Sistem Pemindahan Elektronik untuk Dana dan Sekuriti) to facilitate a faster and more efficient system of trading, registration and settlement of government securities. SPEEDS comprised two components: the Scripless Securities Trading System (SSTS) and the Interbank Funds Transfer System (IFTS). The IFTS was launched on 15 December 1989, enabling interbank fund trans-

fer and settlement to take place within a system that had built-in security features and where all settlements took place automatically at the end of each business day.

The SSTS was launched on 2 January 1990 as an on-line book entry system for MGS, Treasury bills, Cagamas papers and Bank Negara bills, in order to minimize the danger of loss, theft, destruction and counterfeiting of scrips, and to enable the system to handle a much larger volume of transactions. It was also designed to eliminate the delivery delays inherent in the previous system of paper certificates of ownership and to eliminate the consequential timing differences in the settlement of trades. To improve the process and enhance secondary market trading, BNM made it a requirement that all unlisted PDS must be issued scripless, with clearing and settlement executed electronically via SPEEDS, which was then enhanced to act as the Central Depository and Paying Agency for all unlisted PDS.

In addition, the Central Bank established the Trading Practices and Market Development Committee in 1990, as provided for in the Code of Conduct and Market Practices for Scripless Trading in the Malaysian securities market. Generally, the Committee acts as a consultative and advisory body to guide the development of the scripless securities market. The Code sets out in detail the code of conduct and market practices and the associated clearing and settlement procedures for scripless trading in the Malaysian securities market. Subsequently in 1994, the conduct of market participants in the wholesale and foreign exchange markets was formalized, through the publication of the Malaysian Code of Conduct for Principals and Brokers in the Wholesale Money and Foreign Exchange Markets. This code governs the conduct of all participants in the wholesale markets in order to maintain the highest level of professionalism and to protect the credibility of oral contracts.

In September 1996, BNM introduced the Fully Automated System for Tendering (FAST) in order to improve the overall efficiency of the tendering process for treasury bills, MGS, Bank Negara bills, Cagamas debt securities and PDS.

In the post-crisis period, the Bond Information and Dissemination System (BIDS) was set up on October 1997 to as a centralized database, providing information on the terms of issue, real-time prices, details of trades done and relevant news on the various debt securities. In July 1999, in an effort to minimize, if not eliminate, the settlement risk in securities transactions, SPEEDS was replaced by the Real Time Electronic Transfer of Funds and Securities (RENTAS) System. RENTAS is a real-time gross settlement system, which enables real-time delivery against payment for electronic book entry settlements.

6. FOREIGN PARTICIPATION IN THE MALAYSIAN BOND MARKET

There are no specific capital market rules or regulations governing foreign participation in the ringgit bond market in terms of participation as investors, intermediaries or issuers. For foreign investors, there are no capital market regulatory constraints against them purchasing domestic bonds unless, of course, the terms of the bond offering itself restrict the offering to locals or certain categories of investors that may exclude foreign investors as a category. Foreign investors are, however, subject to a 15 per cent withholding tax that differentiates them from domestic investors.

As intermediaries who give advice or handle deals within the domestic jurisdiction, foreign participants are required to be licensed under the Securities Industry Act 1983 or the Futures Industry Act 1993. The activities that fall within the scope of capital market activities governed by these Acts include dealing in securities, fund management activities, investment advice, future broking and futures fund management. Foreign locally incorporated banks form an active group of bond dealers that trade and create the market for bonds. These banks also provide guarantees for some bonds in order to increase their attractiveness.

For issuers, locally incorporated entities or companies that are foreign owned can raise funds through ringgit dominated bonds. For example, BAT Malaysia Bhd (a tobacco company) and Nestlé Malaysia Bhd (a food company) have issued ringgit bonds to finance their expansion. The regulatory regime that applies to this type of entity is no different from that of domestic ones. A foreign incorporated entity can issue ringgit denominated bonds in the Malaysian market and such an exercise will fall within the SC's existing Guidelines on the Offering of Private Debt Securities. Although this is allowed, there was no submission by a foreign incorporated entity to offer ringgit denominated bonds.

Even though the capital market regulatory framework is not explicit on the rules and regulations on issuance of foreign denominated bonds or on Malaysian companies raising funds abroad, the existing exchange controls and currency regime have some regulations concerning domestic capital outflows and sourcing of funds by foreigners in the domestic market. The relevant regulations include:

- Residents are required to seek prior approval to remit funds in excess of RM10 000 for overseas investment purposes.
- Non-bank residents are allowed to extend credit facilities in ringgit to non-residents not exceeding the aggregate sum of RM10 000.
- Non-resident controlled companies are allowed to raise domestic

credit facility through the issuance of ringgit PDS. However, these companies must comply with the 50:50 rule (meaning that 50 per cent of the funds must come from abroad), but this rule can be exempted if the PDS is issued by way of competitive bidding.

- Non-residents can open accounts in ringgit known as External Accounts but the use of the ringgit is limited to certain prescribed purposes. In addition, the sources of funds in the External Accounts are also limited to certain sources.

There are no restrictions on the inflow and outflow of funds through the foreign currency accounts of non-residents.

6.1 Linkages with East Asian Financial Centres

As an open economy, Malaysia has linkages not only in trade but also in financial activities. Malaysia is open to capital flows but as a response to the crisis, has instituted some measures that limit capital flows. Some of these measures have been relaxed and now non-resident portfolio investors are freely allowed to repatriate their principal sum and profits out of Malaysia at any time. Flow of FDI remained unhindered even during the crisis.

6.1.1 Offshore ringgit and securities markets

Prior to the crisis, Malaysia had a reasonably active offshore ringgit market. The non-trade transaction in the offshore ringgit market include ringgit trading, trading in shares, and derivatives. The unusually high volume of ringgit transaction and swap activities had indicated speculative pressures from the off-shore market during the height of the crisis. The pegging of the ringgit and measures under the selective capital controls have stopped the functioning of the ringgit off-shore market.

Similarly, there was an offshore equity market, which has stopped since the crisis. Originally, Malaysia and Singapore functioned as a joint stock market even after the secession of Singapore from Malaysia in 1965. However, this joint stock market was split in 1973 into two separate stock markets – the Kuala Lumpur Stock Exchange and the Stock Exchange of Singapore (SES). This decision was arrived at for two reasons: first, the termination of the currency interchangeability arrangements between Malaysia and Singapore, and second to address the rapid growth of companies in both countries. However, Malaysian securities continued to be traded in the SES. When the Malaysian government announced the policy of de-listing Malaysian securities from SES⁶ in 1990, an over-the-counter market in Singapore, known as the Central Limit Order Book International (CLOB) was created so that these stocks could continue to be

traded. As part of the package of measures to support the Selective Capital Controls through sealing possible capital leakage through the stock market, the KLSE had introduced the ruling that transactions on KLSE quoted stocks should be made only through the Exchange. On 16 September 1998 the Stock Exchange of Singapore discontinued the trading of Malaysian shares on CLOB. At the time of its closure, CLOB had about 172 000 investors, holding 11.4 billion shares and other securities worth about RM4.8 billion (US\$1.3 billion).

6.1.2 Foreign exchange market

Based on the BIS survey the average daily foreign exchange turnover for Malaysia in April 2001 was US\$1.2 billion as shown in Table 11.13. Of this turnover, 97 per cent was for the US dollar. The foreign exchange trading comprised mainly trade-related transactions because position-taking activity on the ringgit has been contained through the elimination of the off-shore ringgit market.

Prior to the 1997 crisis, the foreign exchange market rose rapidly at an average annual growth rate of 25 per cent during the 1993–96 period (Bank Negara Malaysia 1999). This high growth rate was the result of the continued massive inflow of short-term foreign funds, particularly the exceptional growth in the swap market. Following the imposition of selective capital controls, the volume of foreign exchange transactions declined by 32 per cent (Bank Negara Malaysia, 1999).

6.1.3 Labuan international offshore financial centre

Labuan was inaugurated as an international offshore financial centre (IOFC) in 1990, thus marking a milestone in Malaysia's effort to develop its financial system as well as to form a strong link with international financial markets. It offered a wide range of offshore products including banking, insurance and insurance related activities, trust business, fund management, investment holding, Islamic financing, company management services and capital market activities. In line with the progress made in conventional offshore financing, the Labuan IOFC is now broadening its activity to also develop offshore Islamic financing. In 2002 the Malaysian government had successfully issued Malaysia's US dollar Sukuk Ijarah paper, which was listed both in Luxembourg and Labuan.

The establishment of the Labuan international financial exchange and the international Islamic money market is expected to deepen the offshore capital markets. This exchange is expected to facilitate the listing and trading for equity and debt instruments, including Islamic financial products. The Islamic money market is aimed at being an alternative to the conventional money market.

Table 11.13 *Malaysia: Foreign exchange turnover net of local inter-dealer double accounting in April 2001*

Total	US\$	Euro	Yen	Pound	Swiss Franc	Can\$	Aus\$	Other	Residual currencies
Total: Daily average in millions of US\$									
2496	1209	88	155	24	9	0	19	989	3
US\$ against: Daily average in millions of US\$									
1209		71	138	21	8	0	18	897	56
Euro against: Daily average in millions of US\$									
88	71		6	–	0	–	–	9	1
Local currency against: Daily average in millions of US\$									
928	897	9	10	3	1	0	1		7

Source: BIS Survey, April 2001

The administration of Labuan is mostly independent of domestic regulation. Labuan is governed by a separate legal framework – for example Malaysians are allowed to set-up offshore companies in Labuan. At the same time Labuan continues to put in place the necessary financial supervisory structures to adhere to the best international practices and standards.

In 2001 there were 364 new companies, bringing the total number of offshore companies to 3085. The lower number of new companies incorporated, compared to 510 in 2000, was due to the more cautious investment sentiment in 2001. The number of active trust companies in Labuan remained at 18 in 2001. In 2001, the trust industry reported a 24.2 per cent increase in operating income to RM19.5 million from RM15.7 million. Total pre-tax profit rose by 26.9 per cent to RM8.5 million. The overall net operating margin for trust companies in Labuan improved to 44 per cent.

Despite the global economic slowdown, the offshore insurance industry recorded commendable growth in 2001. The number of offshore insurance and insurance-related licensees increased by 18.1 per cent to 98 companies. Total assets rose by 17.5 per cent to US\$512.9 million in 2001. Nevertheless, offshore banking saw a consolidation in 2001. For Labuan IOFC, the merger of banks led to the closure of several branches. As a result, the number of offshore banks declined from 60 to 54 in 2001. Of the 54 banks, ten were domestic-owned while 44 were foreign-owned.

7. CONCLUSION

The emergence of the bond market as a major source of funding reflects the structural adjustments undertaken by the economy to diversify the sources of financing and to support the role of the private sector as the engine of growth. This transformation in Malaysia is reflective of the situation in other countries in East Asia. Despite the large domestic savings, the prior method of financing relied mainly on the banking sector and the equity market. The shortfall in funds for investment was met with foreign capital inflows. What was worsening the situation was that the fledgling bond market was not able to match projects with long gestation period with the appropriate level of risks and returns.

There is no doubt that a case has been made about recycling the large savings in East Asia to meet the increasing investment needs for the region, especially in view of the strong growth prospects of many emerging Asian economies. The emergence of a vibrant corporate bond market in Malaysia is an indication that the capital market has to be deepened so that the financial sector can really facilitate and even lead the growth process. Equally important is that such development, especially if it extends to the entire region, would expand the type of investment instruments available to savers as well as provide better returns.

A successful regional bond market would have to be supported by strong domestic markets. Malaysia has some of the key factors to further strengthen its bond market such as a well-established market infrastructure, sound regulatory framework and institutions. Yet, Malaysia is still confronted with many challenges. These include expanding the investors' base, improving market efficiency, increasing liquidity, activating the secondary market, establishing a yield curve, developing hedging instruments and fostering greater awareness and confidence among the public about the bond market.

A regional bond market needs these basic elements and more. It must be able to overcome the problem of national boundaries, in particular, issues relating to exchange rate, capital flows and other domestic regulations. More important are the issues of availability of information, transparency and regulatory framework. Availability of accurate information is crucial for a successful investment in bonds as investors can evaluate the degree of risk that they are willing to take. Exposure to regional investments, if not judiciously managed, can have serious repercussions to the domestic financial sector. A case in point is the short-term foreign debt exposure of the crisis countries – their large short-term foreign debt was one of the key contributors to the crisis. Therefore, sufficient safeguards should be put in place to minimize the risk of defaults.

In addition, the success of a regional bond market is dependent on whether domestic investors and issuers have a regional or home bias in the investing funds or raising capital. In some cases, national development strategy and regulations create the home bias – for example, a national strategy that utilizes low-cost domestic funds for development will discourage outflow of funds for investment abroad. Similarly, controls on outflow of domestic capital will become a barrier and force the creation of a home bias. Hence, if a regional bond market is to take off, it is important that measures, which form a home bias be eliminated.

As a participant in the international economy, the integration of the regional capital markets is likely to benefit Malaysia. Malaysia is encouraging international financial institutions and multinational corporations to issue ringgit bonds. Certainly, Malaysia is increasing its efforts to be the regional leader in the Islamic capital market (Appendix A gives more details about Islamic banking in Malaysia), in particularly to make Labuan an Islamic financial center.

NOTES

1. Based on a paper presented at the workshop on 'A New Financial Market Structure for East Asia: How to Promote Regional Financial Market Integration', 7–8 February 2003, Hawaii.
2. Data allows for changes in exchange rate. The jump in the ratio of gross national savings to GDP in 1998 was partly due to the contraction of the economy as a result of the Asian crisis. In 1998, the GDP decreased by 7.5 per cent. It is interesting to note that even during this period of economic contraction, total national savings increased by 8 per cent. This could be explained by a perception, at that time, that the crisis was going to be a prolonged one and thus had induced more savings in preparation for a more difficult time.
3. The EPF was established under the EPF Act 1951 (an Act of the Parliament) on 1 October 1951. This retirement provident scheme is to allow members to receive the payment after the age of 55 based on what they have saved plus dividend. The EPF, as at December 2001, has a total of 10.18 million members. The total number of active and contributing members is 5.04 million.

The EPF invests its money as follows:

Investments in Malaysian Government Securities (MGS)	49.1 per cent
Loans and debentures	27.4 per cent
Money market instruments (fixed deposit)	16 per cent
Share market	7.3 per cent
Investments in property	0.18 per cent

4. Khazanah is the investment arm of the Ministry of Finance. The Khazanah benchmark bonds are government-guaranteed, zero coupon bonds, structured to comply with Islamic principles. They began to be issued in September 1997 with a first RM1 billion three-year tenure issue. Since this first issue, a total of nine issues with maturity terms of 3, 5, 7 and 10 years have been issued, totalling RM10 billion in nominal value.
5. MGS are classified as eligible liquid assets of commercial and merchant banks and finance companies. MGS were also made a 'trustee' investment for social security insti-

tutions under the provision of the Trustee Act, 1949. When the Insurance Act, 1963 was implemented, MGS were made eligible as 'authorised' assets for the insurance companies to hold in meeting their minimum assets requirement.

6. SES was renamed the Singapore Stock Exchange Ltd. upon its flotation in the Singapore stock market.

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APPENDIX

Islamic Banking in Malaysia

An Islamic banking system is one based on Syariah principles, which prohibit the payment of interest. The successful establishment of the first Islamic bank in Dubai and the Islamic Development Bank in 1975 paved the way for the setting-up of Islamic financial institutions throughout the world. In Malaysia the Islamic banking system operates on a parallel and equal basis with banking based on western principles. Thus separate Islamic legislation and banking regulations exist side by side with those that govern conventional banking activities. The legal basis for the establishment of Islamic banks is the Islamic Banking Act (1983) while the Government Investment Act, enacted in 1983, empowers the government to issue Government Investment Certificates, which are securities based on Syariah principles. The Islamic banks also have to observe similar regulatory rules as applied to conventional banking, such as a minimum risk-weighted capital ratio of 8 per cent.

The first Islamic bank in Malaysia (Bank Islam Malaysia) opened in July 1983 and the second one, Bank Muamalat Malaysia, started in October 1999. They meet the financing needs of the Muslim community in Malaysia by providing deposit-taking products such as current and savings deposits under the concept of *Al-Wadiah* (guaranteed custody) and investment deposits under the concept of *Al-Mudharabah* (profit-sharing). They also offer financing facilities such as working capital financing under *Al-Murabahah* (cost-plus), house financing under *Bai' Bithaman Ajil* (deferred payment sale), leasing under *Al-Ijarah* (leasing) and project financing under *Al-Musarakah* (profit and loss sharing).

In 1993, the interest-free banking scheme was introduced to allow conventional banks to offer Islamic banking products and services using their existing infrastructure. However, there were additional requirements. Participating banks had to establish an Islamic Banking Unit, create an Islamic Banking Fund with a minimum allocation of RM1 million, open separate current/clearing accounts for Islamic banking operations with the Central Bank and operate a separate cheque clearing system. As at May 2003, more than 40 Islamic financial products and services are offered by both Islamic and conventional banks.

Another major development in Islamic banking has been the establishment of an Islamic money market in January 1994, based on the concept of profit-sharing. The Islamic money market has three parts: trading of Islamic financial instruments; Mudharabah inter-bank investments; and the Islamic cheque clearing system. Islamic and other banks participating

in the Islamic Banking Scheme are allowed to trade in Islamic financial instruments such as Islamic accepted bills, green bankers' acceptances, Islamic bonds and Islamic commercial papers.

Islamic banks, like others, need insurance, but one that is based on a system acceptable to the Syariah principles. Islamic insurance is governed by the *Al-takaful*, *Al-Mudharabah* and *tabarru'* principles. *Al-takaful* is a pact among a group of participants, reciprocally guaranteeing each other against loss or damage that may befall any one of them. *Al-Mudharabah* is commercial profit-sharing contract between the financiers of a business venture and the entrepreneur who actually conducts the business. *Tabarru'* is the agreement by a participant to donate a certain proportion of the *takaful* contribution to fulfil his obligation for mutual help and joint guarantee should any of his fellow participants suffer a defined loss. The first *takaful* operation began in 1984 with a paid-up capital of RM10 million.

The National Syariah Advisory Council on Islamic Banking and Takaful (insurance) was formed in May 1997 to serve as the highest Syariah authority on Islamic banking and takaful. One of its main functions will be to act as the arbiter of any differences in opinion among Syariah scholars, which if unresolved may impede the healthy development of an Islamic banking system.

12. The Thai financial sector in transition: Can the bond market prevent a future currency crisis?

Bhanupong Nidhiprabha

1. INTRODUCTION

The Thai government wished to establish Bangkok as a regional financial center by creating the Bangkok International Banking Facilities (BIBFs) in 1993. It was a prelude to the financial crisis in 1997. The huge inflows of foreign capital and the unsustainable fixed exchange rate reduced the effectiveness of Thailand's monetary policy. Loans extended by BIBFs grew from B200 billion in 1993 to 1.9 trillion in 1997. At the end of 1999, the amount declined to just B550 billion. The precarious borrowing foretold a financial distress that would come when foreign lenders changed their perception about Thailand's financial risk. There has been a suggestion that short-term flows may not be as desirable as long-term flows. As such, some kinds of capital controls are required to fend off volatile short-term capital.

Some commentators on the financial crisis argued that the lack of developed capital markets is the original sin committed by the crisis-hit countries. Heavy reliance on bank loans, instead of equity and corporate bonds, lead to the problem of credit crunch, which was aggravated by the attempt to defend the exchange rate by employing a tight monetary policy. With the emergence of the domestic bond market, the financial stress on the banking sector can be reduced because the credit risk can be diversified into other non-bank financial sectors. The structure of business financing has been gradually changing, as we can observe in Table 12.1. Bank loans, accounting for 104.4 percent of GDP in 1996, declined to only 84.5 percent in 2002. The importance of bank credit has been declining, while financial resources drawn from the bond market has become increasingly important. The value of the bond market represented only 11.2 percent of GDP in 1996, but it had been rising continuously to 42.5 percent of GDP in 2002. Asset reallocation occurred as bonds were substituted for equity investment, time and saving deposits (TD and SD). As government bonds are safe and providing high

Table 12.1 *Size of the Thai financial market (percentage of GDP)*

	1996	1998	2001	2002
Bank loans	104.4	116.1	85.1	84.5
Equities (market capitalization)	55.4	27.3	31.8	37.8
Domestic bonds	11.2	20.3	37.2	42.5
TD+SD	68.8	88.0	88.6	86.8
GDP growth	5.9	-10.8	1.8	4.9

Sources: Bank of Thailand, *Annual Economic Report*, NESDB.

Table 12.2 *Share of outstanding value of domestic bonds (percentage)*

	1995	1997	1999	2000	2002
Government bonds and T-bills	10.13	2.52	44.08	44.08	54.29
State enterprise bonds	56.15	53.73	25.67	25.01	17.20
FIDF/PLMO bonds	2.24	9.44	1.30	0.25	4.88
Corporate bonds	31.48	34.31	28.95	30.66	23.63

Sources: Bank of Thailand, *Annual Economic Report*, SEC, BDC.

rates of return, the share of government bonds as a percentage of total outstanding value of domestic bonds increased to almost 55 percent in 2002 (Table 12.2). Corporate bonds are now more important than state enterprise bonds, as the business sectors have begun to take advantage of bond financing rather than relying mainly on bank credit as they did in the past.

In section 2, the changing structure of the financial sector in Thailand is discussed. Section 3 outlines the development of the bond market, where bond financing has become increasingly important as a means to finance public deficit and to reduce foreign exchange risks for corporations. Section 4 explores the issue of international capital mobility and implications of capital controls. Section 5 examines the recent proposal to establish Asian bond markets. Section 6 provides concluding remarks.

2. A NEW FINANCIAL MARKET STRUCTURE IN THAILAND

It was expected that direct finance through issuing shares by corporations would provide financial resources of business investment. Households do

not regard investment in equities as preferable assets. The volatility in stock prices are a key factor in keeping risk-averse investors away from the stock market. It is clear from Table 12.1 that the market capitalization is related to GDP growth. The performance of the stock market is very much related to the macroeconomic performance of the country. Long-term bank depositors are not attracted to high but volatile capital gains in the stock market.

The capital market is still subject to the influence of external shocks as the equity market is thin and dominated by shares in banking, telecommunications, and the energy sector (53 percent of the total market capitalization in 2001). The size of the market capitalization moves cyclically with the performance of the real economy. As a result, safe financial assets such as bank deposits and government bonds are more attractive than equities. The equity market can be easily affected by the behaviors of foreign international investors. In 2001, foreign investors were net sellers of the Thai stocks at B6.4 billion. In contrast in 2002, foreign investors were net buyers at B13.4 billion. The SET index rose from 304 points at the beginning of the year to 356 points at the end of 2002. The peak during the year was at 424. The market capitalization rose by 24 percent in 2002. Had it not been the result of the accounting woes of American corporations and mounting tension between the US and Iraq, the market capitalization could have been much higher. Market capitalization and daily average turnover are interrelated (Table 12.3). The low level of turnover in 1997 and 1998 during the crisis years did not support a large number of securities firms, which had been introduced into the industry during the boom period since 1991.

After the boom in the Thai stock market in the early 1990s, the market capitalization declined prior to the slowdown in the real sector. It is clear from Figure 12.1 that, despite the dwindling activity in the stock market between 1996 and 1997, bank credit still expanded at a rapid pace right to the currency crisis period in 1998. As the Thai economy was in recession, the size of bank loans relative to GDP had been declining. The loan to GDP ratio fell from 116 percent in 1998 to about 85 percent in 2001. The declining figure reflects the fact that distressed firms were not willing to borrow to add more debt to further increase the probability of bankruptcy. On the other hand, commercial banks were reluctant to lend as the volume of non-performing loans was rising rapidly because of sluggish sales experienced by borrowing firms. We observe a negative change in the volume of bank loans from 1998 to 2001. The first positive loan growth was registered in 2002, with a minor increase in bank lending. Many commercial banks in Thailand have switched their focus from large corporations to retail borrowers.

Table 12.3 Market capitalization and volume of transactions

	Market (billion baht)	GDP (billion baht)	Market (percentage of GDP)	Daily average (million baht)
1990	613.52	2183.5	28.1	2539.69
1991	897.18	2506.6	35.8	3237.32
1992	1485.02	2830.9	52.5	7530.65
1993	3325.39	3165.2	105.1	8984.28
1994	3300.76	3629.3	90.9	8628.00
1995	3564.57	4186.2	85.2	6239.67
1996	2559.58	4611.0	55.5	5340.75
1997	1133.34	4732.6	23.9	3763.50
1998	1268.20	4626.4	27.4	3504.80
1999	2193.07	4632.1	47.3	6570.60
2000	1279.22	4904.7	26.1	3739.70
2001	1607.31	5057.1	31.8	6439.83
2002	1986.24	5259.4	37.8	8356.91

Source: Stock Exchange of Thailand and NESDB.

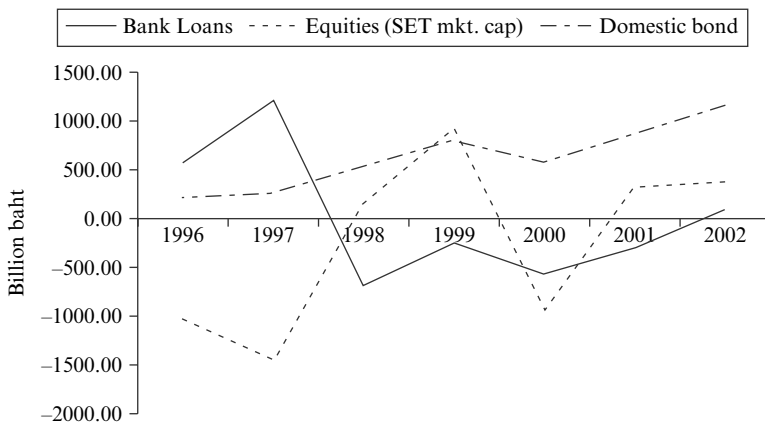


Figure 12.1 New issues of domestic bonds and change in other sources of funds

The competition between domestic and foreign banks has been intensified. As a result, Thai banks have lost part of their market shares to foreign banks (Table 12.4). In 1990, Thai commercial banks commanded almost 95 percent of the market share, but the lending share dropped to 76 percent

Table 12.4 *Lending distribution between domestic and foreign banks (million baht)*

	Thai banks		Foreign banks		Total loan	
	Total	Share (%)	Total	Share (%)	Value (%)	Percentage of GDP
1990	1 025 946.70	94.44	60 365.36	5.56	1 086 312.06	49.75
1991	1 255 251.55	94.16	77 917.90	5.84	1 333 169.44	53.19
1992	1 529 245.90	94.55	88 078.60	5.45	1 617 324.50	57.13
1993	1 876 214.10	92.32	156 131.80	7.68	2 032 345.90	64.21
1994	2 266 570.50	86.18	363 563.20	13.82	2 630 133.70	72.47
1995	2 732 673.80	83.15	553 685.20	16.85	3 286 359.00	78.50
1996	3 135 594.00	83.86	603 590.00	16.14	3 739 184.00	81.09
1997	3 577 582.00	76.61	1 092 170.00	23.39	4 669 752.00	98.67
1998	3 556 576.00	82.55	751 633.00	17.45	4 308 209.00	93.12
1999	3 306 634.00	83.94	632 650.00	16.06	3 939 284.00	85.04
2000	2 835 111.00	83.39	564 538.00	16.61	3 399 649.00	69.31
2001	2 808 576.00	84.38	519 748.00	15.62	3 328 324.00	65.81
2002	2 829 993.80	86.46	443 150.70	13.54	3 273 144.50	62.23

Source: Bank of Thailand.

in 1997. Although the share recovered gradually from the crisis slump, it is impossible for the Thai banks to maintain their dominance position as they did under the protection from competition in the early 1990s. The share of foreign banks' lending presented in Table 12.4 may exaggerate the power of foreign banks, since there are also loans extended by other Thai financial institutions such as the Government Saving Bank, Government Housing Bank, and other specialized financial institutions. Since the financial crisis, although the volume of lending has declined substantially (Table 12.5), the share of BIBFs' lending by foreign banks dominated that of Thai banks – a completely different picture compared to the pre-crisis lending pattern.

Bank deposit rose by 2.5 percent (year-on-year) in December 2002, while bank loan grew by 7.5 percent during the same period. As Figure 12.2 indicates, the increase in bank deposit did not come from time deposits, which have remained stagnant since the crisis in 1998. The relative low interest rate of time deposits encouraged long-term savers to reallocate their portfolio into other assets. In the case of securities, as Figure 12.2 illustrates, there are always uncertainties due to capital gain and loss on volatile stock prices. Interest on bonds and time deposits are subject to a 15 percent withholding tax rate, while capital gains are tax exempted. Fixed income alternatives such as bonds and debentures are more attractive than time deposits due to

Table 12.5 *BIBFs' lending of domestic and foreign banks*

	Thai banks		Foreign banks		Other BIBF	
	(mil. baht)	% Share	(mil. baht)	% Share	units	% Share
1993	129 254.10	64.37	51 116.30	25.45	20 443.20	10.18
1994	201 413.80	36.13	104 245.40	18.70	251 817.00	45.17
1995	265 380.10	22.16	157 218.70	13.13	774 962.90	64.71
1996	346 358.20	26.85	232 158.20	17.99	711 675.30	55.16
1997	549 421.10	29.19	954 798.20	50.72	378 225.30	20.09
1998	242 486.20	26.49	521 062.80	56.91	151 974.10	16.60
1999	120 174.80	21.82	337 715.80	61.31	92 915.40	16.87
2000	77 292.30	17.93	276 339.80	64.10	77 480.20	17.97
2001	45 741.60	14.78	212 570.50	68.70	51 113.30	16.52

Source: Bank of Thailand.

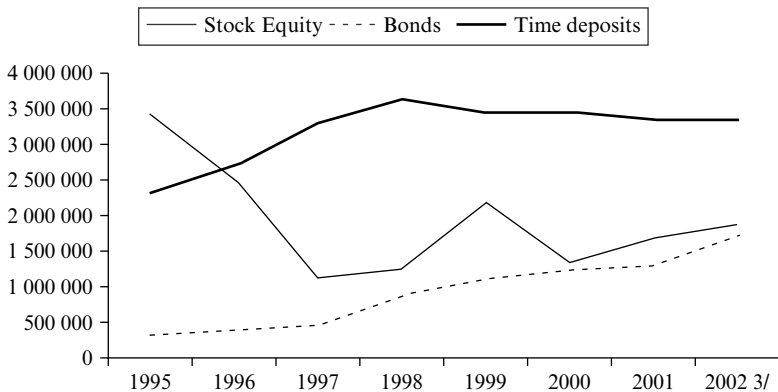


Figure 12.2 *Long-term assets*

a higher rate of return. This is a reason why we observe a steady increase in the demand for domestic bonds. Bonds are an alternative source of funds for large corporations. With ample liquidity and low level of interest rates, financing investment through issuing domestic bonds has gained importance since 1997.

The signs of excessive liquidity were clearly demonstrated by a sharp decline in the yields of long-term assets such as state enterprise bonds and fixed deposit rates of interest (Figure 12.3). As bank deposits rose faster than bank credit, both lending and deposit interest rates have been declining. Many commercial banks shun large depositors by offering a near zero

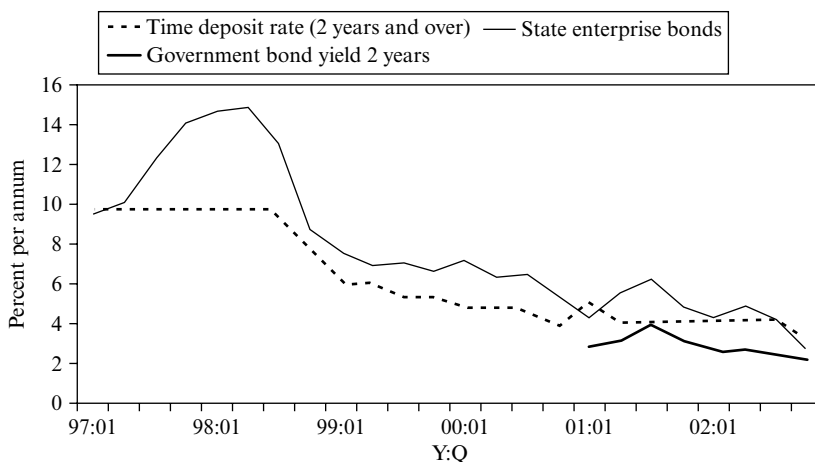


Figure 12.3 Signs of excess liquidity

interest rate on fixed deposit. Thus some depositors have shifted their investments to other financial assets and life insurance, which earned them 4 percent in 2002. The demand for life insurance was stimulated by the government's decision to increase the tax deductibility of insurance premiums to 50 000 from 10 000 baht previously applied. The life insurance industry has been growing at an average of 20 percent annually in the period 1999–2002. The industry is highly concentrated with two top firms controlling about two-thirds of the market. The top five companies earn about 90 percent of total premium. American International Assurance (AIA), Thai Life, Ayudhaya Alliance CP, Bangkok Life, and Ocean Life are the top 5. The market share of AIA is about 50 percent. The total size of premiums earned by all 25 life insurance companies was about 72 billion baht in the first eight months of 2002. The industry is encouraged by the Insurance Department to consolidate since small firms cannot exploit economies of scale and small firms suffer from low interest spreads, despite the reduction of the guaranteed rate of return to 4 percent in 2003 from 6 percent in 2002. There is a need for these firms to raise their capital funds which can be done through consolidation. Competition is strong due to opening up of the insurance sector to foreign companies. Furthermore, some banks such as Thanachart Bank has offered a five-year fixed deposit with life insurance from Thanachart Zurich Insurance. Overlapping services in the financial sector will benefit consumers, but financial institutions must not spread their activities too thinly and operate within the activities that allow them to exploit economies of scope.

Table 12.2 indicated that state enterprise bonds were dominant in the bond market (56.2 percent), followed by corporate bonds (31.5 percent) in 1995. The government bonds and treasury bills were only 10 percent of the total outstanding volume. The structure of the market remained unchanged in 1997, except when the Bank of Thailand issued a significant amount of bonds for the Financial Institutions Development Fund (FIDF) and Property Market Organization (PLMO) in order to obtain money to bail out weak financial institutions (see Table 12.2). In May 1999, the non-performing loans of the Thai banking system reached 47 percent of total loans. After the period of recapitalization and bad debt write-offs, the NPL declined to 23 percent. The previous government's approach to solving the NPL problem was to allow the market mechanism to work. Thus banks were encouraged to form their own asset management companies to get rid of bad debts from their balance sheets. The process was so slow and ineffective that the new government adopted a new policy by establishing the Thai Asset Management Corporation (TAMC) in 2001 to handle bad debts from private and state-owned banks of around 750 billion baht. By the end of 2003, TAMC expects to have successfully restructured 70 percent of the non-performing loans through various methods: payment extensions, debt reductions, collateral transfers, asset sales, and debt-equity swaps.

The FIDF has bailed out state banks by assuming the burden of their non-performing loans. The transfer prices of bad loans to TAMC were roughly 80 percent, while the actual value of the original loans' assets can be as low as 30 percent of the original value. The FIDF has to absorb the difference between the original loan values and the retrievable assets once loans are restructured. The total loss of the FIDF was estimated at B1.4 trillion, B500 million of which was absorbed by the FIDF bonds approved by the previous government. The remaining burden will be settled over the next 30 years by the Ministry of Finance and the Bank of Thailand. In July 2002, the government issued bonds worth 305 billion baht to refinance the FIDF's short-term debts in the repurchase market. The government has tried to reduce FIDF's burden by issuing long-term bonds rather than short-term bonds, but the entire short-term debt cannot be eliminated because of continuing debt repayments to 56 finance companies' promissory note-holders.

From the macroeconomic view point, the large amount of public bonds used to finance the bailout of financial institution does not cause any negative impact on private consumption spending. Sales of passenger cars and motorcycles by units rose on the year-on-year basis by 16 percent and 57 percent respectively in December 2002. Taxpayers' horizon must be shorter than the maturity of the government bonds or households are not ultra rational enough to fully discount the future tax burden.

From 1999 onward, the government bonds have become the most important assets in the domestic bond market. The government issued saving bonds worth 305 billion baht. These bonds are sold to non-institutional investors, charity foundations, cooperatives and individual investors. Though financial institutions are not allowed to buy saving bonds, due to the low interest rate from the fixed deposits, these bonds were over-subscribed. The high coupon rate of 6.1 percent for 10-year saving bonds had a negative impact on some private firms that attempted to issue bonds. They either postponed the sales or had to make the yield attractive relative to the saving bonds.

The financial crisis in 1997 brought about the new kind of financial assets available to Thai households. The government bond yield for the five-year bonds stands at 4.15 percent. To make the bonds attractive to hold, investors are permitted to sell the bonds back to the central bank after one year from the purchase date. Nevertheless, they would have to pay the price by receiving only 2.3 percent after interest payments received are included. Interest is paid twice a year. The interest is also subject to a withholding tax of 15 percent, while the minimum investment must be 50 000 baht. In this case, saving bonds are not directly competing with fixed deposits at commercial banks. They are tailored to large long-term savers with plenty of liquidity. The yield from holding the government bonds would be affected by the key interest rate of the central bank. In the future, the monetary policy of the Bank of Thailand will become more effective since its adjustment of the repurchase market rate can have an impact on long-term interest rates, bond prices, and the stock market prices. The Bank plans to employ open market operations to become active in setting interest rates in the money market. In addition, by the end of 2004, the BOT planned to issue 70 billion-baht saving bonds through its Financial Institutions Development Fund (FIDF) to refinance the 1.4 billion-baht debt incurred from bailing out some financial institutions during the financial crisis in 1997 and 1998. The Bank of Thailand had not sold its bonds since 1997. The issuance of the BOT bonds is seen as a move to develop the bond market as well as enhancing the monetary policy effectiveness and allowing a new investment asset to commercial banks.

To help commercial banks manage their risk exposure to debt-instrument investment, in April 2003 the Bank of Thailand approved commercial banks carrying out three new derivative transactions; forward bonds, bond options, and equity-linked index swaps. Thailand's only listed derivative exchange is the Stock Exchange of Thailand. Most of the derivative activities are trading in equity warrants. All trades are carried out through the SEC's computerized trading system. Before April 2003, banks were

allowed to sell or buy debt instruments in spot markets that officially settle within two days. Equity-linked index swaps help banks to cover risk and generate income when banks want to exchange returns from reference interest rates with return from the equity index. The BOT allows banks to use forward bonds and bond options only for baht-denominated debt including treasury bills, government bonds and other secured bonds. Banks are permitted to use derivatives for hedging foreign currency-denominated debt instruments only in cases where at least one of the two parties is a financial institution allowed to carry out foreign exchange transactions. It is obvious that the Bank of Thailand is attempting to increase flexibility for commercial banks, but at the same time cautiously liberalizing the banking sector so that they would not jeopardize the soundness of the banking system.

3. DEVELOPMENT OF THE BOND MARKET

Similar to the rapid development of many Asian countries' bond markets (Park 2001), Thailand's bond market has developed remarkably since 1997. Treasury bills and government bonds have always dominated the Thai domestic bond market. In 2001 the share of corporate bonds in total outstanding domestic bonds was only 12 percent. The amount of bonds issued in foreign currencies was limited, since less than 1 percent of the budget deficit was financed by foreign borrowing in 2001. State enterprises bonds accounted for 77 percent of total bonds issued overseas in 2002. The central bank and the private sector financed the fiscal deficit by 22.7 and 68.8 percent, respectively. The lack of supply of risk-free assets such as government bonds prevented development of the bond market in Thailand.

Because of excess liquidity in the financial system, the real net rate of interest offered by commercial banks was less than 1 percent in 2003. The government has issued saving bonds worth more than 400 billion baht to finance the loss of the Financial Institutions Development Funds during the 1998 financial bailout of weak financial institutions. These saving bonds, with maturity between 5 and 10 years, have offered attractive yields around 5 to 6 percent. As a result, the bond market will expand rapidly in the future. Households will get accustomed to a new kind of saving instruments which was not available to them during the boom years when the Thai government ran a budget surplus. Nevertheless, there might be some crowding out effect since firms would have to bear a higher cost for new investment. During the recovery, the value of issued corporate bonds doubled between 1996 and 2001. Investment recovery in 1999 and 2000 was partly due to the ability to substitute bonds for bank loans. Despite the

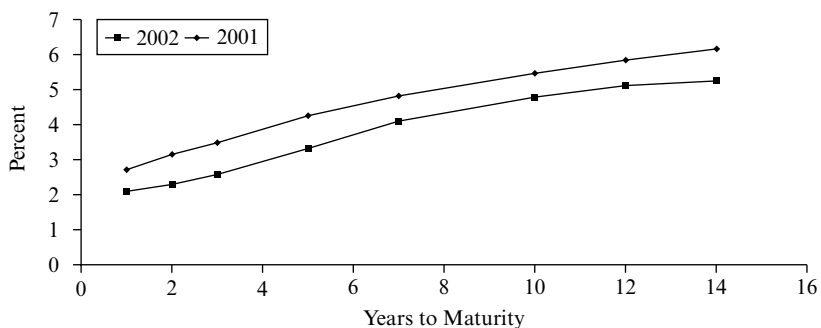


Figure 12.4 Government bond yield curves

fact that the Thai economy is still a bank-based economy, bank credit continued to contract by 6 percent in 2001, leading to a continued decline in the ratio of bank loans to GDP to 85 percent.

The need to finance a budget deficit of 5 percent to GDP led to new bond issuances. For this reason, the benchmarks from the government bond yield curves has been established (Figure 12.4). The yield curves in both 2001 and 2002 slope upward, suggesting an increasing demand for long-term investment. The government bond yield curve shifted downward in 2002 as a result of a low inflationary pressure and excess liquidity in the money market. The benchmarks have been established since 2001 with a complete range of maturity from 1 year up to 14 years. Both government bonds and corporate bonds are traded over the counter at the Bond Dealer Center, where wholesale dealers make up 90 percent of the market. Most individual investors hold bonds to maturity.

After suffering from the lack of commercial banks' credit during the credit crunch in 1998, many large companies opt to raise fresh capital funds through issuing bonds and debentures. Telecom Asia (TA), a fixed-line operator, sold 18.5 billion baht worth of bonds in October 2001 to repay its dollar debt. In February 2002, TA issued another lot of bonds with 4.8 years maturity worth 3.6 billion baht. The bonds offer a fixed annual coupon rate of 5.8 percent. In effect, Telecom Asia has completely converted its dollar-denominated debt into the lower cost of domestic bonds.

Many companies have lowered their interest burden from foreign debts and eliminated foreign exchange risks. Banpu, the largest coal mining company in Thailand, issued bonds worth B3 billion, with a coupon rate of 3 percent, to refinance its debt and expand business investment. Both TA and Banpu bonds were rated BBB and A respectively by the Thailand Rating and Information Agency (TRIS). In terms of the availability of

market infrastructure, the benchmarks and the independent rating agency have been established in the Thai corporate bond market.

PTT Exploration & Production, Thailand's second-largest gas producer, was able to sell its yen-denominated 10-year Samurai bonds in 1997 with 3.35 percent interest per year. But PTTEP was able to sell local-currency bonds in 1999 with a coupon of 6.5 percent. Its three-year baht bonds matured in 2002. The company has \$393 million of foreign currency bonds outstanding. Its debt was rated at Baa3, the lowest investment grade, by Moody's Investors Service. Nevertheless, those firms that have been able to issue domestic and foreign bonds are large corporations, which can easily obtain funds by tapping the domestic stock market or through borrowing from commercial banks.

The Export-Import Bank of Thailand also plans to issue debentures worth 7–10 billion baht in 2004 for debt refinancing and loan expansion. From the example provided above, it is quite clear that small firms are naturally excluded from tapping financial resources through issuing bonds. Although small and medium-sized enterprises cannot obtain funds from the bond markets, they may be able to get listed in the Market for Alternative Investment (MAI), Thailand's second stock exchange for SMEs. There was a notorious case in 2002, when a firm listed in the MAI violated disclosure rules and engaged in insider trading and accounting fraud. As long as Thai firms lack good corporate governance and do not upgrade their accounting standards, investors' interests in bonds and securities would not be protected. In addition, if the legal infrastructure is not efficient, development in bond markets and capital markets can only be done gradually.

The Thai Bond Dealing Center (TBDC) was established in 1998 under the Securities and Exchange Commission Act as Thailand's only organized secondary market for bonds. Currently, the TBDC's 46 members, mostly local and foreign banks and stock brokers, trade and confirm transactions by phone. Previously the TBDC's 46 members, mostly local and foreign banks and stockbrokers, traded and confirmed transactions by phone. In 2003, the electronic trading platform was established. The TBDC expects that the electronic platform can raise investor confidence in selling bonds when their members need liquidity.

It would seem very difficult to develop a broad investor base. Households would prefer holding assets with relatively low risks. Note that the Thai government still guarantees all deposits at commercial banks. The development of deposit insurance will not be materialized in the near future, until commercial banks are back to normal operation with profit and low non-performing loans. Sharma (2000) argued that the close relationships between firms, banks, and governments are the fundamental constraints on

the development of bond markets in Southeast Asia. With large concentration of wealth, families that own large corporations are politically influential and they have close relationships with governments.

As long as the creditors' rights are not fully protected by law and enforced effectively by the legal system, the would-be corporate bonds holders are likely to shun investment in corporate bonds. The effectiveness of the legal infrastructure in protecting the right of creditors must be enhanced since sustainable economic recovery requires banks to resume their lending activities. As empirical evidence provided by La Porta et al. (1998) and Claessens et al. (1999) indicates there seems to be a negative relationship between wealth concentration and judicial enforcement. The top 15 families' ownership as a percentage of market capitalization was 2.8 percent in Japan, 53.3 percent in Thailand and 61.7 percent in Indonesia. But the index of the degree of judicial enforcement (rule of law, risk of expropriation, risk of contract repudiation) was strongest in the case of Japan at 9.4, from the total score of 10, 5.9 in Thailand, and 4.4 in Indonesia. Consequently, without dismantling the concentration of family control and reducing the monopolistic structure of corporations, the development of corporate bonds market will only take place slowly. Rules of law might be easily broken. Passage of laws that encourage market competition would be unlikely to succeed. With the majority of the Thai Rak Thai party in the parliament and a resurgence of nationalism, there has been an attempt to draw support from the public to amend bankruptcy laws to protect the interest of Thai businessmen against the encroachment of foreign interest. If that attempt is successful, the development of Thai corporate bond market would be seriously damaged and the bond market would become ineffective in mobilizing long-term savings. Thailand would remain predominantly a bank-based economy.

4. CAPITAL MOBILITY

The US dollar has dominated foreign exchange transactions, accounting for almost 95 percent between 2000 and 2002. Note that the importance of the US dollar has been declining marginally from 97.8 percent during the fixed exchange rate system to 96.9 percent in the period 1997–99. Although the yen has become important after the currency float, its significance is still negligible relative to the dollar. Foreign banks are involved more in the transactions of the foreign exchanges, capturing 83 percent of the total transactions in 2002 (Table 12.6). Citibank has been a leading financial institution that provides foreign-exchange, trade finance, and treasury-management products. As a foreign bank, Citibank is not permitted to have

Table 12.6 Commercial banks' foreign exchange transactions

	Thai banks		Foreign banks	
	Value million baht	Share (%)	Value million baht	Share (%)
1994	3 437 984.0	20.9	13 007 977.0	79.1
1995	5 495 941.0	20.6	21 221 571.0	79.4
1996	11 449 738.0	24.0	36 269 784.0	76.0
1997	14 558 532.0	28.8	36 019 975.0	71.2
1998	6 271 719.0	26.9	17 083 113.0	73.1
1999	3 752 459.0	26.9	10 193 202.0	73.1
2000	4 241 196.0	22.3	14 761 865.0	77.7
2001	4 077 461.0	23.1	13 549 498.0	76.9
2002	4 203 973.0	17.1	20 388 618.0	82.9

Source: Bank of Thailand.

more than one branch in Thailand. But Citibank is very active in issuing baht-dominated bonds for major corporations in Thailand.

The average share of Japanese foreign direct investment in Thailand increased from 28 percent during the pre-crisis period to 31 percent between 1998 and 2002. The share of foreign direct investment from Asean countries, mainly Singapore, had increased dramatically after the crisis. The US and EU's shares of FDI was about half of the Japanese investment. The year 2002 witnessed a worldwide plunge in foreign direct investment. A survey conducted by the Japanese Chamber of Commerce in Thailand revealed a reduction in investment by Japanese firms in Thailand in 2003 of 24 percent from the level in 2002. A lack of human resources such as shortage of engineers capable of using technology imported from Japan is one of the main reasons why Japanese foreign direct investment in Thailand fell by 54 percent in 2002. This is a serious concern since Japanese investment in Thailand is the largest source. Furthermore, solving the human capital problem can only be done by long-term solutions by upgrading the education and training system. The fundamental factor contributing to movement of long-term capital flows is the availability of the human capital stock, while the lack of funds is not the main obstacles to foreign direct investment.

There are some restrictions on foreign institutions engaging in the real and financial sectors. However, since the banking crisis in 1998, foreign banks have taken over four Thai commercial banks from the total of 13 banks. Foreign banks have injected new capital funds after writing off bad debts. In addition, the Australia & New Zealand Banking Group and

the International Finance Corporation, a unit of the World Bank, are interested in buying shares from the Thai Military Bank, which still needs to issue more shares to existing shareholders to repay debts and cover bad loans.

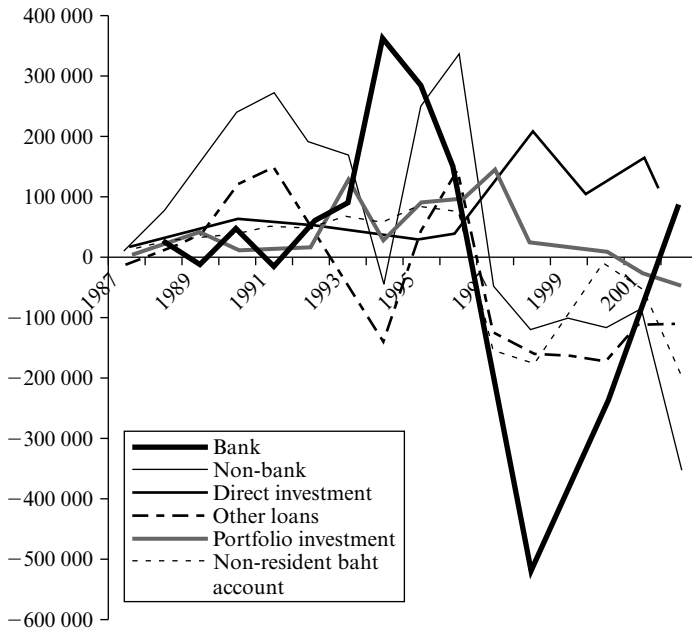
In conclusion, the financial crisis has dismantled the protection of domestic banking industry from foreign banks' invasion. The Thai banking industry has become more efficient; there has been more price competition in the form of attractive interest rates to borrowers and depositors. The plan to sell three nationalized banks has been postponed. Because the stock price index is pro-cyclical, delaying public offerings until the economy has fully recovered would mean that the government can obtain higher prices. The Thai economy recovered in 2002 with 5.2 percent GDP growth, the stock market index rising by 17.3 percent in the same year. Despite the robust economic recovery, the process of privatization of Thailand's state enterprises has suffered a long delay due to strong protests by their employees.

Interest rate differentials can move capital provided that there is a relaxation of capital controls. However, prudential controls are still needed for building up sound financial institutions. Furthermore, foreign exchange risks can discourage recycling of regional excess savings, despite a large interest gap. The movement of the yen-dollar exchange rates directly affects Southeast Asian currencies. If the yen-dollar exchange rates become less volatile, we might be able to encourage capital movement among financial centers in the region.

As mentioned earlier, prudential capital controls were employed to prevent sudden capital inflows or capital flight. As Figure 12.5 indicates, private capital outflows through commercial banks, loans to non-bank sectors and non-resident baht accounts were major channels of capital flight. The Bank of Thailand has strict regulation on capital outflows and foreign ownership. Thai corporations cannot raise their funds from foreign markets such as the Singapore Exchange (SGX). Total Access Communications Plc is the only Thai company listed on SGX's main board with a market capitalization around 10 billion baht. That was done before capital control regulation took into effect.

The Thai government turned down the International Finance Corp's request to issue baht bonds in 1996. Fearful of capital outflows, the government was worried that the IFC might attempt to use the proceeds from the baht bonds to lend in the international markets. In hindsight, if the government had allowed the IFC to launch baht bonds in Thailand, the Thai domestic bonds market could have developed further and would have lessened the impacts of the currency crisis.

The Ministry of Finance approved the plan for the World Bank, IFC, and ADB to issue baht-denominated bonds for the first time in 2003. The timing



Source: Bank of Thailand.

Figure 12.5 Composition of total net private capital flows

is right because excess liquidity in the market in 2003 stood around 600 billion baht. These foreign institutions are allowed to issue baht-denominated bonds with a maximum amount of 10 billion baht in 2003 with the maturity of ten years or greater. But private foreign corporations are still not allowed to issue baht bonds. The maximum amount of 10 billion baht seems insignificant to be able to create a crowding-out effect to Thai investors. In addition, the Bank of Thailand requires that non-residents who raise baht liquidity from the domestic bond markets must swap it into foreign currencies before transferring it overseas. The painful lesson from the 1997 currency attack is still haunting the Thai monetary authorities, who remember that baht liquidity in Singapore and Hong Kong was employed to force them to float the baht. The fear of capital outflows is exaggerated since Thailand is no longer under the fixed exchange rate system. There is no need to hold large amount of international reserves and the country should not attempt to make the baht undervalued. Furthermore, the World Bank and ADB bonds would provide new products to the domestic bond market and enhance liquidity in the secondary market.

It should be emphasized that the structure of the capital inflows into Thailand has changed dramatically from heavily reliance on short-term foreign flows to long-term domestic debts. Similarly the structure of foreign debt has changed from short-term into longer maturity. As such, the risk of encountering another currency crisis has substantially reduced.

5. ASIAN BOND MARKETS

Initially the government planned to sell \$1 billion global bonds but it was delayed due to political uncertainties in the Middle East. The issue of dollar-denominated bonds will be a test for closer economic cooperation among Asian countries. The Bank of Thailand also seeks cooperation from other central banks in the region to participate by investing in the Asian bonds.

The initial idea of the Asian bonds was first introduced by the Hong Kong Monetary Authority in the wake of the 1997 Asian crisis. During that period, there existed a currency swap agreement to help Asian countries to fend off the speculative attacks on their currencies. But the idea of Asian bond markets stems from the fact that Asian countries, with high saving rates, invested their money outside Asian region. In turn, the money is recycled back to Asia via short-term borrowing. With the establishment of Asian bond markets, Asian countries with billions of dollars-worth of international reserves should contribute to the long-term investment in the region by investing in Asian bond markets.

The Thai Prime Minister is a strong supporter of the establishment of the Asian bond markets, where sovereign and corporate debt instruments can be traded. Regional central banks are expected to be major investors in Asian bonds so that the private sector in Asia can raise funds for long-term investment without currency risk. The Thai government has approved a contribution of \$200 million or 0.5 percent of the total foreign international reserves. Nevertheless, there are some problems remaining before an effective Asian bond markets can be successfully launched. The main obstacles are inadequate infrastructure, i.e., the lack of a regional rating agency and efficient regional settlement mechanisms. The success of the Asian bond markets will also depend on cooperative effects among Asian nations, in particular Japan, South Korea, Singapore and China. Unless these countries envisage benefits from allocating their international reserves to create a sizable amount of funds, there would be no liquidity and active trading in the Asian bond markets.

The conditions for successful Asian bond markets are also similar to those for domestic bond markets. Some countries with advanced financial

infrastructure should proceed further, while countries with underlying constraints must address the issue of legal infrastructure and corporate governance. If Asian bonds are only denominated in hard currencies, foreign exchange risks still remain. If they are denominated in local currencies, the Asian bond markets simply shift currency risk from local borrowers to foreign investors. The success of the Asian bonds markets can be tested by their ability to issue regional currency bonds. A gradual approach must be undertaken, since we are not quite sure whether capital inflows might become more volatile. It is true that foreign investors are less sensitive to short-term fluctuations within the country, when compared with domestic investors. By linking bond markets in Asia together, we might get a higher degree of interconnectedness; thereby exposing each market to common idiosyncratic shocks. As such, we need to be cautiously optimistic about the Asian bond markets. Its development must be a slow and continuous process dictated by the demand conditions rather than by a big push by some energetic governments.

6. CONCLUDING REMARKS

The Thai financial sector is in a period of transition. The heavy dependence of the real economy on bank credit has been declining slowly with the emergence of the bond market. While the stock market capitalization synchronizes with the real business cycle of booms and busts, the bond market has been growing steadily. Nevertheless, Thailand will still remain a bank-based economy for many years to come. After suffering badly during the currency and financial crisis episode, despite undertaking a major overhaul the Thai financial system still suffers from remaining weaknesses. It has been a very difficult task to change the attitude and behaviors of firms towards good corporate governance and to upgrade accounting standards and disclosure. The close relationship between banks and large corporations still remain after the crisis. It is hoped that Thai businessmen would learn from the painful lessons during the period of loan restructuring. Nevertheless, unless there is a major overhaul of the legal infrastructure, the development of domestic bond markets as an alternative to bank lending will not be successful. Stock market manipulations and insider trading still impose risks and volatility on investors. The government bonds seem to be the most attractive and safest assets for long-term investors to hold in Thailand.

Establishing Asian bond markets is a good concept if the idea materializes and is efficiently executed. The Asian countries with a nascent stage of bond markets need an overhaul of existing institutional infrastructures.

The corporate governance and legal infrastructure is still far below the level that can provide efficient domestic bond markets. Asian countries should not remain complacent about the foreign exchange risks after establishing the Asian bond markets. The root of the financial crisis is based on macro-economic structure and unrealistic exchange rates. No sufficient amount of international reserves can be used to indefinitely defend the overvalued exchange rates.

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13. Financial centers in East Asia: An Indonesian perspective

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1. INTRODUCTION

This chapter will explore the evolution of Indonesia's financial sector after the 1980s deregulation and especially after the 1997–98 crisis. Between 1983 and 1989 the Indonesian government undertook major financial reforms. The effects of those reforms on the subsequent development of the country's financial sector were quite dramatic. Within a few years there had been a large increase in the number of banks and branches, and in the amount of credit. Capital markets also experienced significant development, especially after foreigners were allowed to buy stocks. The number of listed companies and the market capitalization increased significantly, albeit from small numbers.

The rapid financial development proved to be unsustainable, however. The 1997 financial crisis propelled the sector into a turmoil from which it has not fully recovered yet. Part of the reason was the weak legal and regulatory mechanisms. Prudential regulations, supervision and enforcement were inadequate. Meanwhile, banks were driven into increasingly risky businesses such as real estate lending and the like, by intense competition. Another factor was the rapid financial integration prior to the crisis. Foreign banks gradually crowded local banks out of the top-tier corporate lending hence heightening the competition among local banks for lower grade business lending. In addition, high domestic interest rates forced domestic firms, banks included, to borrow offshore. Most of the offshore debts were unhedged.

Efforts have been taken to restructure the financial sector, the banking system in particular, after the crisis. Nevertheless, the efficiency of the financial sector has improved only gradually. The banking sector remains concentrated, with the share of the four largest banks accounting for around 50 percent of the banking sector total assets. The capital markets are among the least efficient in Asia. This chapter therefore argues that Jakarta is still far from becoming a regional financial center. Instead, it will

stay as a domestic financial center aiming primarily at providing financial services to domestic customers in the foreseeable future. There are several reasons as to why this may be the case. The first is associated with economies of scale. The size of Indonesia's financial sector is relatively small to begin with. Meanwhile, there is a tendency for a financial sector to agglomerate where, other things being equal, bigger financial centers are likely to attract more business than smaller ones. In addition, economies of scope are also becoming an important factor for the competitiveness of a financial center. A financial center that is able to provide a greater variety of financial services will have competitive edge over those that do not.

The second reason is the absence of an explicit government policy to promote Jakarta as a regional financial center. Arguably, if it is pursued persistently and consistently, such a policy may create strong enough expectations to foster further growth of the financial sector in question into a regional financial center. Nevertheless, recent development suggests that the government is gradually removing restrictions on foreign banks and other financial institutions as well as foreign individuals, on participating in the domestic financial markets. Some other institutional impediments remain, however. For instance, settlement procedures for trading in the stock and bond markets are not yet fully compatible with international standards.

Given the foregoing, the way forward for Indonesia's financial sector is to improve its efficiency by fostering greater competition among the market participants as well as encouraging greater foreign participation in the domestic markets. The government has recapitalized a number of banks, but their performances remain relatively poor, especially when compared with foreign-owned banks. With regard to foreign-owned banks, their presence will arguably help improve the stability of the banking sector and bring in badly-needed expertise. Correspondingly, capital markets and non-bank financial institutions (NBFI) will also benefit from this arrangement, as greater foreign participation will provide more liquidity to the market and will automatically bring in more transfer of technology.

2. A BRIEF REVIEW OF THE PRE-CRISIS FINANCIAL DEVELOPMENT

2.1 Financial Reforms

2.1.1 Banking sector reforms

The government began to liberalize the financial sector in 1983 by removing all credit ceilings, reducing the number of credit categories financed by liquidity credit (which had been funded from oil revenues), removing

controls on deposit and lending rates of state banks, and eliminating subsidies on deposit rates by state banks. The banking system had responded positively to the removal of many of the government's direct controls. Banks deposits increased rapidly and time-deposit growth exceeded that of demand deposits. Also, the growth of bank lending was much more rapid in the private banks than in the state banks or foreign banks (Cole and Slade 1996, pp. 103–04).

The 1983 deregulation package was followed by a more substantial banking reform in October 1988, which removed most of the entry barriers and various restrictions that favored certain types of banks. The new package also allowed foreign entry in the form of joint ventures, albeit with some restrictions. First, the capital requirement to establish a joint venture bank was Rp.50 billion, with a maximum foreign ownership of 85 percent.¹ Second, a joint venture bank can be set up involving one or more foreign banks and one or more domestic banks. However, these joint venture banks are only allowed to operate in Jakarta, Bandung, Semarang, Surabaya, Denpasar, Medan and Makassar. Third, a new joint venture was required to allocate at least 50 percent of its total credit for export credit within one year from its establishment. The same requirement was also applied for the established foreign banks; new sub-branches of a foreign bank must have allocated at least 50 percent of their total credits for export credits within a year of establishment. Failure to meet the requirement was subject to penalties and could result in the bank's rating being downgraded. Fourth, foreign and joint venture banks (this also applied to private domestic banks) were required to allocate a minimum of 80 percent of their credits denominated in foreign currencies to non-oil exports (see Box 13.1 for details of banking reforms).

Problems associated with the lack of institutional development related to the financial sector began to emerge in the early days of the reform and some of them remain today. Improvement in the regulatory frameworks and supervisory capacity of the central bank to deal with the rapid expansion of the banking sector did not come as a part of the reform. Rather, the government took significant efforts to improve prudential regulations in 1992 more as a response to growing public concerns over the rapid expansion of the banking sector. The prudential regulations included a comprehensive capital, asset, management, equity and liquidity (CAMEL) quantitative rating system. The system included requirements for more strict qualifications of bank owners and managers; a schedule to meet capital adequacy requirements (CAR) according to the Bank of International Settlement (BIS) standards of 8 percent on risk-weighted assets by 1993; more stringent information and reporting requirements; and stricter legal lending limit regulations to related groups or to one individual group.

BOX 13.1 SUMMARY OF BANKING REFORMS

- *Open entry*: for joint ventures (since 1969 closed to foreign banks) with minimum capital requirement of Rp.50 billion (\$29.6 million) and maximum foreign ownership of 85 percent; for domestic banks (since 1977 new entry closed) with minimum capital requirement of Rp.10 billion (\$6 million); and open up foreign exchange licenses for sound domestic banks.
- *Relaxation on branching*: regulations substantially relaxed; foreign banks allowed to open up to one sub-branch in 6 other major cities (since 1967 foreign banks were only allowed two branches in Jakarta).
- *Performance requirement for banks*: foreign banks were required to lend 50 percent to export oriented businesses (although this had never been effectively enforced or monitored) and domestic banks were required to lend 20 percent to small and medium-sized companies.
- *Preferential treatment for state banks*: state-owned enterprises are no longer required to deposit all their funds in state banks and are allowed to deposit up to 50 percent of their funds in private banks.
- *Reserve requirements reduction*: from 15 percent for demand deposits and 10 percent for saving and time deposits, to 2 percent of deposit liabilities.
- *Prudential*: establishment of legal lending limits for loans to a single borrower and to groups of borrowers; in March 1989 bank capital was defined, and it was stipulated that banks could not invest in stocks and replaced foreign borrowing ceilings by a net open position of 25 percent of equity.
- *Other*: banks were allowed to issue shares; and the tax exemptions on interest on time deposits were removed to equalize the treatment between interest payment and dividends.

A further improvement on the regulatory framework was taken a year later. A new banking law was enacted in 1992. This brought about significant changes; among other things, stricter sanctions for bank owners, managers and commissioners for violation of laws, foreigners were allowed

to purchase bank shares in the capital markets (up to 49 percent) and the legal status of state banks was set to a limited liability company. In October 1992, as part of the desire to limit the number of banks, the capital requirements to set up domestic and joint venture banks were raised by five times for the former and doubled for the latter. Nevertheless, the 1992 Banking Law had some major drawbacks. In particular, the law provided the government with a legal basis to treat a bank as a development agent, in that ‘the government may assign a commercial bank to implement government program for the development of particular sectors’ (Article 12).² This special treatment drove nepotism and led to corruption of bank owners, who were then President Suharto’s cronies.

2.1.2 Capital market and non-bank financial institutions (NBFI) reforms

In addition to banking reforms, the government also took steps to deregulate non-bank financial institutions. The December 1988 financial reform package was considered to be the first step towards building a modern financial sector. The government opened up entry for foreign investors in all NBFI activities, including insurance, in the form of a joint venture. As a result, the number of companies in the industry increased rapidly.

Serious efforts to build a modern capital market in Indonesia also began in the 1980s. In December 1987, the government issued the first of a series of capital market reform packages. The reforms provided the impetus for the market to take off and expand and became the catalyst for a rapid metamorphosis of the Indonesian capital market from a nascent stock market of 24 companies to 124 companies in three years (see Table 13.1). The development was in line with the central government’s policies to give a bigger role for the private sector to expand. Appendix 1 provides a more elaborate description of the reform measures.

In 1989, a new stock exchange, the Surabaya Stock Exchange (SSX) was established in Surabaya (on the island of Java). It was the first private

Table 13.1 Number of stocks and bonds traded in capital markets (1987–2001)

	1987	1990	1995	1996	1997	1998	1999	2000	2001
Stock market	24	124	248	267	306	309	321	347	379
Bond market	3	20	50	55	70	70	76	91	94

Source: Bank Indonesia, *Indonesian Financial Statistics*, various issues

stock exchange in Indonesia. At the same year an over-the-counter stock exchange, the Indonesian Parallel Stock Exchange, was also established. The two exchanges were eventually merged in 1995, leaving only two primary exchanges operating in Indonesia, JSX and SSX. SSX is the smaller of the two.

Despite the rapid increase in the number of listed stocks and bonds, Indonesia's capital markets were nevertheless relatively small, poorly developed, shallow and with little resilience against economic shocks (Wells 1999). Meanwhile, institutional development progressed only gradually. Some issues that needed to be resolved before markets could work, such as, competition; transparency; acceptance and application of global accounting, disclosure and due diligence standards; institutional restructuring; dematerialization of script, electronic registers; and establishment of national depositories, integrated custody, settlement, transfer and ownership registration mechanisms were addressed only slowly and in a piecemeal fashion. Finally, as Wells (1999) argues, the securities settlement system was risky in that it did not conform to the international standard. The settlement system was not delivery versus payment (DVP) and had not been dematerialized, i.e., script-less.

There were a number of initiatives undertaken during the period under consideration to improve the performance of the country's capital markets. First, in 1992, Bapepam (Badan Pengawas Pasar Modal), the capital market regulatory agency, transferred its executive function to the Jakarta Stock Exchange thus ending its function as an organizer of the capital market but retaining its regulatory function. The transfer notwithstanding, Bapepam remained a powerful body yearning for independence. The former was reflected in its various decisions. For instance, under its ruling, all stocks had to be listed on both JSX and SSX. The ruling was eventually rescinded in 1995, but a new ruling was later introduced whereby bonds and derivatives could only be listed on the Surabaya Stock Exchange. In addition, SSX has been allowed to undercut JSX transaction costs but not the other way around. These rulings put SSX in an advantage position vis-à-vis JSX, although as Wells (1999, p. 81) points out, the business share of SSX has long been minimal. In a sense, SSX has been kept alive by Bapepam. On the other hand, structurally Bapepam was, and still is, under the Ministry of Finance, and was funded through the government budget. As such, it was difficult for Bapepam to free itself from government interference.

Second, prior to 1993, clearing and settlement for transactions were not even centralized, which implied higher transaction costs. Hence, in 1993, the Indonesian Depository and Clearing Agency (PT KDEI – Kliring Deposit Efek Indonesia) was established under the sponsorship of the seven state banks and the Jakarta and Surabaya Stock Exchanges. KDEI

was licensed for securities clearing, settlement, depository and registrar functions, including bonds. KDEI performed multilateral netting of script between brokers with settlement on the fifth exchange day or T + 4. KDEI attended to ownership transfers, but the corresponding financial transfer was undertaken on a net basis through a major state bank in which all brokers are required to hold settlement accounts. Settlement between brokers and custodian banks representing international investors was undertaken with cheques.

Third, in 1995, the government promulgated a new capital market law, replacing the outdated law issued in 1952. Under the new law, the two stock exchanges were turned into self-regulatory organizations (SROs). In addition, two new SROs would be established to replace KDEI. The first one would act as a central depository and settlement institution, which would set rules on depository, securities transaction, and other related activities. The second one would act as a clearing and guarantee house and would set rules on guarantees, securities transaction clearing, and other related activities.

Finally, in 1994, the capital market authority issued a regulation, which required all debt instruments to be rated by the domestic credit rating agency, PT PEFINDO (Pemeringkat Efek Indonesia). Prior to that, credit judgments were based on the type of issuer (state-owned/guaranteed, private, or public), which might not reflect the true credit risk of the instrument held. The absence of ratings had forced Bapepam to impose strict guarantee and sinking fund requirements on issuers in the interest of investors and thus in fact limited the quality range of bonds available to investors. PEFINDO applies two types of rating scales, one for the company rating along with the long-term debt securities and the other for short-term debt securities.

2.2 Implications to the Financial Sector

2.2.1 Implications to the banking sector

The post-liberalization financial sector was marked by several interesting characteristics. First, as noted, there had been a rapid expansion of the sector following the reform with various, intended as well as unintended, repercussions to the banking sector in particular, and to the economy in general. The number of banks increased dramatically, reaching 239 banks in 1996 (Table 13.2).

Total assets of the banking sector also increased tremendously. In 1996, its total assets were about Rp.388 trillion, a 512 percent increase compared to 1988. Private domestic banks expanded rapidly and began to overtake the state banks by 1994, in terms of loans, deposits (private banks were

Table 13.2 Number of banks and branches (1988–96)

	1988	1990	1991	1996
<i>Number of banks</i>	110	165	184	239
State banks	5	5	5	7
Private domestic	63	103	119	164
Foreign and joint venture	11	26	29	41
Development	28	28	28	27
<i>Number of branches</i>	9434	12 079	12 543	5919
State banks	815	945	960	1379
Private domestic	559	2052	2639	3964
Foreign and joint venture	21	48	53	86
Development	290	396	468	490

Source: Bank Indonesia, *Indonesian Financial Statistics*, various issues

already ahead in 1992) and total assets. The asset quality problem and low capital levels were among the factors which hindered the growth of state banks. In 1996, private domestic banks' assets accounted for about 52 percent of total banking sector assets compared to 17 percent in 1988, while state banks' assets accounted about 36.5 percent, in contrast to 63 percent 1988. Foreign and joint venture banks' assets gradually increased from 5 percent in 1988 to 9 percent in 1996 (Table 13.3). The government attempted to strengthen the state banks by announcing plans for mergers and privatization, but only BNI, the largest of the state banks had gone public in late 1996 and no meaningful progress on mergers took place prior to the crisis.

The above-mentioned development led to intense competition among banks, which pushed interest rates up. As result, there had been a tremendous increase in private savings and deposits, from a mere Rp.35 trillion in 1988 to Rp.265.7 trillion in 1996. As the system was flooded with liquidity, banks' credits and the range of new products and services expanded rapidly as well. Banks ventured increasingly into unproductive and risky sectors, such as real estates and the like. The expansion of credit was also been directed to consumer lending, which was utilized for, among other things, purchase and speculation in property and stocks. This was especially the case in the early 1990s, especially 1994 when interest rates were low. The resulting asset price increases in the real estate and stock markets in turn progressively skewed investments towards these sectors as banks increased

Table 13.3 *Bank assets and liabilities (Rp. trillion and percent)*

	1988	1992	1993	1994	1995	1996
State banks*						
Loans (%)	61	44	42	42	39	36
Deposits (%)	57	41	38	36	33	30
Capital (%)	57	22	34	30	36	36
Total assets (%)	63	46	43	42	40	36
Private national banks**						
Loans (%)	17	36	41	46	49	52
Deposits (%)	21	47	49	55	57	61
Capital (%)	14	51	61	54	49	49
Total assets	16	37	41	46	48	52
Foreign & joint venture banks						
Loans (%)	5	7	9	10	10	10
Deposits (%)	7	5	5	6	6	6
Capital (%)	3	15	17	12	12	13
Total assets (%)	5	8	10	10	10	9
All commercial banks						
Loans (Rp. trillion)	46.3	141.6	173.5	210.7	259.0	315.7
Deposits (Rp. trillion)	35.5	107.3	130.4	155.5	201.5	265.7
Capital (Rp. trillion)	4.5	12.2	14.5	22.2	30.1	37.1
Total assets (Rp. trillion)	63.3	180.1	213.9	248.0	308.6	387.5

Notes:

* State banks include, BNI, BBD, BDN, BRI, Bank Exim, BTN and Bapindo.

** Comprised of some 164 private banks.

All commercial banks also includes regional development banks, which is relatively very small compared with the above categories.

Source: Bank Indonesia.

lending especially to the property sector based on inflated collateral prices. Hence the financial sector, the banking sector in particular, was increasingly vulnerable to negative shocks.

Second, Indonesia's business sector, the financial sector included, was characterized by weak corporate governance. Part of the reason for this may be traced to some distinctive features of Indonesia's business sector. First, many of the big corporations were family-owned. Most of the family-owned corporations had highly diversified and networked structures, and some of them included banks. Salim Group owned Bank Central Asia (BCA), Sinar Mas Group owned Bank Internasional Indonesia (BII), and many more (See Table 13.4). Second, although many of these banks had been listed on the stock market, the initial owners retained their

*Table 13.4 The top ten private bank affiliations and focus
(as of 31/12/96)*

Present bank	Total assets	Part of a group	Strategic focus	Status
Bank Central Asia	Rp.36.1tn	Salim diversified	All market segments	BTO
Bank Danamon	Rp.22.0tn	Danamon div.	Retail-commercial	BTO&M
BII	Rp.17.7tn	Sinar Mas	Retail-commercial	Recapitalized
BDNI	Rp.16.7tn	Gajah Tunggal	Retail-commercial	Closed
Lippo	Rp.10.2tn	Lippo diversified	Retail-commercial	Recapitalized
Bank Bali	Rp.8.0tn	Bali financial	Retail-commercial	BTO
Bank Niaga	Rp.7.9tn	Hasjim div.	Corporate-consumer	BTO
Bank Umum	Rp.7.1tn	Bob Hansan and Ongko Group	Retail-commercial	Closed
Panin	Rp.5.4tn	Panin financial	Retail-commercial	'A' category bank (sound bank)
Bank Duta	Rp.5.3tn	Berdikari div.	Retail-commercial	BTO

Notes:

BTO means bank taken over by IBRA

M means merged;

Recapitalized means recapitalized by the government which implies government now has around 80% of shares

Source: Pangestu and Habir (2001) based on Infobank magazine and interviews

control. Both BCA and BII were listed on the stock market, but the owners of Salim Group and Sinar Mas Group were still the majority shareholders. Third, interconnections between, on the one hand, family-based corporate ownerships and, on the other hand, corrupt entrepreneurial-minded officials, were quite common. Finally, it should also be noted that despite the increase in the number of banks the banking sector remained highly concentrated. As pointed out by Pangestu and Habir (2001), the top 10 private banks and the six significant state banks together accounted for 75 percent of total bank assets.

Given the foregoing, it is little wonder that banks had a little incentive to review their corporate lending carefully. Contrast the above with what Patrick (2001) considers as the necessary condition for high quality banks' debt monitoring, and it will immediately clear as to why violations of legal lending limits and other banking malpractices were common during the period. Patrick argues that the necessary condition is the independence of

the banks from the borrowers as well as from the government measures. Several other factors also contributed to creation of operating environments of perverse incentive with the conflict of interests and moral hazard they posed. The prevailing legal and regulatory mechanisms during the period under consideration were, in general, weak. As mentioned earlier, the rapid expansion of the banking sector after the comprehensive reforms in 1988 had not been accompanied by adequate prudential regulations and central bank supervision. This was due to, among other things, weak capacity and capability of the bank supervisors in the central bank. Moreover, as noted, the 1992 Banking Law also provided the government with a legal basis to ask banks to finance even controversial projects such as the Timor car. Finally, there were also implicit guarantees extended to certain groups and state-related banks or corporations (see Box 13.2 for examples).

Third, Indonesia's financial sector was rapidly integrated with the international financial market (see, for example, De Brouwer 1999). Financial integration and the opening up of the banking sector resulting from the 1988 reforms increased the presence of foreign banks. In 1990, there were already 15 joint venture banks established. Some 48 branches of foreign and joint venture banks were in operation. In 1992, the government increased capital requirements for setting up new banks, including joint venture banks. Capital requirements to set up the latter were double the amount required by the 1988 October package, which was still considered relatively low. Nevertheless, the number of joint venture banks increased from 29 in 1991 to 44 in 1997 with 90 branches. Four years after entry was opened for joint venture banks, foreign and joint venture banks loans were about Rp.10.1 trillion, almost ten times what they provided in 1988. In 1996, it reached Rp.29.8 trillion, about 10 percent of total bank loans. Credits allocated by foreign and joint venture banks were much higher than deposits that they could mobilize domestically as they channelled funds from other countries to Indonesian real sector.

The presence of foreign banks was intended to facilitate transfer of technology in skill and products, through technical assistance or foreign bank personnel moving to the local banks. However, it is unclear that increased efficiency due to competition was achieved based on two indicators, bank net and operating margins, which did not show a definitive declining trend. Part of the reason for this outcome is that, by crowding them out of their prime borrower, competition had increased the risk profile and overhead costs of domestic banks. Hence financial integration and the presence of foreign banks might have contributed to increased vulnerabilities of the financial sector.

BOX 13.2 EXAMPLES OF TOO BIG OR TOO IMPORTANT TO FAIL

1. *Bappindo*, the state-owned development bank, had been having problems for many years and in the late 1980s was discovered to have a large number of non-performing loans, including a case of serious corruption in order to obtain credit for large projects. Instead of closing down the bank or undertaking drastic restructuring efforts, the bank was allowed to continue to function and the sanctions to the corruption stopped at the officers' level and one business man who actually 'escaped' from prison.
2. *Bank Duta* was a private domestic bank that experienced large foreign exchange losses due to currency speculation. The Bank was already suffering losses due to foreign exchange positioning, but still went public with fraudulent financial statements. It held deposits of the State Logistics Agency and the foundations of Suharto, and as such was 'rescued' by 'persuading' one of the business conglomerates to contribute to a bailout plan. The manager of the Treasury division was jailed and the management of the Bank changed.
3. *Bailing out corporations close to the center of power*: two corporations in cement (i.e. Indocement) and a cold rolling mill which is the upstream of steel production (i.e. CRMI) which had a large stake of the Salim group were 'rescued' by the government coming in as shareholders.
4. *Implicit government guarantees* through providing captive market, special policy and directed lending (often involving state banks and/or central bank liquidity credits). One of the most blatant examples was the Timor National Car linked to the former President Suharto's youngest son. Timor was given special status of being allowed to import parts and components, and then later complete vehicles from Kia in Korea, duty-free. It was also provided with a captive market through government civil servants being given special preferences to purchase vehicles and police cars. Furthermore, banks including state banks were asked to give loans to the venture.

Given their more conservative and strict credit risk profile, foreign banks had largely focused on the corporate sector and within this segment had naturally focused their attention on home-based or existing multinational companies based in Indonesia and, in addition, the top-tier corporations, resulting in intense bank competition within this market segment. Furthermore, top-tier corporations, also largely with the help of foreign banks (investment and commercial banks) have been active in tapping the capital markets (both foreign and domestic) directly, either through the issuance of equity or debt (short-term CP and long-term bond) instruments. Stocks issued through the capital markets grew from Rp.27.6 trillion as of end-1991 to Rp.152.2 trillion by end-1995. For the same period bonds issued grew from Rp.2.2 trillion to Rp.5.3 trillion. The top-tier firms were obtaining the lower cost of offshore funding due to high domestic interest, the risk premium charged was also declining due to learning as well as reputation. For instance top-tier corporations such as Astra observed their spread on Eurobonds narrowing from an average of 2.5–3.0 percent in the late 1980s down to around 1.5–2.0 percent in the 1990s (Pangestu and Habir 2001).

Domestic banks trying to avoid competing head on with the foreign banks gradually shifted their strategic business focus on what they often called the middle market made up of second tier corporations and small and medium businesses, and individual consumers. Most of the top-tier private banks began to focus on the retail middle market as their major business in mid-1990s. Given information availability and transparency issues, entry into this relatively new segment meant that banks faced higher risk and inevitably experienced larger non-performing loan levels. Reflecting this higher risk, interest spreads on retail-type loans are normally 2–3 percentage points higher than a corporate loan. Prior to the crisis, average corporate lending rates were 19–20 percent, collateralized consumer loans were 22–23 percent, and security-free consumer receivables, such as credit card outstanding were in the 30-percent range.

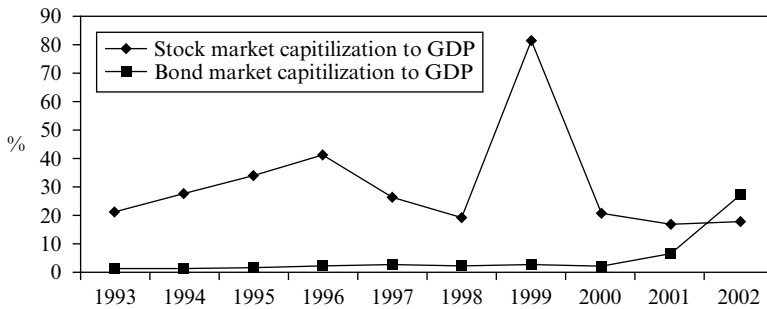
In addition, the rapid financial integration had also adversely affected Indonesia's financial sector; it made the sector increasingly susceptible to shocks originating from outside the country. Again, it may be argued that Indonesia was ill-prepared for such a possibility. The country has adhered to open capital accounts since the early 1970s, meaning capital was free to flow in and out of the country. In addition, the exchange rate regime adopted during the period also provided implicit exchange rate guarantee. Moreover, there were no limits imposed on private sector borrowing. Hence, in response to the high domestic interest rates and with the predictability of the exchange rate movement, large Indonesian corporations, banks included, increased their short-term unhedged external lia-

bilities in the years prior to the crisis. Data made available after the crisis provided information concerning the extent of off-shore borrowing by domestic banks and corporations, during the period leading up to the crisis. During this period, the banking sector's total foreign debt was estimated to be around \$16.7 billion, consisted of \$14.4 billion in the form of bank loans and \$2.3 billion in the form of securities. The corporate sector, on the other hand, accumulated much higher foreign debts, amounting to \$65.3 billion, \$57.6 billion of which were bank loans and \$7.7 billion in securities.

Detailed data from PEFINDO, a credit rating agency, which tracked the cross-border debt issuance of about 400 Indonesian companies, including banks, indicated several interesting trends. First, it appears that foreign borrowing increased rapidly in the period 1994–97, before abruptly ending when the crisis started. The main 'drivers' of the increased lending were that offshore borrowing was less costly than domestic borrowing and the issuance of the Central Bank's Yankee bonds in 1996 provided a benchmark for Indonesian entities. Other than the high domestic interest rates resulting from the tight monetary policy stance, domestic borrowing was more costly due to the relative inefficiency of the domestic financial markets and the high transaction costs of domestic borrowing. A second observation is that a large proportion or 80 percent of the corporate debt was short-term and issued to domestic-oriented companies, rather than export-oriented companies which would have the natural hedge of dollar earnings. In fact, the five most active cross-border borrowers during the period of observation were the banking and finance companies, followed by infrastructure, property and pulp and paper producers, and all but the last one are non-tradable sectors. The unintended bias towards non-traded goods was caused by the prevalence of large-scale domestic-oriented private investment projects in infrastructure (e.g., power, telecommunications, toll roads and water utilities), cement, chemicals, auto assembly and parts and components. Rising real wages combined with other cyclical factors, such as the downturn in the Japanese economy and the depreciation of the yen, caused a slow-down in Indonesia's export growth. Other than the absence of a natural hedge, the majority of cross-border borrowing or around 80 percent was not covered by future currency swap contracts (Pangestu and Habir 2001).

2.2.2 Implications for the Capital Market

As noted, the capital market reforms had led to a rapid increase in the number of firms issuing stocks. Meanwhile, the number of companies issuing bonds also increased, albeit at a slower rate. Bond market capitalization over GDP remains very small (see Figure 13.1).³ In the following



Source: Jakarta Stock Exchange, Surabaya Stock Exchange

Figure 13.1 Market capitalization (as percentage of GDP)

sections, we will explore the policies, legal framework and development of the stock and bonds market separately.

Before the 1987 deregulation, foreign investors were not allowed to buy stocks. Following the deregulation, foreign investors had been allowed, but restricted to owning a maximum of 49 percent of listed shares. On average (1992 – March 1997) foreign investors only accounted for 27.9 percent of the market capitalization value in JSX but stock trading was dominated by the foreign participants (60 percent).

Nevertheless, bank loans were the main source of funds for companies in Indonesia before the crisis. Based on 1996 data, net new bank lending amounted to Rp.98.8 trillion, compared to new IPOs and right issues of Rp.14.6 trillion and new bond issuance of Rp.2.8 trillion (Table 13.5). In other words, the banking sector provided about 85 percent of the total business finance, while bonds and equities contributed to only about 15 percent of the amount.

3. FINANCIAL DEVELOPMENT IN THE AFTERMATH OF THE CRISIS

3.1 The Crisis

The 1997 crisis delivered a severe blow to Indonesia's financial sector, and the banking sector in particular. Given the vulnerabilities discussed earlier, the exchange rate and interest rate shocks that were experienced at the onset of the crisis had a dramatic impact on the balance sheet of banks and highly leveraged corporations. The liabilities of banks increased sharply

Table 13.5 Indonesia: Financing of the economy

	Credits approved (in mn Rp)	Private debt securities: Bonds issued (in mn Rp)	Equity		Total
			IPO issued (in mn Rp)	Rights issued (in mn Rp)	
1990	26 453 000 (80.80)	535 000 (1.63)	5 221 651.6 (15.95)	527 248.9 (1.61)	32 736 901
1991	32 906 000 (96.79)	125 000 (0.37)	626 169.6 (1.84)	340 473.1 (1.00)	33 997 643
1992	41 552 000 (91.73)	1 641 533 (3.63)	743 665 (1.64)	1 361 236.4 (3.01)	45 298 434
1993	60 859 000 (90.18)	1 905 000 (2.82)	1 362 431.3 (2.02)	3 356 723.1 (4.97)	67 483 154
1994	68 681 000 (85.77)	929 520 (1.16)	4 804 494 (6.00)	5 661 450.5 (7.07)	80 076 465
1995	83 578 000 (88.49)	2 003 130 (2.12)	5 682 059.4 (6.02)	3 182 000.7 (3.37)	94 445 190
1996	98 796 000 (85.01)	2 841 080 (2.44)	2 662 207.3 (2.29)	11 924 194.7 (10.26)	116 223 482
1997	145 217 000 (84.30)	7 204 992 (4.18)	3 950 515.5 (2.29)	15 887 075.1 (9.22)	172 259 583
1998	194 563 000 (97.44)	150 000 (0.08)	68 125 (0.03)	4 890 935.7 (2.45)	199 672 061
1999	98 749 000 (42.24)	4 283 960 (1.83)	808 247 (0.35)	129 934 491.3 (55.58)	233 775 698
2000	72 994 000 (74.54)	5 613 000 (5.73)	1 772 196.1 (1.81)	17 548 875 (17.92)	97 928 071
2001	79 435 000 (90.68)	3 875 000 (3.28)	10 967 63.1 (1.25)	41 879 677 (4.78)	8 759 4731

Note: Figures in brackets represent percentage of economy.

Source: Statistik Indonesia, Annual Report BAPEPAM.

due to their own unhedged borrowing and interest rate exposures, whilst corporate distress affected the value of companies assets. At the early phase of the crisis, the non-performing loans rose to as much as 32 percent of total loans in Indonesia.

As the crisis deepened, the government asked the International Monetary Fund (IMF) for assistance and the first IMF letter of intent (LOI) was announced on 1 November 1997. The first LOI comprised of a bank-restructuring component. The main components of the package

included immediate closure of 16 small and deeply insolvent banks (market share: 2.5 percent) with protection limited to small depositors of up to Rp.20 million (around US\$6000) which accounted for 90 percent of the number of depositors in the banking system. However, the closures of the banks were not planned and executed well. The criteria for bank closures were unclear and led to speculation that more banks would be closed. The deposit guarantee of Rp.20 million also did not provide the comfort level needed. At this stage, the response of domestic investors was to switch their deposits from private banks to state banks with the perception of 'safety' rather than quality. Many also went to foreign banks or exchanged rupiah for dollars and repatriated their funds. As a result, during December 1997, Bank Indonesia's liquidity support to banks reached Rp.31 trillion or 5 percent of GDP. Some of the liquidity support was in fact funneled abroad (Lindgren et al. 1999).

To restore confidence, the government (with IMF approval) announced another bank restructuring package on 26 January 1998, which was comprised of three components. First, all bank liabilities were guaranteed, both on and off-balance sheet obligations, with subsequent automatic extensions every six months unless announced otherwise by the Indonesian Bank Restructuring Agency (IBRA). Derivative transactions (other than currency swaps), bank liabilities to affiliated parties and shareholders of 10 percent or more in the bank were excluded from this guarantee. Second, to supervise and restructure the banking sector, the IBRA was set up. IBRA's mandate was to close, merge or recapitalize troubled banks. The banks taken over and recapitalized would eventually be sold. IBRA was also to recover the transferred bad loans; and to monitor and sell corporate assets pledged or transferred to IBRA from former bank owners as collateral for emergency BI liquidity credits. IBRA was expected to complete these tasks in five years and after which the institution would no longer exist. Third, it was belatedly realized that recovery and bank restructuring couldn't be achieved without also focusing on corporate restructuring.

Despite the foregoing, the confidence crisis and deposit runs, as well as credit lines to domestic banks being withdrawn, continued so that liquidity support continued to swell. Interest rates began a steep ascent with Bank Indonesia Certificates (SBIs) fetching a high 70 percent p.a. interest rate and deposit rates also reaching 60–70 percent as banks sought to maximize their liquidity position to anticipate potential deposit runs, and given that inflation by then had already reached 50 percent. The negative spread experienced by the banking sector increased substantially during this period, further affecting its capital base. In October 1998, the equity of the private national and the seven state banks dropped to the negative territory, leaving

a major portion of the banking sector technically insolvent. The economy contracted at close to 14 percent in 1998 and bank NPLs reached 75 percent of total loans.

3.2 Bank restructuring

As noted, to restructure the banking sector, the government established IBRA, a powerful agency yet one which proved to be prone to political pressure. International experience and studies suggest that there are various options for undertaking bank restructuring. All the options entail tradeoffs between speed of restructuring, fiscal costs, incentives for bank performance and confidence in the banking system (Claessens 1998). For instance, bailouts would be the fastest option, but would entail the highest fiscal cost, the greatest disincentive for bank performance and financial discipline, and also not increase confidence in the banking system. Moreover, in the case of Indonesia, which faced a systemic crisis, bailouts just did not make any sense. The other extreme would be to close down unviable banks and pay off creditors and depositors. This would also be speedy, send a strong signal about financial discipline and involve relatively low fiscal costs (depending on the extent of unviable institutions), but would have a dire effect on the confidence in the banking system. Hence, the Indonesian government had opted for selective closures of the most unviable banks, combined with one of the other options of facilitating mergers of banks to recapitalize distressed banks with the option to sell them at a later date. Arguably, these options involve lower fiscal costs and moderate to better incentives for better bank performance and could restore the confidence in the banking system.

The main task faced by the government was to complete the task of determining viable and non-viable banks; dealing with non-viable banks, and recapitalising the remaining viable ones. To achieve this a clear criterion of viability is necessary, which in turn needs to be linked to the terms of operational restructuring in terms of imposing a cost to the existing owners (e.g. dilution of shareholding, forced consolidation, change in ownership/management) and ensuring subsequent proper prudential oversight. The blanket guarantee meant that the cost of recapitalization became the burden of the government. The cost of the restructuring was in turn intricately linked to the ability to resolve value-impaired assets by restructuring non-performing loans (restructuring, rescheduling, sale and swap), sale of assets and sale of banks taken over (BTO). The government had opted for a centralized structure to resolve the sale and restructuring of assets under IBRA, and this in turn led to a lot of political interference on IBRA.

The restructuring program was comprised of categorizing banks into three groupings based on an audit by international accounting firms. The first grouping, called A category banks, were those that had CAR above 4 percent, and were exempt from the program and could resume their operations. Nevertheless, the owners and managers of the A category banks had to be reviewed by the fit and proper test conducted by BI, and one third of them did not pass that test. The managers and commissioners who did not pass the test had to be replaced, and owners who did not pass the test were given 90 days to divest their shares.⁴

The next, B category, banks were those whose CAR fell between 4 percent and negative 25 percent. These banks were candidates for the recapitalization program, provided that their respective bank owners could provide 20 percent of the total new capital injection required to attain a CAR of 4 percent. Banks with CAR less than negative 25 percent were categorized as C banks and owners were given time to inject equity so they could graduate to the higher categories and be eligible for recapitalization. Banks in the C and B categories, whose owners could not add capital, would be taken over or closed by IBRA.

Ten banks whose owners were deemed to have violated their legal limit requirements were taken over by IBRA. The former owners were essentially asked to pay back the liquidity support obtained from Bank Indonesia and the amount of affiliated lending. Several owners had pledged some Rp.200 trillion of assets at their valuation as well as about Rp.1 trillion in cash. IBRA's advisors valued the assets at Rp.92.8 trillion and a tentative settlement was reached. A protracted debate ensued as to how much up-front cash owners should provide and there was political controversy as suggestions of restructuring of asset ownership emerged, including the possibility of giving some shares to cooperatives. In the end it was agreed that the obligations should be settled within four years and that 27 percent be realized in the first year.⁵

The main objective of the recapitalization program was to inject fresh capital into viable banks and to have burden sharing between the government and the private sector to restructure the banks. The government's contribution would be in the form of bonds while that of owners would be in cash. The owners could reacquire the share in the bank by repaying the government contribution and after three years, the government would have an independent valuation of the bank done. The owners had the first option to buy back the government share but after a specified period, the government could sell it to other investors. To encourage owners to inject new capital, the government allowed owners to retain control over the management of the banks. Category 5 loans or those already written off were transferred at zero-price to the Asset Management Unit of IBRA. The proceeds

from the resale of these loans would be used to buy back the government preference shares, giving the government the possibility of earning return on its capital injection and reducing the amount owners have to pay to reacquire the bank.

All of the state banks fell under C category, yet they were recapitalized after restructuring and merging some of them. Some regional development banks under the same category were also recapitalized. The progress on restructuring of state banks has been much slower. Four state banks, Bank EXIM, BDN, BBD and Bapindo were merged into one to become Bank Mandiri in September 1998. The corporate business segment of BRI was also merged into Bank Mandiri and BRI was delegated the task to focus on small businesses. The non-performing loans of the four banks were transferred to the Asset Management Unit of IBRA. The management of Bank Mandiri was entrusted to professionals with technical assistance from Deutsche Bank. Consolidation of the bank included retrenching of half of the staff and closing of branches. Bank Mandiri has been recapitalized and preparations are on the way for privatization. However, the restructuring of the management and incentive system appears not to be completed yet. As for the remaining three state banks (BNI, BTN and BRI), after submitting restructuring plans, changing the management of the banks, they have also been recapitalized.

In addition, the government also merged a number of banks as a part of the restructuring program. Among the 13 banks⁶ taken over by IBRA, nine were merged with Danamon, while BCA, Niaga and Bali remain as they are and have been recapitalized. The larger recapitalized banks are BII (affiliated with the Sinar Mass Group), Lippo (Lippo group) and Universal (Astra Group). There are four smaller sized banks also recapitalized: Bukopin (Cooperative Bank), Prima Ekspres, Arta Media and Patriot. Just recently, Prima Ekspres, Arta Media and Patriot were merged with Bank Universal and Bank Bali into a new bank named Permata Bank.

IBRA has also begun to divest its share of those banks it had taken over. In April 2002, IBRA sold a 51 percent share of BCA to Consortium Faralon Capital for US\$567.5 million leaving it with just 6.63 percent. In November 2002, IBRA sold a 51 percent share of Bank Niaga to Consortium Commerce Asset Berhad at Rp.1.057 trillion (around US\$117 million) leaving it with a 46 percent share. Just recently IBRA sold its 51 percent stake in Bank Danamon.

Finally, it is worth mentioning the cost of the banking restructuring program. Up to the year 2000, there were 67 private banks closed down and 11 banks taken over by IBRA. The cost of banking restructuring was estimated to reach Rp.655.3 trillion (about 165 percent of GDP), of which Rp.228.3 trillion was to replenish banks that were facing liquidity

Table 13.6 *The cost of bank restructuring*

Items	Book value	Market value	Recovery rate % ^(a)
<i>Assets (April 2001)</i>	541.8	207.9	38
Corporate equity as shareholders' settlements	131	70.7	54
Core asset from private and state banks	270.3	94.6	35
Non-core asset from private and state banks	8.5	3	35
IBRA's investment in recapitalized and BTO Bank ^(b)	132	39.6	30
<i>Liabilities (Dec 2000)</i>	655.3	655.2	
Government bond to Bank Indonesia	228.3		
Government bond to recapitalized bank	427		
Asset – Liability	–113.5	–447.28	

Notes:

(a) Calculated based on IBRA's strategic plan October 1999.

(b) Excluding IBRA's investment in state banks.

Source: Bank Indonesia and IBRA

shortages because of bank runs during the crisis (the central bank liquidity assistance – bantuan likuiditas Bank Indonesia, BLBI), and Rp.427 trillion to recapitalize a number of banks. On the other hand, IBRA only managed to get hold of assets with the total book value of about Rp.541.8 trillion, and with an even much smaller market value of about Rp.207.9 trillion, as in Table 13.6.

By 2001, there were 145 commercial banks in the system, 42 of which were government owned,⁷ 69 private national banks which have Capital Adequacy Ratio (CAR) greater than 4 percent (A-category bank), 24 joint venture banks⁸ and 10 foreign banks (6 percent). Total assets of the banking sector, which was about Rp.528.9 trillion in 1997, increased to Rp.1040 trillion in 2001, 38.3 percent of which were government bonds and 6.8 percent SBI. The state bank group held 48.5 percent of the total assets, taken-over banks group 17.3 percent and domestic private banks 10.1 percent. Foreign and joint venture banks' assets accounted for about 12 percent of total banking sector.

3.3 Institutional and Infrastructure Development

3.3.1 Banking Sector

There were some changes in the laws and regulations concerning the banking sector introduced after the crisis that were, arguably, pivotal for further development of the sector. Most notably among them is the new law concerning Bank Indonesia. Under the new law, BI becomes an independent body with the sole objective of maintaining the stability of the Rupiah. In the past BI was burdened with multiple objectives. BI is free to use monetary policy instruments, regulate and supervise the national payment system and the commercial banks, in its efforts to attain the above-mentioned objective. Accordingly, the Monetary Board was abolished and BI alone is responsible for conducting monetary policy. On related issues, BI is not permitted to lend to the government, nor to purchase government bonds, except in the secondary market.

Another important provision of the law is concerning the role of BI as the lender of last resort. Under the new law, BI may provide banks with credit only for a maximum of 90 days, and this must be fully secured by sound and liquid collateral. This limitation should be seen as a safeguard against a possibility that BI will, under certain circumstances, provide banks with large but unsecured credits, as it did during the recent crisis. The law also calls for the transfer of the job of prudential supervision of banks to a new, independent institution by the end of 2002. However, given strong opposition from BI, this provision has not been implemented.

Another important piece of legislation enacted recently was a law concerning amendments to the 1992 Banking Law. Under the revised law, a foreign partner in a joint venture bank no longer needs to be a bank itself. Foreigners can now acquire shares in Indonesian banks directly, rather than only through purchases on the stock exchange as previously required. This makes foreign non-bank financial institutions and other corporations eligible to purchase stakes in troubled banks. Moreover, whereas before the proportion of foreign-owned shares had to be a maximum of 49 percent, there is now virtually no limit at all. However, the law still does not allow for the establishment of fully foreign-owned banks. Finally, the law also opens the way for full privatization of the state banks.

Attempts to improve banking supervision and prudential regulations have also been made. Under the IMF-led reforms a comprehensive set of changes on prudential regulations have been undertaken, ranging from credit assessments and allocation, transparency in banks' financial conditions, to minimum CAR and exit policy. On the CAR issue, Bank Indonesia set the end of 2001 as the target date for the compliance of the minimum CAR of 8 percent. In addition, BI has also set a maximum 5 percent target

for banks' non-performing loans. The regulation on minimum CAR is a part of Indonesia compliance to Basel Core Principles. Under the regulation, a bank that fails to comply with minimum CAR requirement would be put under special surveillance. At the beginning, commercial banks complained over the plan of imposing higher CAR requirements. At the end of 2001, four banks under IBRA and two A-category banks failed to comply with this new requirement. The four banks under IBRA were then merged with Bank Bali into a new Permata Bank, while the two A-category banks agreed to add capital.

Concerning the capital requirement, some have argued that BI should set a higher minimum CAR requirement, perhaps by doubling the current level to 16 percent. Fane and McLeod (2001), argue that a higher minimum CAR will limit the moral hazard created by explicit deposit insurance or implicit government guarantees. Pangestu and Habir (2001), point out a higher minimum CAR level will encourage further consolidation in the banking sector. The higher level of capital requirement would imply serious initial commitment of owners and management who want to be in the banking business, and also protect franchise value from imprudent and unfair competition.

In terms of supervision, the capacity and performance of central banks shows improvement, albeit slowly. IMF's assessment based on the compliance with the 25 Basel Core Principles shows that in 2002 Indonesia fully complied with and implemented two principles: CP 1 concerning preconditions for Effective Banking Supervision, which covers Objectives, Independence and Resources, Legal Framework, Enforcement Powers and Legal Protection; and CP2 regarding Permissible Activities of Banks. Indonesia also achieved the status of largely compliant for the other 10 principles (Bank Indonesia, 2002).

3.3.2 Capital markets and NBFIs

There have been some tangible developments the capital markets as well. As noted, the 1995 Capital Market Law authorized the establishment of two new SROs. One would act as a clearing and guarantee house and would set rules on guarantee, securities transaction clearing, and other related activities. Another would act as a central depository and settlement institution, which would set rules on depository, securities transaction, and other related activities. Hence, in 1998, the Indonesian Clearing and Guarantee Corporation (PT Kliring dan Penjaminan Efek Indonesia – KPEI) and the Indonesian Securities Depository and Settlement Corporation (PT Kustodian Sentral Efek Indonesia – KSEI) were set up to undertake the above duties respectively. The key service currently offered by KSEI is the centralized settlement of exchange trades. This system includes a trading

Table 13.7 *Indonesia banks: assets and liabilities (1997–2002) (in trillion Rp. and percentage)*

	1997	1998	1999	2000	2001	Nov. 2002
State banks						
Loans (%)	40	43	49	37	38	40
Deposits (%)	33	45	43	43	45	43
Capital (%)	30	26	82	37	37	39
Total assets (%)	38	40	50	51	50	47
Private national banks						
Loans (%)	45	42	26	33	34	38
Deposits (%)	54	44	43	42	40	42
Capital (%)	55	48	47	45	45	40
Total assets	47	46	37	36	34	38
Foreign banks						
Loans (%)	5	6	12	16	14	10
Deposits (%)	8	6	9	9	9	7
Capital (%)	4	(2)	(3)	1	2	7
Total assets (%)	7	7	8	8	10	9
Joint venture banks						
Loans (%)	8	7	10	10	9	7
Deposits (%)	3	3	3	3	3	2
Capital (%)	9	3	(17)	12	10	8
Total assets (%)	7	6	5	4	4	4
All commercial banks						
Loans (Rp. trillion)	408	540	245	287	321	381
Deposits (Rp. trillion)	327	536	587	673	766	802
Capital (Rp. trillion)	47	(99)	(22)	51	67	94
Total assets (Rp. trillion)	529	762	789	985	1040	1060

Notes: () means negative. See also Table 13.3.

Source: BI

system, settlement, a central depository system and broker accounting. These measures are expected to improve the integrity and liquidity of the market. The system could also accommodate potential developments on domestic and international markets. The legal aspect of the development of the electronic-based bond clearing system is also under intensive consideration, since there is a significant legal difference between shares and bonds.

In addition to the above, several other measures have also been undertaken, i.e., the introduction of an automated trading system at both JSX, namely JATS (Jakarta Automated Trading System) and at SSX, namely

S-MART (Surabaya-Market Information and Automated Remote Trading). Meanwhile, both KPEI and KSEI have introduced electronic systems to expedite transactions. For KPEI, it was a new, electronic clearing and guarantee system, known as e-CLEARs and for KSEI it was a computerized central depository services and book entry settlement of securities transaction known as C-BEST. The settlement through KSEI is done on the basis delivery versus payment (DVP), in that the delivery of securities and cash payment are performed concurrently. Finally, since September 2002, the settlement cycle has been shortened from four days (T+4) to three days (T+3). This measure was taken to boost efficiency and reduce settlement risk, increase market liquidity and was seen as an effort to match up to international capital market practices.

Concerning foreign participation in the capital market, the government has removed the regulation that limited foreign ownership of stocks to a maximum of 49 percent of listed shares. The change was essentially a crisis-driven policy intended to turn around the overall investment orientation, yet thus far it did little to increase foreign investment. Domestic security and political instability were still dominant factors in determining foreign investors' decisions.

In security companies, foreign participation is limited to 85 percent. A foreign financial company other than a security company is allowed to own up to 85 percent of the shares of a joint venture security company, while a foreign security company is allowed to own up to 99 percent of shares of a joint venture company.

The insurance sector is relatively small. In 2001, the total assets of the insurance industry were about US\$6.3 billion, down by 10 percent compared to 1997. Life insurance is the largest part, having 35 percent of total insurance sector total assets, followed by *social* insurance with 26 percent.

In the pre-reform period, the insurance business was state-dominated. The nine largest companies accounted for about 84 percent of the industry total assets, of which only one company was completely private owned (Cole and Slade 1996, p. 239). Post 1988 reforms, insurance business has been dominated by private companies. In Indonesia, insurance business can be classified into two broad categories: general insurance business and social insurance, which is compulsory for employees. In life insurance, private nationals with 36 companies and joint venture companies accounted about 42 percent and 48 percent of the total assets of the life insurance industry, respectively. While in the non-life insurance business, 79 private national and 22 joint venture companies accounted for about 63 percent and 19 percent of the total non-life insurance industry, respectively. The four reinsurance companies are all private nationals, with total assets of US\$65 million.

Table 13.8 Insurance investment (1997–2001)

	1997	1998	1999	2000	2001
Investment (total in US\$ billion)	5.06	3.46	4.11	3.42	5.12
Share (%)					
Bank deposits	62	72	61	59	58
Stocks	4	3	8	4	2
Bonds	5	3	4	11	9
Others	29	22	28	27	30

Source: Directorate of Insurance, Ministry of Finance.

Gross premiums collected in 2001 reached US\$2.3 million, about 1.58 percent GDP. Non-life insurance accounted for about 44 percent, life insurance accounted for about 39 percent, companies administering social insurance and employee's social security accounted for about 11 percent and companies administering social insurance and employee's social security accounted for about 6 percent. In the period of 1997–2001, gross premiums collected experienced 24 percent annual growth. The highest increase in gross premium was in companies administering insurance for civil servants and the armed forces. Meanwhile, the amount of gross claims paid by the insurance industry in 2001 was US\$1.4 billion, about 64 percent of total gross premium collected. Although the insurance industry is one of the largest investors in the capital market, its investment portfolio in 2001 was actually dominated by bank deposits, which accounted for about 58 percent (see Table 13.8). Meanwhile, 13 percent were invested in bonds, 4 percent in stocks, and 1 percent in mutual funds. The remaining was invested in promissory notes, private placement, land and property.

4. PRESENT CONDITIONS AND THE REMAINING CHALLENGES FOR THE FINANCIAL SECTOR

There are a number of key features of Indonesia's financial sector that need further discussion. The first one concerns the structure of the banking sector. Although many banks were liquidated during the crisis, the number remains considerably high with pervasive government's control of the system. As of January 2003 there are 141 banks consisting of five state-owned banks, 76 private domestic banks and 34 foreign and joint venture banks.⁹ Most of the banks are relatively small in size; in terms of assets,

the sector is highly concentrated. Four out of the five biggest banks in terms of assets in Indonesia were state-owned banks. In 2002, the five state banks' share of the banking sector total assets was about 48 percent. Seven out of the ten biggest commercial banks, in terms of assets, accounted about 70 percent of total bank assets.

The performance of those government banks is mixed. Bank Mandiri, the biggest bank in 2001, has a CAR of 26 percent, non-performing loans (NPL) of 10 percent and loan to deposit ratio (LDR) as low as 25 percent. One should be very careful in interpreting the data, however. Bank Mandiri received a large amount of recapitalization bonds, worth about Rp.178 trillion. In addition it has also purchased a large amount of assets from IBRA, not all of them have been restructured, and hence increased the fraction of its risky assets. The combination of less liquid recapitalization bonds and a large amount of risky assets makes Bank Mandiri vulnerable to any financial shock. The second largest bank, the BNI 46, a publicly listed bank where the government is the majority shareholder, had a CAR of 14 percent and NPL as high as 19.5 percent, although during the early period of restructuring, all bad loans went to IBRA. BRI and BTN were among the ones which had LDR higher than 40 percent for different reasons. BRI focused on SME financing and BTN focused on home and property loans.

The prevailing view among many Indonesians is to have further consolidation in the banking sector through mergers. It has been argued that a merger can increase expected future profits either by reducing expected costs or by increasing expected revenues (BIS 2001). Economies of scale and economies of scope resulting from a larger bank are among the factors that may lead to a reduction in costs. Meanwhile, a merger can lead to increased revenues because a bigger size allows bank to better serve larger customers; increase product diversification allowing firms to offer customers a 'one-stop shopping' for a variety of different products; increased size or market share making it easier to attract customers; etc.

The above should be measured against the potential drawbacks of a merger. A merger increases market concentration, which may sometimes enhance monopoly power, allowing the merged bank to increase profits by setting prices that are less favorable to customers. Moreover, bigger banks are not necessarily more efficient than smaller ones, as the recent banking crisis readily demonstrated. Most the banks that survived the crisis were relatively small in size (Fane and McLeod 2001).¹⁰ Perhaps a more important issue that needs to be considered before promoting further consolidation in the banking sector is the blanket guarantee. Arguably, the guarantee can increase moral-hazard-related problems in the banking sector. Bigger banks are likely to exacerbate this type problem through a 'too big to fail' syndrome. In addition, it is also important to avoid more

mergers through coercive measures and let market forces to do the job instead. A merger by coercion does not necessarily create a better bank, as the case of Bank Mandiri clearly indicates. As noted, setting a higher minimum CAR may encourage small banks to merge with each other or with foreign banks.

It may also be added that there is a need to reduce government control of the banking sector. Past experience suggests that consistent good performances of state banks cannot be taken for granted. An implicit government guarantee, even without blanket guarantee or deposit guarantee, may induce state banks to behave imprudently. State assets in the banks under IBRA will eventually be sold. The government needs to expedite the privatization of the state banks.¹¹

The second feature concerns the provision of credits by banks. There have been some concerns that banks are still reluctant to extend loans to corporate sectors. The average loan to deposit ratio among domestic banks (LDR) is less than 50 percent, well below that before the crisis, which was about 135 percent. In 1999, the LDRs of the domestic banks had dropped significantly but were still above 50 percent. The ratios dropped further since then, except for the A-category domestic private banks. Meanwhile, deposits mobilized by the banking sector have increased significantly since the crisis, from Rp.327 trillion in 1997 to Rp.802 trillion in 2002.

There are at least two possible reasons as to why LDR remains low. The first one is the corporate sector has not recovered from the crisis. Part of the reason is the failure to restructure the corporate sector. This may explain why the level of non-performing loan (NPL) stays above the target set by BI. Many companies are still facing difficulties in servicing their debts. Another explanation is that banks prefer to hold Bank Indonesia certificates (Sertifikat Bank Indonesia, SBI) as the prevailing SBI rates remain high. However, recent trends shows a tendency for the SBI rates to fall as the inflation pressure diminishes.

In contrast to the above, joint venture and foreign banks LDR stood as high as 514 percent. Comparing joint venture and foreign banks is misleading, however, as foreign and joint venture banks mobilized less deposits compared to domestic banks due to their function rather to recycle savings from other countries, mainly developed markets. But it should also be noted that they continue to extend loans. Most of these loans go to the retail sector, like the domestic banks'.

The third key feature is concerning the blanket guarantee. Five years after the crisis and the blanket guarantee stays intact. The guarantee covers all liabilities of domestic commercial banks and rural banks to depositors as well as to creditors. It seems that the government will begin to phase out the guarantee only after a deposit insurance institution has been established.

There are at least two issues associated with the prolonged application of the guarantee. The first issue is regarding how to prevent the emergence of the moral hazard resulting from such a wide range of guarantees. In this case there is no substitute for consistent enforcement of prudential regulations on the part of BI. In addition, as Fane and McLeod (2001) argue, it may be necessary to increase the minimum CAR requirement from the current level of 8 percent to a higher level of say 15 percent. The owners of a bank which is unable to meet the minimum CAR either decide to merge the bank with other banks or put the bank up for auction.

The second issue concerns the best way to phase out the guarantee. Actually, in line with the gradual improvement in the conditions of the banking sector the government could at least begin to gradually phase out guarantees on certain types of bank liabilities to creditors. Under the law, the government should announce such a plan six months in advance and, hence, the government would have enough time to assess the likely market reactions to the plan.

The fourth feature concerns the absence of independent supervisory agencies for the capital markets and the insurance industry. As stated, Bapepam, the capital market supervisory agency, is embedded in the Ministry of Finance and for that reason it becomes liable to any pressure from the government. Incidentally, it appears that Bapepam is also deficient in the supervisory capacity as the recent Lippo Bank case suggests. The case involved the issuance of two different third-quarter 2002 financial reports by Lippo Bank, both of which, it was claimed, had been audited. One report depicted Lippo Bank as a healthy bank while the other showed the bank was short of capital. Initially, neither Jakarta Stock Exchange where Lippo Bank was listed, nor Bapepam as the stock market supervisory agency, saw any potential fraud associated with those reports. Only after the media exposure intensified did the two agencies decide to reprimand the management of the bank.

On a related issue, as noted, BI Law provides that BI should transfer the job of bank supervision to a new, independent institution, by December 2002. The government has a plan to establish a super agency that will take over not the task of supervising banking sector, but also that capital market and non-bank financial institutions. However, it seems that it will take longer before such an institution is established. BI for instance is resisting the pressure to give up its banking supervisory role.

Finally, just like capital markets, the insurance industry is also in a great need of an independent and effective regulatory and supervisory agency. At the moment, it is the Directorate of Insurance and Ministry of Finance, which assumes these tasks. Like Bapepam, the directorate lacks the capacity, i.e., human resources, to do the job effectively as reflected in a recent

case involving PT Manulife Indonesia, an insurance company. PT Manulife Indonesia is the fourth largest joint venture insurer in Indonesia, with over 10 percent market share in the country's life insurance market. Manulife's case began after the Canadian-based insurance giant purchased its ex-partner's, Dharmala Sakti Sejahtera (DSS), 40 percent shares in the company at an auction run by the Ministry of Finance. DSS later accused the Canadian-based company of fraud and took the case to the South Jakarta District Court. The court declared PT Manulife Indonesia bankrupt. However, under the insurance law it is the Directorate of Insurance that has authority to declare an insurance company bankrupt. In its response to an appeal from the company, the Supreme Court later overturned the district court decision and the judge involved is under investigation for possible corruption. This case is a clear example of ineffective regulatory agency, i.e., the Directorate of Insurance, and a corrupt justice system. It should also be added that the Directorate is prone to conflict of interests, especially when dealing with state-owned insurance companies.

5. CONCLUSION

By the year 2002 the financial sector remains fragile. Since the crisis, efforts have been made to improve the performance of the sector. Yet, financial reforms should continue. Although there are about 140 banks in the system, the sector is still, nevertheless, highly concentrated. Arguably, further consolidation is needed, either through mergers or acquisitions, to make those banks more able to withstand intense competition that is likely to happen within the sector in the coming years.

As argued, Indonesia's financial sector is not in a position to become a main regional financial sector, at least not in the foreseeable future. Rather, future reforms should focus on improving its efficiency in serving domestic customers. Global financial integration makes it easier for domestic investors to get direct access to other financial centers for their services. Indonesia-based financial companies should at least aim at becoming the go-between for, on the one hand, domestic investors/borrowers and, on the other, international financiers. This would happen if the local-based financial firms could provide those services at lower costs than, say, a direct access. A greater degree of domestic competition is one way to bring the objective around.

However, as noted, the severity of the recent financial crisis might partly be attributed to the rapid financial integration prior to the crisis for which the financial sector was ill-prepared. It is essential therefore to ensure

continued improvements in prudential regulations and supervision as well as in corporate governance. Factors that may exacerbate problems associated with moral hazard and conflict of interests need to be removed or fixed. The blanket guarantee needs to be phased out and/or replaced with a deposit insurance scheme. The privatization of state-owned banks and the introduction of independent regulatory agencies for capital markets and the insurance industry need to be done urgently.

Finally, it should also be mentioned that some non-financial factors also play important roles in financial development. A financial contract is nothing but an exchange of a sum of money today for a promise to return more money in the future. Whether such an exchange will take place depends upon, among other things, enforceability of contracts, hence upon on the reliability of the legal system. Unfortunately, as indicated by the recent Manulife case, Indonesia's legal system is rather unreliable, to say the least. Improvement in this respect will undoubtedly help Indonesia's financial firms to compete with other financial firms in the region.

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NOTES

1. The capital requirement to establish a domestic bank was Rp.10 billion.
2. This particular Article was amended in 1998.
3. There are several reasons behind the peak in stock market capitalization in 1999:
 1. The secondary market recovered with increased trading volume on the stock exchanges (in the 2nd quarter),
 2. Favorable investors' sentiment following the successful elections and People's Consultative Assembly Meeting in October 1999 drove investors' trading activities upwards: daily trading volume on the JSX increased by 97.4 percent from 90.6 billion shares in 1998 to 178.8 billion shares in 1999. Turnover increased by 48.4 percent from Rp.99.7 trillion in 1998 to Rp.147.9 trillion in 1999.
 3. Many companies went public, fifty issuers conducted public offerings in 1999, compared to 23 issuers in 1998. Most issuers used the proceeds of the offerings to restructure capital and to service debt.
4. Some have questioned the appropriateness of the test, arguing that BI, which conducted the test, does not have the necessary capability to undertake such a test.
5. The former owners of BTO banks were barred from reassuming the ownerships of those banks.
6. The 13 taken-over banks are Bank Danamon, Bank Tiara Asia, Bank PDFCI, Bank Central Asia (BCA), Bank Duta, Bank Nusa Nasional (BNN), Bank Risjad Salim Internasional (RSI), Bank Tamara, Bank Pos Nusantara, Bank Jaya International, Bank Rama, Bank Niaga and Bank Bali.

7. The latter comprised of 5 state banks, 4 taken-over banks, 7 recapitalized national private banks and 26 regional banks, 12 of which were also recapitalized.
8. Some joint ventures were either liquidated or merged.
9. The four banks under IBRA, i.e., Bank Danamon, BII, Permata Bank and Lippo Bank, are included in the private domestic banks.
10. It needs to be stated, however, that most of the larger banks before the crisis were either state-owned banks or banks that were affiliated with big corporations, e.g., BCA with Salim Group and BII with Sinar Mas Group. State-owned banks were among the badly managed banks, while affiliation between banks and big corporations led to agency problems, e.g., violation of legal lending limits to affiliated companies.
11. Bank Mandiri is scheduled to be privatized: an IPO of 15 percent of the government's share in the bank was launched in July 2003.

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APPENDIX

Appendix 1. Indonesia: Financial market deregulation and re-regulation 1983–99

Reform	Main contents	Some notes
June 1 1983 Banking Deregulation	<ul style="list-style-type: none"> • Removal of interest rate control for state banks • Reduction of liquidity credit • Removal of credit ceilings 	<ul style="list-style-type: none"> • Rise in deposit rates • Some fall in intermediation costs • However, liquidity credits increase
April 1984	<ul style="list-style-type: none"> • Removal of holding tax and introduction of VAT • Rationalization of income and sales tax 	<ul style="list-style-type: none"> • Increased government revenue
October 1986	<ul style="list-style-type: none"> • Removal of ceiling on Central Bank Swap 	
December 1987 Capital Market Deregulation	<ul style="list-style-type: none"> • Removal of requirement of minimum 10 percent profit against equity and relaxation of rules for new issues and company listings • Granting of permission to foreign investors to purchase up to 49% of listed stocks • Introduction of bearer stocks • Opening of the Indonesian Parallel Stock Exchange companies (later on in 1995 merged with the Surabaya Stock Exchange) aimed at assisting small to medium sized companies • Removal of maximum 4 percent limit in daily price fluctuations 	<ul style="list-style-type: none"> • Helps companies intending to go public • Increases the demand for stocks by increasing the number of investors • Adds to the variety of securities traded • Gives new companies with insufficient profit a chance to raise funds from the capital market as long as they have good prospects • Allows market mechanism to fix its own price
October 27 1988, (PAKTO) Banking and Capital Market Deregulation	<ul style="list-style-type: none"> • Opening up of licenses for new banks, including joint ventures • Lending limits regulation • Reserve requirements lowered • Imposition of 15 percent withholding tax on interest on bank deposits 	<ul style="list-style-type: none"> • Opening up of many banks and joint ventures • Intense competition between banks • Rising interest rates and falling spreads initially

Appendix 1. (continued)

Reform	Main contents	Some notes
	<ul style="list-style-type: none"> • Imposition of limits on amount of credit granted for individual debtors to a maximum 20 percent, and for group debtors, maximum 50 percent of net worth • Determination of conditions for minimum equity to establish banks 	<ul style="list-style-type: none"> • Equalizes tax treatment for investment in banking products and capital market facilities • Encourages banks or debtors that have reached or exceeded the limits to increase capital or improve capital structure, i.e. by selling stocks in the capital market • Makes capital market an alternative by increasing equity
December 1988 (PAKDES) Capital Market and NBF	<ul style="list-style-type: none"> • Deregulation of capital markets. • Reduction of government role in stock exchange • Foreigners can buy stock. • Deregulation of insurance industry • Rationalization of financial services sector • Creation of opportunity for private sector to establish and operate private stock exchange out of Jakarta 	<ul style="list-style-type: none"> • Sharp increase in capital markets activity and index. • Many major companies went public • Gives choices to companies of capital market in which to list their stock or bonds
March 1989 (PAKMAR) Banking	<ul style="list-style-type: none"> • Banks cannot invest in stocks • Foreign borrowing ceiling replaced by a maximum net open position of 25 percent of capital. • Elimination of requirement of Bank Indonesia approval for medium/long-term loans 	
1990, January (PAKJAN)	<ul style="list-style-type: none"> • Phasing out of liquidity credit system (except for certain credits to BULOG) 	

Appendix 1. (continued)

Reform	Main contents	Some notes
Banking	<ul style="list-style-type: none"> National banks required to allocate a minimum of 20 percent for small businesses 	
February 1991 ' <i>Sumarlin Shock</i> '	<ul style="list-style-type: none"> Withdrawal of Rp.8 trillion (US\$ 4.2 billion) state enterprise deposits from commercial banks to BI 	<ul style="list-style-type: none"> Using banks as part of monetary operation Improve current account
Banking	<ul style="list-style-type: none"> Prudential standards widened to encompass capital adequacy Re-imposition of controls on banks' borrowing overseas 	<ul style="list-style-type: none"> Dampen inflation Increasing tendency of re-regulation
February 1992	<ul style="list-style-type: none"> Foreigners permitted to purchase shares in domestic banks listed in the stock market 	<ul style="list-style-type: none"> Led to rapid growth of stock market
Banking and Capital Market	<ul style="list-style-type: none"> State banks permitted to list on the stock market 	
13 July 1992 Capital Market	<ul style="list-style-type: none"> Bapepam transferred its executive function to JSX 	<ul style="list-style-type: none"> Privatization of the JSX, and limitation of Bapepam to a supervisory role
1995 Banking and Capital Market	<ul style="list-style-type: none"> Re-imposition of control on bank lending Extension of central bank control to bank involvement with commercial paper issuance Extension of central bank control to non-bank financial companies Capital Market Law: Securities companies can offer full securities administrative services to clients Allow mutual funds Bapepam has criminal investigatory powers and sanctions Guarantee from Clearing Guarantee Institution 	<ul style="list-style-type: none"> Banking sector re-regulation Capital market de-regulation

Appendix 1. (continued)

Reform	Main contents	Some notes
1996	<ul style="list-style-type: none"> • Increase in reserve ratio, tightening of licensing on new bank branches • 1995 Capital Market Law put into effect 	<ul style="list-style-type: none"> • Financial sector re-regulation
1997 Banking and Capital Market	<ul style="list-style-type: none"> • Banking: further increase in required reserve ratio, tightening of prudential regulation • Securities companies can offer full securities administrative service to client • Removal of 49 percent limit on foreign investment in listed companies (except banks) 	<ul style="list-style-type: none"> • Financial sector re-regulation • Capital market deregulation
1999 Banking	<ul style="list-style-type: none"> • The maximum number of listed shares and foreign ownership in banks set to 99% 	

Source: Pangestu (1996), Seki and Watanabe, 1998, McLeod (1999), IMF Letters of Intent.

Appendix 2. IBRA banks and state-owned banks

	Asset total 2001
Bank Mandiri	262 290 995
Bank Negara Indonesia	129 053 150
Bank Rakyat Indonesia	76 195 195
Bank Danamon Indonesia	52 680 068
Bank Internasional Indonesia	30 754 466
Bank Tabungan Negara	26 509 197
Lippobank	23 810 986
Bank Bali	13 001 598
Bank Patriot	193 215
Bank Universal	11 114 391
Bank Prima Express	1 280 386
Bank Media	1 014 614
Total assets (IBRA)	627 898 261
Total assets including state-owned	1 040 000 000
SHARE	60

Appendix 3. Banks under IBRA, as of June 2002

	IBRA ownership
Niaga	97.12
Danamon	99.35
Lippo	59.25
BII	56.68
Bali	98.23
Artamedia	76.91
Patriot	80.99
Prima Express	88.64
Universal	78.65

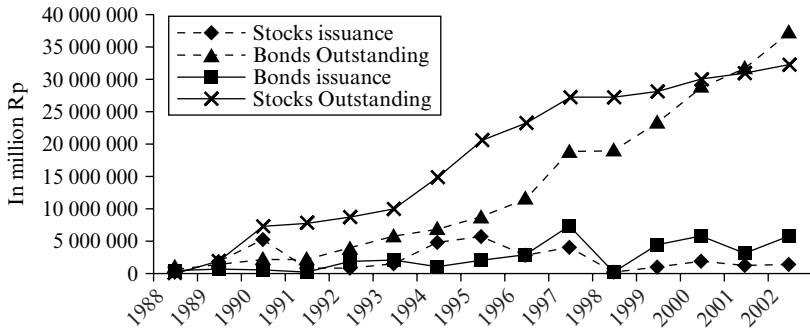
Notes: Bank Bali, Patriot, Artamedia, Prima Express and Universal were recently merged into a new bank (Permata) and Niaga was sold in November 2002 to Malaysian consortium.

Source: IBRA

Appendix 4. Average daily trading value for top 10 stocks, December 2002 (Rp billion)

Stock	Regular	Non-regular	Total	Non-regular (% of total)
Indosat Tbk	1019.3	4829.9	5849.2	82.57
Telekomunikasi Indonesia Tbk	1045.8	156.9	1202.7	13.05
Astra Internasional Tbk	567.9	58.2	626.1	9.30
HM Sampoerna Tbk	307.9	29.9	337.8	8.85
Bank Central Asia Tbk	295.5	24.0	319.5	7.51
Gudang Garam Tbk	234.3	12.9	247.2	5.22
Ramayana Lestari Sentosa Tbk	156.7	9.7	166.4	5.83
Indofood Sukses Makmur Tbk	3.8	7.1	10.9	65.14
Astra Agro Lestari Tbk	108.953	4.8	113.8	4.22
Limas Stokhomindo Tbk	110.7	0.1	110.8	0.09
Total Top 10	3850.853	5133.547	8984.4	57.14

Source: Jakarta Stock Exchange



Appendix 5. Value of stocks and bonds issuance and outstanding

Appendix 6. Indonesia: Capital market summary (1991–2002)

Market value, end of period	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
US\$ rate at closing	1994	2062	2110	2200	2307	2382	4650	8068	7100	9380	10345	8905
Bond (corporate) market capitalization*	n/a	n/a	4.7	4.9	6.4	8.9	15.2	13.9	14.2	18.9	83.5	419.5
Stock market capitalization (total)	35.3	48.6	123.4	207.5	310.9	406.6	301.5	336.6	859.5	485.4	437.2	496.7
JSX	16.4	24.8	69.3	103.8	152.2	215.0	159.9	175.7	451.8	259.6	239.3	268.7
SSX	18.9	23.8	54.1	103.7	158.7	191.6	141.6	157.9	407.7	225.8	197.9	228
GDP nominal (current price)	227.5	259.9	329.8	382.2	454.5	532.6	627.7	942.8	561.5	1264.9	1449.4	1610
Number of listed and non-default Issuers	n.a.	n.a.	16	24	37	38	49	41	36	n.a.	n.a.	n.a.
Number of listed companies (JSX)	139	153	172	217	238	253	282	288	277	287	316	331
Total trading volume (SSX + JSX)	1.008	1.738	4.106	5.784	12.36	31.07	81.5	92.82	185.52	141.09	157.12	176.7
Trading volume-JSX (billions)	1.0	1.7	3.84	5.29	10.64	29.53	76.6	90.6	178.5	134.53	148.4	171.2
Trading volume-SSX (billions)	0.008	0.038	0.266	0.494	1.72	1.54	4.9	2.22	7.02	6.56	8.72	5.52
Total trading value (SSX + JSX)	5.82	8.09	20.24	27.26	37.61	79.83	131.14	102.80	161.07	132.75	100.22	132.2

Appendix 6. (continued)

Market value, end of period	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Trading value-JSX (trillion Rp)	5.78	7.95	19.09	25.48	32.36	75.73	120.39	99.68	147.88	122.77	97.52	120.7
Trading value-SSX (trillion Rp)	0.04	0.14	1.15	1.78	5.25	4.1	10.75	3.12	13.19	9.98	2.7	11.51
SBI 1-month (%)			8.83	12.44	13.99	12.8	20	38.44	12.51	14.53	17.62	12.99
SBI 3-months (%)			9.3	12.7	14.25	14.13	12.25	39	12.75	14.31	17.63	13.12
Stock market (JSX + SSX) capitalization to GDP	15.52	18.70	37.42	54.29	68.40	76.34	48.03	35.38	153.07	38.37	30.16	30.85
Bond market capitalization to GDP	n/a	n/a	1.43	1.28	1.41	1.67	2.42	1.47	2.53	1.49	5.76	26.06

Note: * Surabaya Stock Exchange

14. The re-emergence of Shanghai as a financial center in China's financial system

Hongzhong Liu and Changjiang Yang

1. INTRODUCTION

Since economic reform took place in 1978, China has gradually turned from a closed and planned economy to a fast-growing market-oriented open economy. The growing linkage in terms of trade and FDI between China and rest of the world makes China play an increasingly important role in the global economy.

Historically, Shanghai had been an international financial center in the Far East, with Tokyo and Hong Kong behind it. As the first city in China where a stock exchange emerged, stock trading can be traced back to the 1860s. In 1891, the Sharebrokers Association was established as an embryonic form of Mainland China's stock exchange. By the 1930s, more than 200 foreign banks had branches operating in Shanghai.

However, as China adopted the central planned economy after 1949, Shanghai remained only as the largest industrial city on the mainland but the financial markets in Shanghai were abolished. As the economic reform deepened, financial market in Shanghai re-emerged rapidly. In 1990, which was symbolic for Shanghai in its recovery as a domestic financial center, the Shanghai Stock Exchange was set up. Up to now, the financial markets in Shanghai include the Shanghai Stock Exchange, China Foreign Exchange Trade System, National Interbank market, Shanghai Futures Exchange and Shanghai Gold Exchange. Therefore Shanghai is often quoted as the domestic financial center, which needs to be justified from the perspective of the financial system.

A financial center usually plays a vital role in the domestic, regional or global financial system in terms of efficiency in the resource allocation. The micro-level efficiency of a financial center is defined as low transaction cost in its financial markets. The financial center should also recycle savings nationally and effectively, which refers to the macro-level efficiency.

However, Shanghai, as a financial center, is far from being efficient, either in the micro-market structure or in the macro saving recycling. As we have shown, Shanghai is re-emerging as a financial center during China's transition to the modern market economy, so understanding the economic reform and development locus, especially China's financial system is the key to evaluating Shanghai's financial markets.

The chapter is organized as follows: in section 2, we present a brief introduction to China's financial system; section 3, is an outline of Shanghai's financial markets; the micro-level efficiency of Shanghai's financial markets will be discussed in section 4, followed by section 5, evaluating Shanghai's role as a domestic financial center in China's saving recycling pattern (the so-called 'underlending syndrome'); The last section concludes the chapter. We will give a graphic analysis of the 'underlending syndrome' in the Appendix.

2. A BRIEFING OF CHINA'S FINANCIAL SYSTEM

2.1 The Development of China's Financial System

The financial system before 1984 was characterized by an all-inclusive banking system established since the early 1950s. In the system, the People's Bank of China (PBC) served as both a central bank and a commercial bank, which controlled about 93 percent of the total financial assets by acting as the 'center of cash, credit and settlement'.

In January 1984, the PBC was transformed into the central bank only, with its commercial banking business taken over by the newly established Industrial and Commercial Bank of China (ICBC) as well as other state-owned specialized banks. From then on, the banking industry was diversified to include state-owned specialized banks and commercial banks. There are four state-owned specialized banks in China: the Industrial and Commercial Bank of China (ICBC) for urban areas, the Agricultural Bank of China (ABC) for rural areas, the People's Construction Bank of China (PCBC) for long-term investments on a large scale and the Bank of China (BOC) for foreign exchange business. Some commercial banks were also established during this period, such as the Bank of Communications (1986), CITIC Industrial Bank¹ (1987), China Merchants Bank (1987), Shenzhen Development Bank (1987) and so on.

After 1992, the big four state-owned specialized banks were also transformed into commercial banks. More and more new commercial banks and financial institutions were established in the 1990s.² Foreign banks have also been setting up branches or representative offices in China since then. However, it was not until 1996 when some of them were licensed to operate

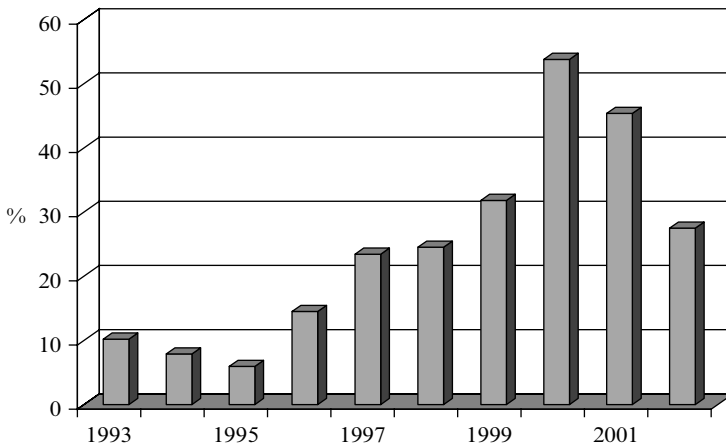
RMB business in Shanghai and Shenzhen. After China's entry into the WTO, foreign financial institutions will be granted the national treatment gradually.

Financial markets were established and developed along with the financial reform. The volume of security transactions has greatly increased from 1981 to 1991, when the total financial securities issued in China was 377 billion RMB. There are two stock exchanges (Shanghai and Shenzhen) which were established in the early 1990s.

2.2 Characteristics of China's Financial System

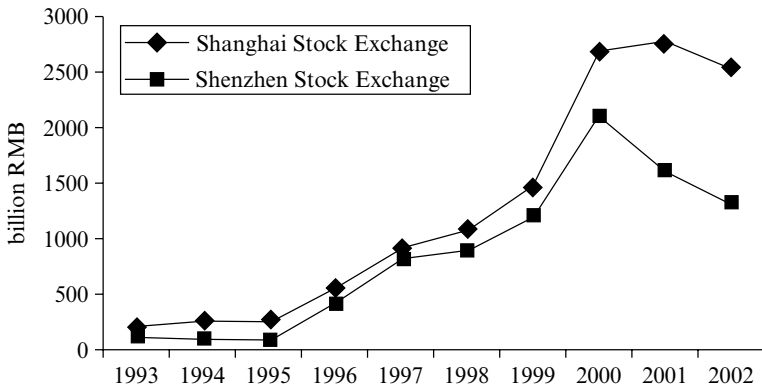
The first characteristic of China's financial system is the rapid growth of its financial markets. The ratio of the stock market capitalization to GDP had increased rapidly in recent years, reaching a maximum of 53.79 percent in 2000, but decreasing to 26.9 percent in 2002 due to the sharp decline of stock prices (see Figure 14.1). In terms of market capitalization, the Shanghai stock market has been the fourth biggest one in Asian and Pacific countries, just behind Tokyo, Hong Kong and Sydney, since 2001. Comparatively, Shenzhen stock market is another rapidly growing financial market in China, although it has lower market capitalization than Shanghai Stock Exchange (see Figure 14.2).

Second, China's financial system is a bank-dominated one.³ China's banking sector is much more important than the markets, because the majority of investment is materialized through bank loans and the stock



Sources: *China Securities and Futures Statistical Yearbook 2002*; China Securities Regulatory Community (www.csrc.gov.cn).

Figure 14.1 The ratio of market capitalization to GDP



Sources: *China Securities and Futures Statistical Yearbook 2002*; China Securities Regulatory Community (www.csrc.gov.cn).

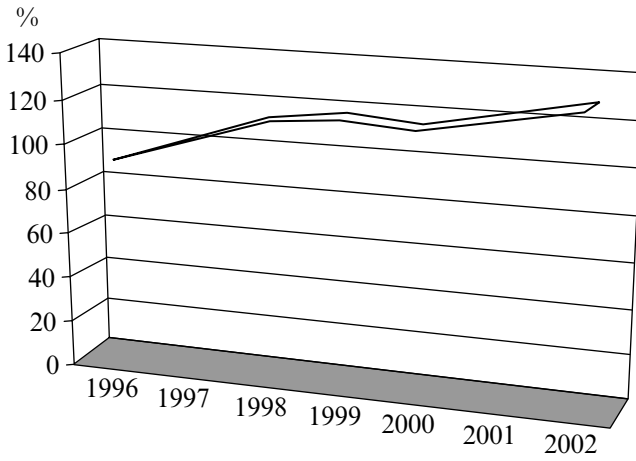
Figure 14.2 *The market capitalization of Shanghai and Shenzhen Stock Exchanges*

market only serves a subordinate role. In recent years, the ratio of outstanding loans to GDP has kept on increasing and has exceeded 100 percent since 1997 (Figure 14.3). Stocks are only a small part of financial assets in household saving: in 2001, 63.6 percent of savings are held in bank deposits and 12 percent of savings in stocks.⁴ The ratio of domestically raised capital in stock markets to bank loans was only 18.43 percent in 2001 (Figure 14.4). Furthermore, the banking sector is monopolized by the big four state-owned banks, which take the major part of the total deposits and loans. In 2001, the ratios of big four banks' deposits and loans to total deposits and loans were about 70 percent (Figure 14.5).

The third characteristic of China's financial system is its low proportion in aggregate financing. Although the banks provide a large amount of funds to firms, self-fundraising is still the most important financing, which includes proceeds from capital raised from the local government and communities and internal financing such as retained earnings (Figure 14.6). But the stocks and bond issuances, which are also included in self-fundraising, accounted for only 4.5 percent of the aggregate financing in 2001.⁵

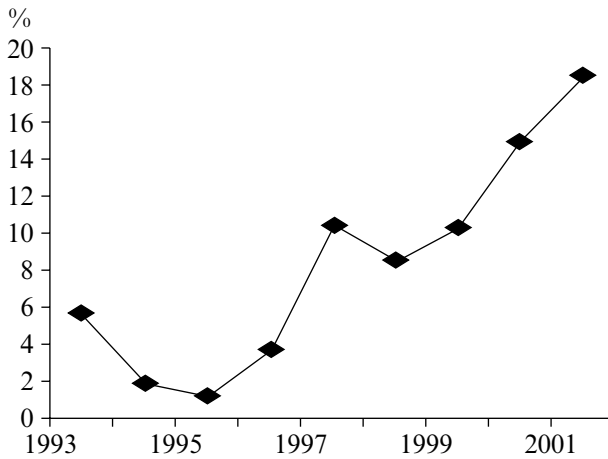
3. FINANCIAL MARKETS IN SHANGHAI

Although China's financial system is dominated by the banks, the banks in Shanghai are not so important in China. In 2001, the ratios of deposits and



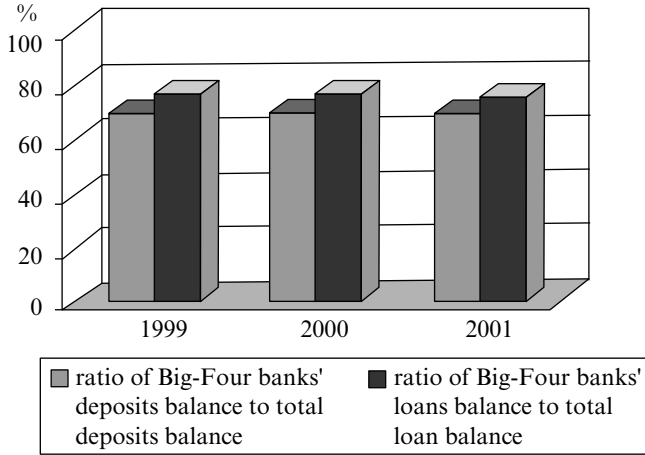
Sources: China Securities and Futures Statistical Yearbook 2002; People's Bank of China (www.pbc.org.cn).

Figure 14.3 Ratio of outstanding loans to GDP



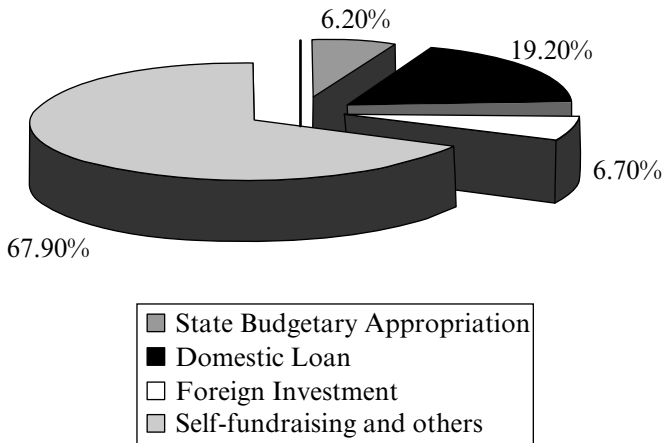
Sources: China Securities and Futures Statistical Yearbook 2002

Figure 14.4 Ratio of domestically raised capital in stock markets to bank loans



Source: Almanac of China's Finance and Banking 2002

Figure 14.5 Big four banks in China



Source: China Statistical Yearbook 2002

Figure 14.6 Breakdown of the financing in China's fixed assets investment in 2001

loans in Shanghai only account for 5 percent of the total banking sector.⁶ On the contrary, it is the financial markets in Shanghai that has determined its standing in China's financial system. Up to 2002, the main financial markets had all been established in Shanghai, i.e., capital market, money market, foreign exchange market, future market and gold market. But the access of foreign financial institutions to Shanghai financial markets is strictly controlled. Only after China's entry to WTO, were foreign banks to be allowed to take RMB operations in Shanghai. Up to now, foreign investors have only been able to invest in B shares of Shanghai stock market, with some qualified foreign institutional investors permitted to invest in A shares (see Table 14.1). A and B shares are in RMB and US dollars or UK dollars, Originally A shares were designed for domestic investors only, while B shares were for foreign investors. But since 19 February 2001 domestic investors have able been allowed to invest in B shares. There is no off-shore financial market in Shanghai now, but the government has plans to set up one up in the near future.

3.1 The Capital Market

Shanghai Stock Exchange (hereafter referred to as 'SSE') came into existence on 19 December 1990. The securities traded on the SSE include stocks, bonds and funds.

The stocks are divided into A Shares and B Shares with A Shares designated for domestic investors and B Shares for foreign investors. In 1990, the first batch of eight A Shares were listed on the SSE, followed by the first B Share in 1992. On 19 February 2001, the China Securities Regulatory Commission (CSRC) announced that domestic investors were to be allowed to invest in B shares as well. By the end of 2002, there were altogether 705 A Shares and 54 B Shares listed in SSE and no foreign company is listed in SSE.

The bonds include treasury bonds, financial and corporate bonds and convertible bonds. The SSE is the most buoyant market for treasury bonds trading in Mainland China. The repurchasing of treasury bonds was initiated in 1993. By the end of 2002, there were 25 government bonds (eight of which for repurchase), 14 financial and corporate bonds (three of which for repurchase) and three convertible bonds on the SSE.

Investment funds were initiated after 1993. But it was only after 11 November 1997, when the first rule on the security investment funds was issued by the CSRS, that the funds market developed rapidly. In 1998, four securities investment funds were issued and listed on the SSE, representing a new era in the development of the funds market. By the end of 2002, there were altogether 25 securities investment funds on the SSE.

Table 14.1 Overview of Shanghai Stock Exchange

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of listed securities												
Stocks	8	42	190	203	220	329	422	477	525	614	690	759
A shares	8	34	101	169	184	287	372	425	471	559	636	705
B shares	0	8	22	34	36	42	50	52	54	55	54	54
Bonds	0	46	33	24	28	22	21	20	23	25	31	42
Funds	0	0	1	12	12	15	15	19	26	18	23	25
Total	8	88	224	239	260	366	458	516	574	657	744	826
Total turnover (billion RMB)												
Stocks	0.08	2.47	234	573.5	310.3	911.4	1376	1239	1697	3137	2270	1696
A shares	0.08	2.47	226.1	562.7	304.2	902	1335	1230	1683	3103	1988	1644
B shares	0	0	7.9	10.8	6.1	9.4	41	9	14	34	282	52
Bonds	0.38	0.77	8.67	52.04	193.7	1740	1539	2126	1740	1680	1973	3080
Funds	0	0	1.21	11.74	30.57	49.74	21.95	60.53	136.6	133.4	134.9	55.7
Total	0.46	3.24	256.6	637.3	534.6	2701	2938	3426	3573	4950	4385	4852
Number of investors (10 thousands)												
Stocks	11	111	425	575	685	1208	1713	1999	2281	2958	3430	3566

Source: Shanghai Stock Exchange Factbook 2002

On 10 November 2002, the CSRC and PBC declared the qualified foreign institutional investors (QFII) scheme, which would open the A share stock market to the outside world.

The clearing system of the SSE is organized by the Central Registration and Clearing Company, which was established in 1993 and solely funded by the SSE. In 2001, it joined the China Securities Registration and Clearing Co. Ltd with the approval of the State Council and CSRC. As a non-profit legal entity, the Registration Company provides services of registration, trust and clearing for any company listed on the SSE. Since 1997, the Registration Company has restructured its depository and clearing system and established a centralized clearing and delivery system for its corporate members. The clearing process are usually finished on the following working day (T + 1). By the end of 2002, there was no Real Time Gross Settlement system in China.

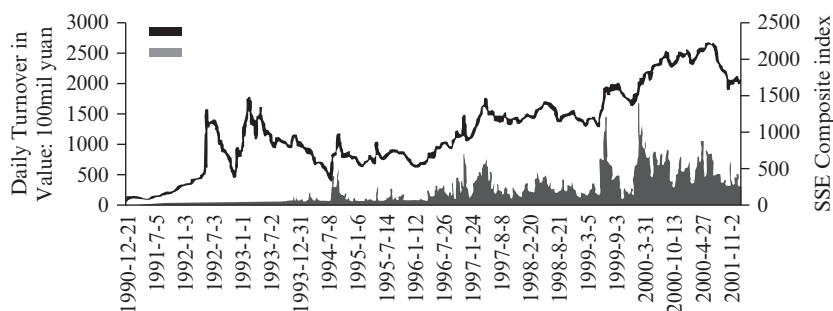
In recent years, more and more online transactions have been conducted in China security markets. At the end of 2001, 9.98 percent investors opened their accounts via the Internet and online trading accounts for 4.38 percent of total turnover of stock and fund markets.⁷

3.1.1 Stock market

SSE makes use of a centralized bidding system that is based on the principle of price priority and time priority. The system automatically matches the closest offer and bid with a maximum capacity of 5000 deals per second. Equipped with a satellite-based telecommunications network, the trading information can be instantly delivered to all parties across the country. From December 1996, all the A shares, B shares and funds are subject to a daily limit of 10 percent up or down, while the figure is 5 percent for the ST shares.⁸ The PT shares⁹ can only be traded on Friday afternoon with a 5 percent up limit.

The SSE stock indexes include Shanghai 180 Index, Shanghai Composite Index, A Share Index, B Share Index, Category Index and Fund Index, the earliest of which to be compiled is the Shanghai Composite Index (Figure 14.7).

The listed companies on the SSE¹⁰ have a multiple ownership structure: stated-owned shares, legal person shares, staff shares and public shares. Among them, only public shares are tradable (legal person shares are held by other enterprises and can be transferred only within enterprises) (Table 14.2). A few legal person shares have been transacted between legal persons in the STAQ and NET system. The state-owned shares, which have been converted from state-owned assets, make up 52.33 percent of total shares in 2002 (Figure 14.8).



Source: Shanghai Stock Exchange Factbook 2001

Figure 14.7 SSE composite index historical movements (1990.12–2001.12)

Table 14.2 Total volume of stocks issued on the SSE (billion RMB)

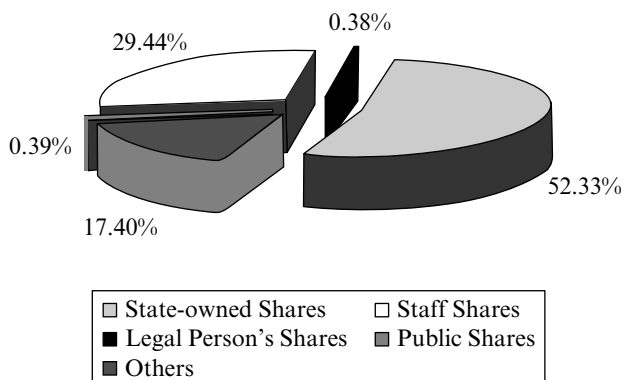
	1995	1996	1997	1998	1999	2000	2001
State-owned shares	24.54	30.34	39.98	55.23	68.3	92.67	183.74
Legal person's shares	11.48	16.61	25.79	30.37	35.95	41.92	46.27
Staff shares	0.13	0.63	1.52	1.97	1.5	1.31	1.79
Public shares	19.23	25.64	37.26	47.52	58.99	74.45	114.04
Others	0.4	0.85	1.69	2.49	2.84	2.45	0.9
Total	55.78	74.07	106.24	137.58	167.58	212.80	346.74
Ratio of total amounts to GDP(%)	0.97	1.1	1.5	1.8	2.08	2.45	3.71

Source: Almanac of China's Finance and Banking 2002

3.1.2 Bond market

The bonds traded on the SSE consist of treasury bonds (spots and repos), financial and corporate bonds and convertible bonds. According to the payment of interest, the treasury bond spots can be divided into zero coupon and coupon. In terms of face value, they can be divided into book entry and bearer bonds. The maturity term of repos varies from 3 days, 7 days, 14 days, 28 days, 91 days to 182 days.

Since the Chinese government has been adopting a positive fiscal policy by issuing treasury bonds in recent years, the bond market is developing very fast. But the bonds issued by enterprises still lag behind (see Tables 14.3 and 14.4).



Source: *Shanghai Stock Exchange Factbook 2002*

Figure 14.8 Classification of share ownership on the SSE, 2002

Table 14.3 Issuance of bonds in China (billion RMB)

	1996	1997	1998	1999	2000	2001
T-bonds	184.78	241.18	380.88	401.5	465.7	504.2
Financial bonds	107.02	146.35	195.02	180.09	164.5	150.2
Corporate bonds	26.89	25.52	14.79	15.8	8.3	9.4
Total	318.69	413.05	590.69	597.39	638.5	663.8
Ratio of total amounts to GDP (%)	4.5	5.64	7.67	7.42	7.36	7.1

Source: *Almanac of China's Finance and Banking 2002*

Table 14.4 Total outstanding of bonds in China (billion RMB)

	1996	1997	1998	1999	2000	2001
T-bonds	436.14	550.89	776.57	1054.2	1367.4	1872.3
Financial bonds	297.74	362.88	516.32	658.89	752.52	803.32
Corporate bonds	59.77	52.1	67.69	77.86	86.16	99.34
Total	793.05	965.87	1360.58	1790.95	2206.08	2774.96
Ratio of total amounts to GDP (%)	11.87	13.2	17.68	22.27	25.44	29.69

Source: *Almanac of China's Finance and Banking 2002*

Table 14.5 Summary of bond transactions on the SSE

	1995	1996	1997	1998	1999	2000	2001	2002
Listed numbers	47	24	22	20	23	25	31	42
T-bonds	31	17	17	15	14	15	19	25
T-bond spot	18	9	9	7	6	7	11	17
T-bond repurchase	13	8	8	8	8	8	8	8
Financial and corporate bonds	16	7	5	5	9	10	11	14
Convertibles							1	3

Source: *Shanghai Stock Exchange Factbook 2002*

SSE is the main bond market in China, since the transaction turnover of bonds in Shenzhen Stock Exchange in 2001 was only 62.3 billion RMB, which was 3 percent of that of SSE (see Table 14.5).

3.1.3 Funds market

Close-ended funds first appeared on the SSE in 1998. On 21 September 2001, the first open-ended fund was also issued. From then on, the expansion of securities investment funds has effectively improved the structure for investors in Shanghai securities market, enriched the investment instruments and enhanced the operational levels of fund managers. At the end of 2002, the trading turnover of funds on the SSE was 55.67 billion RMB (Table 14.6), while the corresponding amount on the Shenzhen Stock Exchange was 60.99 billion RMB.

3.2 Money Market

In 1996, the National Interbank RMB offering market was set up in Shanghai, which unified the national money market. The National Interbank bond trading system started operation on 6 June 1997. The PBC participated in the market to implement the monetary policies.

3.2.1 Interbank offering market

In the interbank offering market, the trading process includes self-quotation, standardized inquiry and confirmation of dealing. The maturity is within four months. For the sake of statistics, the weighted average interest rates of overnight, 7 days, 20 days, 30 days, 60 days, 90 days and 120 days—are calculated and published as the fundamental interest rates in China—CHIBOR (the China Interbank Offered Rates).

Table 14.6 Trading summary of funds on the Shanghai Stock Exchange

	Number of funds	Trading volume (billion)	Turnover (billion RMB)
1994	12	5.673	11.734
1995	12	10.721	30.567
1996	15	12.801	49.738
1997	15	5.557	21.953
1998	19	32.958	60.528
1999	26	82.795	136.582
2000	18	99.532	133.418
2001	23	114.835	134.892
2002	25	57.37	55.67

Source: China Securities and Futures Statistical Yearbook 2002

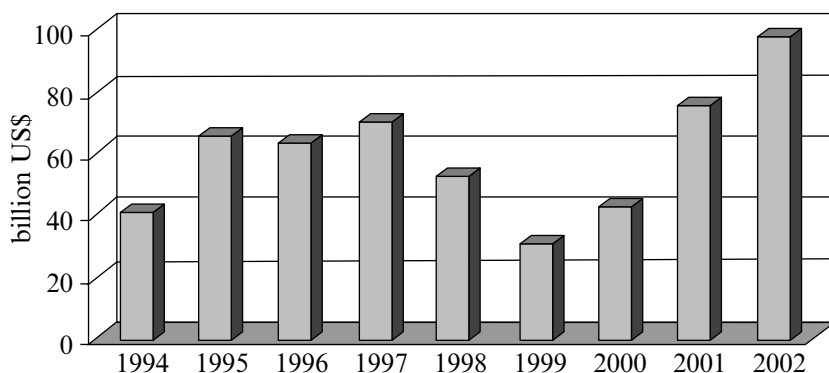
Table 14.7 Trading statistics of the national interbank market
(billion RMB)

Year	Interbank offering	Interbank bond market		Total
		spot	repo	
1996	587.16	NA	NA	587.16
1997	414.92	0.966	30.987	446.877
1998	98.948	3.319	102.148	204.415
1999	329.160	7.741	395.693	732.594
2000	672.807	68.268	1578.174	2319.249
2001	808.202	83.932	4013.329	4905.463
2002	1210.724	441.168	10188.521	11840.413

Source: People's Bank of China (www.pbc.org.cn)

3.2.2 Interbank bond trading market

The interbank bonds traded includes spot and repurchase (repo). So far, the spot dealing is limited to treasury bonds, while repo includes treasury bonds and financing certificates issued by the PBC and policy banks. The repo maturity ranges from 7 days to four months. The total trading volume of the interbank bond trading market increased rapidly rising from 587.16 billion RMB in 1996 to 11 840.413 billion RMB in 2002 (see Table 14.7).



Source: People's Bank of China (www.pbc.org.cn)

Figure 14.9 Turnover of the foreign exchange market

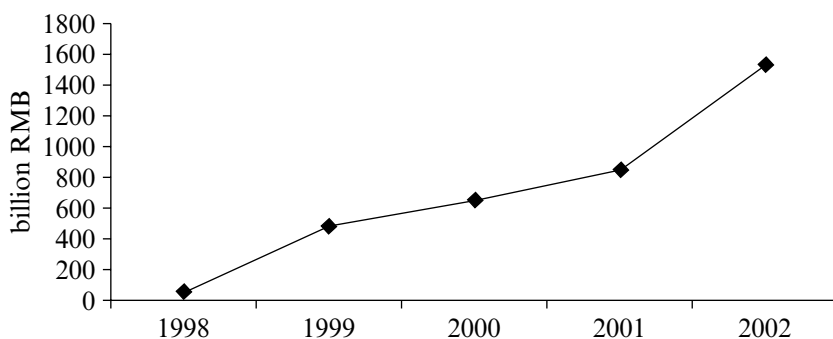
3.3 Foreign Exchange Market

The China Foreign Exchange Trade System (CFETS) began to operate on 4 April 1994. As part of the financial reform to abolish the multiple exchange rate system in China, CFETS has played the role of forming the unified and market RMB exchange rate. The State Administration of Foreign Exchange (SAFE) is responsible for foreign exchange market supervision, while the Open Market Operation Office of PBC is in charge of the macro-adjustment of the market.

In the market, the orders are automatically matched by the computer system. CFETS also provides unified clearing both in domestic and foreign currencies. At the present stage, all the transactions are spot trading of RMB against the US dollar, HK dollar, yen, or euro. The turnover of CFETS was nearly US\$100 billion in 2002 (see Figure 14.9).

3.4 Future Exchange Market

Shanghai is the first city to set up a future market in China. In 1995, the Shanghai Metal Exchange, Shanghai Cereals & Oils Exchange and Shanghai Commodity Exchange were established as future markets for copper, petroleum, building materials, agricultural products and chemicals. In accordance with the request issued by the State Council on further reorganization and standardization of future markets, the above three exchanges were consolidated into the Shanghai Futures Exchange in August 1998. Copper, aluminum (formerly traded in Shanghai Metal Exchange) and natural rubber



Source: *China Securities and Futures Statistical Yearbook 2002*; China Securities Regulatory Community (www.csrc.gov.cn).

Figure 14.10 Turnover of the Shanghai Futures Exchange

are the main items traded in the market. The total turnover of Shanghai Futures Exchange has increased sharply since 1998 (see Figure 14.10).

3.5 Gold Market

The Shanghai Gold Exchange (SGE) was established in October 2002, as a result of the gold market deregulation following PBC's newly introduced 'Weekly Gold Pricing System' and the abolition of 'Gold Products Retail License System'.

The SGE has adopted an electronic order matching system in accordance with the principle that 'the earliest best price in the queue gets matched'. Under certain circumstances, transactions can also be realized through other methods, such as 'proprietary asking system' for non-good delivery gold items, where the transaction was not settled by real transfer of the good but by another transaction in the opposite direction to cover the position. At this early stage of operation, only 'physical' trading can be conducted in SGE. With the further enhancement of the systems, 'gold futures' might be introduced in due course.

4. MICRO-LEVEL EFFICIENCY ANALYSIS: THE CASE OF THE SHANGHAI STOCK MARKET

In this section we will investigate the performance of the Shanghai Stock Market in terms of the liquidity, volatility, bubble and market anomalies in order to evaluate the micro-level market efficiency.

Table 14.8 Bid-ask spread on the Shanghai stock market

Price interval (yuan RMB)	Average daily trading volume (10 thousand)	Average daily turnover (10 thousand RMB)	Spread (%)
4.86–9.62	35.59	260.75	0.165
9.88–14.57	19.83	234.70	0.136
14.68–47.15	12.80	302.31	0.134
Total	22.74	265.93	0.140

Source: Sun and Shi (2002)

4.1 Liquidity of the Shanghai Stock Market

Liquidity is so crucial that some economists regard it as the essence of the market. Liquidity can be measured from the perspective of immediacy, width, depth and resiliency (Harris 1990). Bid-ask spread is one of the most popular measurements due to its simplicity, therefore we use the bid-ask spread to measure the liquidity of Shanghai stock market.

The bid-ask spread is calculated (see Kyle 1985) as the following.

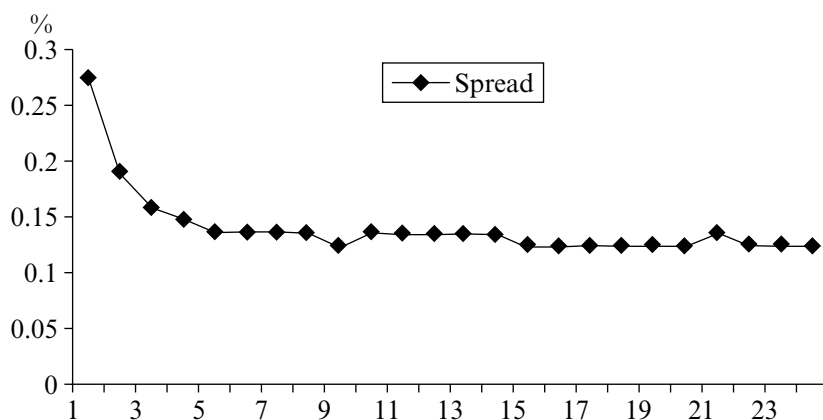
$$Spread = \frac{P_a - P_b}{(P_a + P_b)/2},$$

where P_a represents the highest ask price and P_b represents the lowest bid price.

The bid-ask spread in Shanghai stock market between September 2000 and December 2000 is shown in Table 14.8. The constituent stocks in SSE Composite Index are used as samples.

Compared with the average bid-ask spread of the Dow-Jones 30 index,¹¹ the Shanghai stock market seems more liquid. Someone argued that it is because SSE adopts an order-driven system with a lower transaction cost compared with the traditional quote-driven system.¹² But to our understanding, it is the speculation that determines the high liquidity on the SSE.

Early research shows that the changing pattern of bid-ask spreads in daily transactions might follow a 'U' style or an 'L' style (see Madhavan 2002): for an 'L' style, the spread is high at the beginning of a day and decreases gradually; as to the 'U' style, there is a reversal of the spread at the end of daily transaction. On the Shanghai stock market, the daily bid-ask spread movements follow an 'L' style, as shown in Figure 14.11.



Note: The horizontal axis of the graph is the segmented periods of trading sessions. The spread is drawn from computerized high frequency data.

Source: Sun and Shi 2002

Figure 14.11 Interval spread in the daily trade

Table 14.9 The fluctuations of the SSE composite index

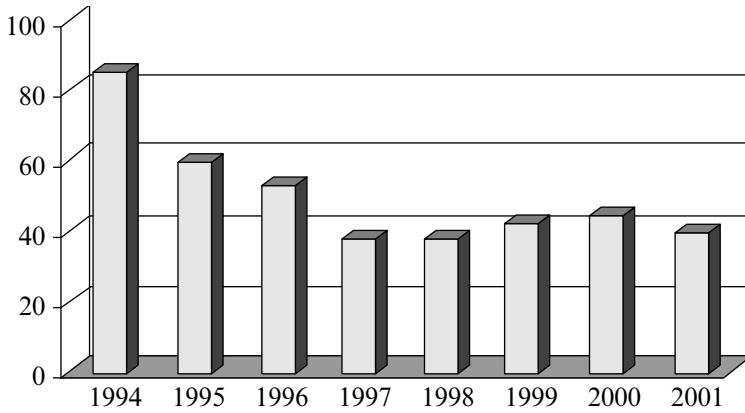
	1994	1995	1996	1997	1998	1999	2000	2001	2002
Peak	1053	926	1257	1510	1423	1756	2126	2245	1749
Trough	326	524	513	870	1044	1048	1361	1514	1339

Source: Shanghai Stock Exchange Factbook 2002

4.2 Volatility of the Shanghai Stock Market

As an emerging stock market, the Shanghai stock market is also highly volatile. Table 14.9 describes the fluctuations of the SSE composite index between 1994 and 2002. In recent years, the annual fluctuation of the index is about 50 percent.

In most cases, the stock prices are determined by the expectations of government policy.¹³ That is why the China stock market is called a 'policy market', where the stock prices are loosely correlated with the performance of listed companies. As a result, the systematic risk accounts for a large proportion of the total risk, and investors can hardly diversify their risks. The systematic risk ratio of Shanghai and other stock markets are shown in Figure 14.12 and Table 14.10.



Source: Xun and Tan (2002)

Figure 14.12 Ratio of systematic risk in Shanghai stock market (percentage)

Table 14.10 Ratio of systematic risk in other stock markets

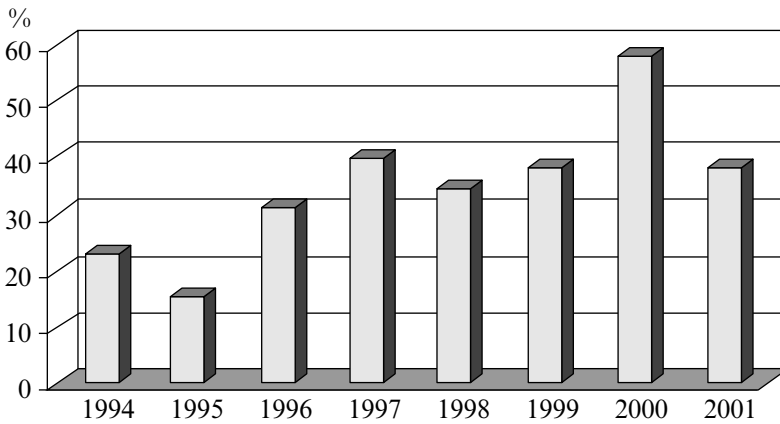
	United States	United Kingdom	Hong Kong, China	Japan	Turkey	Taiwan, China
Systematic risk ratio (%)	2.1	6.2	15.0	23.4	39.3	41.2

Source: Morck et al. 2000

We can conclude that the systematic risk has been the main source of risk, which might result in the high volatility. Although the systematic risk ratio began to decrease after 1994, it is still too high compared with other markets.

4.3 Bubbles in the Market

We use the price/earning ratio to measure the speculation and potential bubble in Shanghai stock markets. From Figure 14.13 and Table 14.11, we see that the P/E ratio is extremely high on the SSE, which reflects the intensive speculation and potential bubbles.



Source: *China Securities and Futures Statistical Yearbook 2002*

Figure 14.13 P/E Ratio in Shanghai Stock Market

Table 14.11 P/E ratio in other stock markets (percentage)

	1993	1994	1995	1996	1997	1998	1999	2000
Hong Kong	21.60	10.70	11.40	16.40	12.10	10.66	26.70	12.80
New York	15.2	12.7	14.0	15.7	23.9	27.2	31.3	25.2
London	n.a.	n.a.	15.6	16.2	19.2	23.3	16.5	14.0
Singapore	37.3	26.2	24.0	21.5	15.2	19.0	99.2	20.9

Source: <http://www.fibv.com>

4.4 Market Anomalies

There are at least two kinds of market anomalies on the Shanghai stock market: weekend effects and small-firm effects. In American stock markets, the long-term average return on Monday is the lowest and significantly negative, termed 'Weekend Effects'.¹⁴ But on the Shanghai stock market, the average daily return is lowest on Tuesday and highest on Friday (Table 14.12).

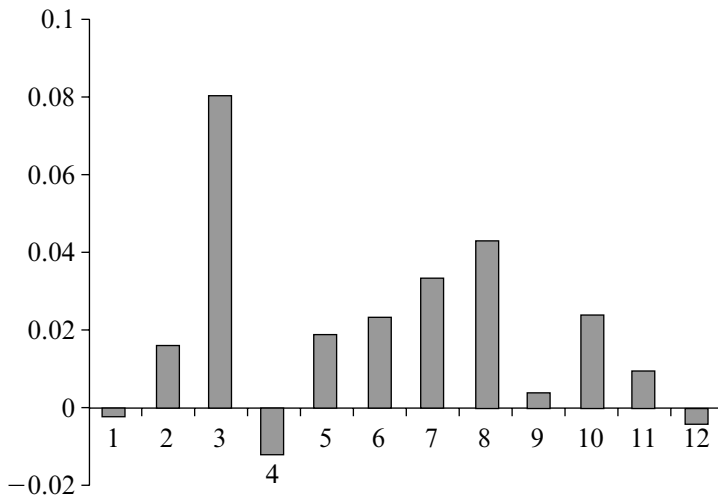
At the same time, 'small-firm effects' are also significant on the SSE. In other words, the stocks of small firms have a relatively higher return. We can conclude from Figure 14.14 that the excess return of small firms compared to the market are significantly positive in most cases.

Table 14.12 Daily return in SSE (1992–98)

	Mean	Std Dev	t-ratio	Min	Max	Number
All Days	0.067	3.509	0.749	-16.394	33.457	1517
Monday	-0.071	4.122	-0.299	-13.076	33.457	302
Tuesday	-0.417**	2.969	-2.464	-16.394	11.790	307
Wednesday	0.278	3.621	1.340	-10.710	29.904	305
Thursday	0.014	3.525	0.071	-10.637	30.987	302
Friday	0.541***	3.145	2.983	-7.177	21.371	301

Note: * level of significance at 10%, ** level of significance at 5%, *** level of significance at 1%

Source: Feng (2000)



Source: Wang and Zhou (2002)

Figure 14.14 Monthly excess return of the stocks of small firms in SSE (1997–2001)

4.5 Inefficiency of the Shanghai Stock Market

In conclusion, we have to say that the Shanghai stock market is not an efficient market. Herding behavior and speculation are prevailing in this market, which might originate from the weak supervision and segmentation of the share ownership. Up to now, most of the empirical studies on the market efficiency can hardly support the weak form of efficiency market hypothesis.¹⁵

5. MACRO-LEVEL EFFICIENCY ANALYSIS: 'UNDERLENDING SYNDROME' IN CHINA'S SAVING RECYCLING PATTERN

A financial center is the place where the supply and the demand of capital meet. Since China's financial system is a bank-dominated one, Shanghai's role in China's saving recycling is not that significant. In this section we will examine China's saving recycling pattern, the 'Underlending Syndrome'¹⁶ in order to evaluate the macro-level efficiency.

5.1 The Saving Recycling Pattern in China: Theory and Reality

Chenery and Strout (1966) argued that most developing countries would face the 'capital gap': domestic saving is not sufficient to support their investment. Therefore, capital is scarce in developing countries and capital inflow is needed. On the other hand, all those countries whose marginal products of capital are relatively low would face the current account surplus to balance their capital export. As suggested by Feldstein and Horioka (1980), the perfectly open economy will have a very loose correlation between its saving and investment. Along with the financial liberalization in the world, the global capital will be allocated from the relatively capital abundant nations to capital scarce ones.¹⁷

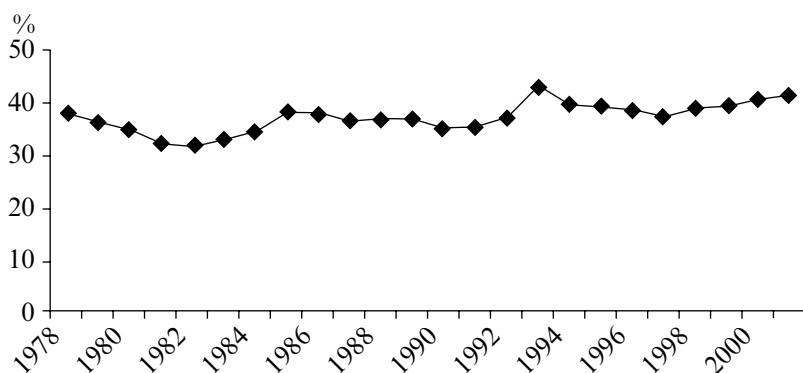
However, the relationship between domestic saving and investment in China is different. On the one hand, China is still a developing country with higher marginal capital productivity, which suggests China is short of capital and capital accumulation is extremely important for economic growth. On the other hand, it seems that capital is in surplus in China because most savings are kept in the banks and only a part of them have been transformed into investment by the means of loans. This contradiction results in the 'underlending syndrome' in China's saving recycling pattern: while national savings are in surplus and some of them flow to the outside world, foreign capital is still imported to finance domestic investment.

5.2 Key Features of the 'Underlending Syndrome'

The 'underlending syndrome' has the following features:

First, the saving rate in China has remained at 40 percent of GDP for a long time (Figure 14.15), which is higher than in most other countries (Table 14.13, excluding Singapore).

Second, only part of the huge domestic saving has been transformed into investment. We can find that China's saving gap (S - I) in Table 14.14 has



Source: China Statistical Yearbook 2002

Figure 14.15 Saving rate in China (percentage of GDP)

Table 14.13 Saving rates in Asian Countries (percentage of GDP)

	1980	1990	2001
Korea, Rep. of	23.8	37.2	30.1
India	21.2	23.6	23.4*
Philippines	26.6	18.7	16.8
Singapore	38.8	43.4	45.8
Malaysia	32.9	34.4	42.5
Indonesia	29.2	32.3	25.5
Thailand	23	34.3	31.4
Hong Kong, China	34.5	35.8	31.1
Taiwan, China	32.6	28.1	23.5
Sri Lanka	12	13.2	15.3
Pakistan	7.8	13.5	12.7
Nepal	11.1	7.9	14.2
Bangladesh	2.2	12.9	17.2
Bhutan	7.9	28	27.4*
Viet Nam	n.a.	2.9	27*

Note: * Refers to 2000

Source: ADB, Key Indicators 2002

obviously enlarged since 1997, which indicatess a large portion of domestic saving is idle.

As we have shown in section 2, direct finance is still a supplement to inter-mediated finance, therefore most investment in China is financed not in the finance markets, but by the banks.

Table 14.14 Domestic saving and investment in China

	Total domestic saving	Total domestic investment	Saving gap (S - I)
1990	695.43	644.40	51.03
1991	813.45	751.70	61.75
1992	991.16	963.60	27.56
1993	1431.86	1499.80	-67.94
1994	1989.47	1926.06	63.41
1995	2487.55	2387.70	99.85
1996	2832.65	2686.72	145.93
1997	3131.48	2845.76	285.72
1998	3259.74	2954.59	305.15
1999	3295.04	3070.16	224.88
2000	3474.00	3249.98	224.02
2001	3966.55	3746.08	220.47

Note: Data in this table are calculated at current prices

Source: China Statistical Yearbook 2002

Since the banks are playing a vital role in the saving recycling, to what extent the investment can be financed depends on the behavior of the banks, which changed dramatically in the 1990s. Since the banks are owned by the state and short of the efficient credit risk control system, they have tended, historically, to make as many loans as possible to state-owned enterprises (SOEs). As a result, a huge quantity of NPLs emerged.¹⁸ In the middle of the 1990s, state-owned specialized banks were reformed to become modern commercial banks, which tightened the control on credit. On the other hand, because of the SOEs' poor performance, many banks would keep deposits rather than making credit. Therefore, credit crunch has been an important character in China's banking sector in recent years, which leads to inefficiency in the saving recycling system.

When the saving rate is high and stable, the deposits increase continually. However, the loans grow relatively slowly. The excess deposits over loans have come into existence since 1995 (Table 14.15).

Generally speaking, the excess deposits over loans can be recycled into investment by the means of investing in bonds or even stocks. But in China, banks are forbidden to invest in stocks. As a result, the excess deposits over loans implies that more and more domestic saving cannot be transformed into investment.

Third, China imports and exports huge amount of capital simultaneously: in the last two decades, capital inflows to China have kept on growing while most of the inflow takes the form of FDI. Since 1992, inward FDI in

Table 14.15 Deposits and loans of financial institutions (billion RMB)

	Deposits	Loans	Deposits minus loans
1996	6 857.12	6 115.28	741.84
1997	8 239.03	7 491.41	747.62
1998	9 569.79	8 652.41	917.38
1999	10 877.89	9 373.43	1 504.46
2000	12 380.435	9 937.107	2 443.328
2001	15 353.978	11 231.470	4 122.508
2002	16 859.590	12 862.775	3 996.815

Source: China Finance Statistical Yearbook 2002

Table 14.16 Total amount of foreign capital actually used (USD billion)

	Total value	Foreign loans	Direct foreign investment	Other foreign investment
1990	10.289	6.534	3.487	0.268
1991	11.554	6.888	4.366	0.300
1992	19.202	7.911	11.007	0.284
1993	38.960	11.189	27.515	0.256
1994	43.213	9.267	33.767	0.179
1995	48.133	10.327	37.521	0.285
1996	54.804	12.669	41.725	0.410
1997	64.408	12.021	45.257	7.130
1998	58.557	11.000	45.463	2.094
1999	52.659	10.212	40.319	2.128
2000	59.356	10.000	40.715	8.641
2001	49.672	n.a.	46.878	2.794

Source: China Statistical Yearbook 2002

China has been increasing steadily (see Table 14.16), which makes China the second largest utilizer in the world. In 2002, it is estimated that China will be the largest utilizer and leave the USA behind.

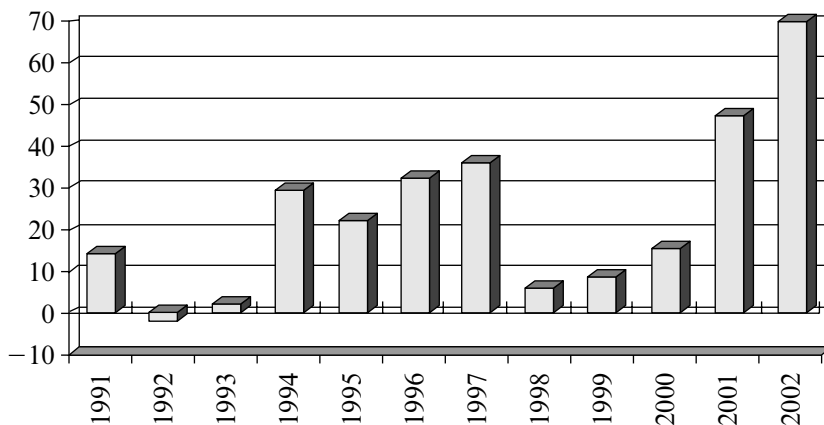
When a lot of foreign capital flows into China, China exports its capital at the same time. Measured by the current account surplus, China had become the eighth most important capital-exporting country as early as 1993 (Table 14.17).¹⁹

China's capital outflows take the following two forms. Since most of China foreign exchange reserves are invested in the US TB market, the

Table 14.17 The distribution of capital exporters in 1989–93
(% distribution)

Japan	Swiss	Taiwan	Holland	German	Hong Kong	Belgium	China	Others
53	8	6	6	5	5	4	2	11

Source: IMF, *World Economic Outlook*, 1995



Source: www.pbc.org

Figure 14.16 Growth of foreign exchange reserves in China (USD billion)

greater the foreign exchange reserves, the more capital outflows. The foreign exchange reserves in China have grown rapidly in recent years. For example, it increased by US\$70 billion in 2002 (see Figure 14.16).

Capital flight is another channel of capital outflow, which has been a serious problem in China even under tight capital controls. Since the capital flight cannot be observed directly, the different methods used to calculate capital flight often lead to confusing results. One estimate of China's capital flight during 1996 to 1999 is reported in Table 14.18.²⁰

5.3 Summary

The 'underlying syndrome' in China's saving recycling pattern can be summarized as follows: while a lot of capital flows into China, there are also huge capital outflows. Why cannot China's domestic saving be efficiently transferred into investment through Shanghai's financial markets? It is the

Table 14.18 Capital flight from China (USD billions)

	Capital flight calculated by direct methods	Capital flight calculated by indirect methods
1997	12.84	14.09
1998	24.33	31.68
1999	12.17	13.01

Source: Ren 2001

over-prudent banks which dominate China's financial system and would not make enough loans to enterprises. It is clear that China's case is opposite to that of Southeast Asia before the financial crisis in 1997.²¹ The 'underling syndrome' in China demonstrates the macro-level inefficiency of Shanghai as a domestic financial center.

6. CONCLUSIONS

Shanghai is re-emerging as a domestic financial center along with the economic reform and rapid growth in China. However, Shanghai's role as a financial center is also curbed by China's financial system. Hence Shanghai still has a long way to go to function as an efficient financial center in terms of both micro-level and macro-level efficiency. Up to now, Shanghai can hardly be called a domestic financial center in a strict sense.

Whether Shanghai can become a genuine financial center heavily depends on the further reform of China's financial system.

The first issue in restructuring the financial system is that more importance should be attached to direct financing. The capital market should be vigorously developed until it becomes another main channel to finance investment. The government should enlarge the market capacity and encourage more qualified companies to issue stocks, especially non-state enterprises. The control on the firms to issue the bonds should also be relaxed.

Second, the efficiency of the financial market should be improved. The government should reinforce the supervision and regulation of the market, enforce the rigorous information disclosure system and protect the interests of investors. When the price is adjusted to a reasonable level, the confidence of investor will recover, which will make it possible for more investment to be financed in the market.

The third issue is to improve the efficiency of the banking system. Accompanied with the opening of the finance market, financial supervision

should work in line with international practices, such as the Basel Accord. The private capital participation in banks should be encouraged. As the importance of non-state enterprises in the economy continues to increase, banks that aim at maximizing their profits should increase credit to them accordingly.

The reforms above are not only crucial for Shanghai becoming a domestic financial center, but also the pre-conditions to restructure the financial system. Since a healthy financial system is vital for the removal of capital controls, the restructuring of China's financial system will influence the process of the full convertibility of RMB, which is also one of the key factors for Shanghai to become a regional and international financial center.

NOTES

1. CITIC Industrial Bank is a 100 percent subsidiary of China International Trust and Investment Corporation (CITIC).
2. Such as China Everbright Bank (1992), Hua Xia Bank (1992), Shanghai Pudong Development Bank (1992), China Minsheng Bank (1996).
3. As Allen and Gale (2000) argued, there are two types of financial system, the market-oriented and intermediation-oriented, where the financial markets and financial institutions play the dominant roles respectively. American and German financial systems are two good examples.
4. This data is provided by the survey on household saving behavior organized by People's Bank of China in April, 2001.
5. See *China Securities and Futures Statistical Yearbook 2002*.
6. The total banking deposits and loans in Shanghai were 857.04 and 658.33 billion RMB in 2001. At the same time, the total banking deposits and loans of the whole country were 15 353.98 and 11 231.47 billion RMB. See *Almanac of China's Finance and Banking 2002*.
7. Data source: China Securities Regulatory Community (www.csrc.gov.cn).
8. When a listed company experienced abnormalities in its financial standing, which would make it difficult for investors to judge the company's prospect and endanger their rights and interests, its shares will be subject to special treatment. The abbreviation of the stock will be preceded by the letters of 'ST'.
9. During the period when the trading of a listed company is suspended, it is named as 'particular transfer'. The abbreviation of the stock will be preceded by the letters of 'PT'.
10. Also in Shenzhen Securities Exchange.
11. In 1999, the spread was 0.32 percent, See Angle (2000).
12. However, some economists argue that the quote-driven system is more efficient and China should also adopt a similar system. See Madhavan (2000).
13. China's stock market is heavily affected by government policies, such as how and when to privatize the stated-owned shares.
14. Weekend effects were first tested by Fields (1931). There is much evidence to suggest that the Weekend Effects exists in both advanced stock markets and emerging stock markets.
15. Liu, Li and Huang (2001) did a survey of the studies on China stock market efficiency.
16. The 'Underlending Syndrome' refers to the special saving recycling pattern characterized by the huge capital inflows and outflows at the same time. As we will elaborate in the Appendix, this phenomenon might originate from a bank's conservative behavior, which results in the phenomenon that a lot of domestic investment must be financed by the foreign capital while large unused domestic savings are exported to the outside world.

- Contrary to the 'overborrowing syndrome' by McKinnon and Pill (1997), we name it 'underlending syndrome'.
17. Of course, the fact that capital appeared reluctant to flow from rich countries to poor ones, has remained as a puzzle for some economists, see Lucas (1990).
 18. Before 1998, credit rationing was the main monetary policy instrument for PBC to implement monetary policy.
 19. For an analysis on the China's capital export, see Liu (2001).
 20. The direct method of estimating capital flight is roughly the item of Error & Omission in one country's balance of payment (see Cuddington 1986). The indirect method of estimating capital flight is the difference between the capitalized value of investment income receipts – that is, investment income receipts divided by the prime risk yield on claims – and the total stock of external claims (see Dooley 1986).
 21. McKinnon and Pill (1997) argued that the secret deposit insurance by the government will cause the banks to borrow too much from outside with moral hazard, which leads to financial crisis.

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15. Australia's financial markets and institutions

Gordon de Brouwer

Financial services are an important part of the Australian economy. Finance and insurance is the third largest industry sector in Australia, contributing about 7½ per cent of GDP in the year to June 2002, making it twice as big as agriculture and 40 per cent bigger than mining.¹ It is a rapidly growing sector, double what it was 15 years ago and growing at about 5¼ per cent a year. The sector employs about 350 000 people, almost 4 per cent of the Australian workforce (see Axis Australia 2003).

The markets that underpin the sector are extensive, sophisticated and liquid. Australia has well-developed money, fixed interest, equity, foreign exchange and derivatives markets. Its institutions are strong, diverse, sophisticated, and active in all financial activities. Australia's banking system and financial market regulation are classified by the World Economic Forum as the second most sound in the world.

In this context, it is straightforward to see that Australia is one of the leading financial systems and centres in East Asia. Because Australia is part of East Asia, the size, breadth and depth of financial activity in Australia make it one of the key financial sectors in the East Asian region.

Australia is also involved in cross-border financial activity in East Asia (as well as beyond), although this activity is incomplete since financial development in East Asia is incomplete. As is the case for many countries in the region, Australia's financial firms are active elsewhere in the region but not conspicuously so. This largely reflects market access and risk aversion, given that financial liberalisation, development and reliability in East Asia as a whole is still in process. But Australia does play a clear regional role in East Asian finance in three important respects.

First, because of its domestic strengths, Australian and foreign financial institutions use Australia as a base not just for business in Australia but also for East Asian and global business. This is apparent for both front-end and back-office operations. Second, Australian financial firms are active in areas beyond 'vanilla commercial banking', such as infrastructure finance, privatisations, pooled investments, securitisation and asset management.

Third, there is a substantial diaspora of Australian professionals working in finance and business services throughout the rest of East Asia, particularly in key financial centres like Hong Kong, Singapore and Tokyo. More Australians work in Hong Kong and Singapore, for example, than in the United States (see DFAT 2003, p. 14).

This chapter is structured in five main parts. Section 1 outlines the basic structure and functions of Australia's financial institutions. Section 2 looks at the various markets that exist in Australia, money, equity, foreign exchange, fixed interest and derivatives markets. Section 3 summarises the settlements, regulatory and prudential structure that underpins these institutions and markets. Section 4 examines the importance of international capital flows and the structure of the financial asset and liabilities of the household and corporate sectors in Australia. Section 5 looks at the role of Australia as a global financial centre in the Asian time zone. It also looks at some of the issues that need to be resolved to enhance this function. The conclusion closes the chapter with some observations based on the Australian experience about how countries can progress their own financial development.

1. AUSTRALIA'S FINANCIAL INSTITUTIONS

Table 15.1 provides a summary of the total assets of Australian financial institutions over the past decade. The financial system can be segmented into three functions: banking, insurance, and funds management.

1.1 Banking

For the purposes of this chapter, banking is interpreted in its widest sense, to cover depository and loan functions, as well as the provision of general financial services including investment banking but excluding insurance and funds management (defined below).

The key providers of banking services are, of course, the banks. As at June 2002, there were 50 authorised banks in Australia, of which 14 were domestic and 36 foreign owned.² The domestic banks dominate retail banking,³ holding 83 per cent of assets under management. Foreign banks tend to be more active in the wholesale or investment banking market.⁴ The number of foreign banks in Australia has doubled since the early 1990s. There is no segmented offshore banking market in Australia as such because the banking system is fully liberalised and open.

Australian domestically owned banks also have substantial overseas business. This is reported in two ways. The domestic operations of Australian

Table 15.1 Total assets of Australian financial institutions (A\$billion)

	September 1992	September 1997	September 2002
<i>Banking</i>	492.3	738.1	1307.3
Banks	373.0	554.3	971.8
Building societies	12.3	11.0	13.2
Credit cooperatives	10.3	17.5	26.5
Money market corporations	46.1	75.1	88.4
Finance companies	30.5	37.7	47.5
General financiers	9.5	14.3	30.4
Pastoral financiers	2.0	3.4	12.3
Securitisation vehicles	8.7	24.7	117.3
<i>Insurance</i>	122.1	197.1	244.8
Life insurance	97.9	138.7	166.0
General insurance	24.2	58.4	78.8
<i>Funds management</i>	136.5	271.3	458.9
Superannuation funds	94.4	182.7	287.8
Cash management trusts	5.4	13.6	28.3
Common funds	4.3	6.4	8.0
Friendly societies	8.9	7.0	4.9
Public unit trusts	23.7	61.7	129.8
Total	750.9	1206.5	2011.0

Note: Excludes the Reserve Bank of Australia; bank assets include A\$ assets in Australia only

Source: Reserve Bank of Australia *Bulletin* (2003), Table B1

banks are active overseas, including with non-resident entities. These are reported in Table 15.2. As shown in that table, Australian banks' domestic on-balance sheet operations with non-residents are mostly on the liabilities side: that is, local operations borrow overseas from non-residents. Lending to non-residents has also increased in recent years. Most of the borrowing offshore is in foreign currencies. About 80 per cent of Australian banks domestic business is denominated in Australian dollars (APRA 2002).

Australian banks also have substantial operations based overseas. These activities are not reported on their domestic balance sheets but are reported in their global consolidated accounts. About one-third of the global consolidated assets of the major domestic Australian banks is held offshore (APRA 2002). Table 15.2 also reports global consolidated assets of Australian banks. Most of these operations are based in established

Table 15.2 Australian banking business (A\$ billion)

	Domestic Liabilities		Domestic Liabilities: Total (share of GDP)	Domestic Assets		Domestic Assets: Total (share of GDP)	Global Consolidated Assets (share of GDP)	Global Consolidated Off-balance Sheet Business (share of GDP)
	Residents (share of total)	Non-residents (share of total)		Residents (share of total)	Non-Residents (share of total)			
1990	278.2 (88.1)	37.5 (11.9)	315.7 (80.0)	339.3 (97.5)	8.7 (2.5)	348.0 (88.0)		1748.6 (442.0)
1991	280.2 (86.3)	44.7 (13.7)	324.9 (81.0)	351.4 (98.3)	6.2 (1.7)	357.6 (89.0)		1849.1 (462.0)
1992	293 (85.4)	50.3 (14.6)	343.3 (83.0)	366.0 (97.9)	7.9 (2.1)	373.9 (90.0)		2,216.6 (534.0)
1993	302.2 (84.2)	56.8 (15.8)	359.0 (82.0)	382.2 (97.5)	9.9 (2.5)	392.1 (90.0)		2172.4 (499.0)
1994	341.0 (87.7)	47.7 (12.3)	388.7 (84.0)	414.1 (97.0)	12.6 (3.0)	426.7 (93.0)	567.0 (123.0)	2171.4 (472.0)
1995	365.1 (85.4)	62.4 (14.6)	427.5 (88.0)	453.4 (96.6)	16.1 (3.4)	469.4 (97.0)	649.7 (134.0)	2223.4 (459.0)
1996	400.0 (84.2)	75.1 (15.8)	475.1 (92)	497.9 (96.0)	20.5 (4.0)	518.4 (100.0)	732.4 (142.0)	2617.7 (506.0)
1997	427.6 (82.5)	90.7 (17.5)	518.3 (95.0)	540.9 (95.0)	28.6 (5.0)	569.4 (104)	835.7 (153.0)	3186.1 (584.0)
1998	453.6 (81.6)	101.9 (18.4)	555.5 (96.0)	588.1 (94.6)	33.5 (5.4)	621.7 (108.0)	868.5 (151.0)	3293.0 (570.0)
1999	509.4 (81.8)	113.6 (18.2)	622.9 (103.0)	661.4 (94.9)	35.6 (5.1)	697.0 (115.0)	937.4 (154.0)	3606.9 (594.0)

Table 15.2 (continued)

	Domestic Liabilities		Domestic Liabilities: Total (share of GDP)	Domestic Assets		Domestic Assets: Total (share of GDP)	Global Consolidated Assets (share of GDP)	Global Consolidated Off-balance Sheet Business (share of GDP)
	Residents (share of total)	Non-residents (share of total)		Residents (share of total)	Non-Residents (share of total)			
2000	524.5 (77.8)	150.1 (22.2)	674.5 (104)	718.9 (94.6)	41.1 (5.4)	760.0 (117)	1051.9 (162.0)	4163.7 (640.0)
2001	581.0 (77.9)	165.2 (22.1)	746.2 (108.0)	787.0 (94.2)	48.4 (5.8)	835.4 (121.0)	1130.5 (164.0)	5072.3 (734.0)
2002	691.4 (74.7)	176.6 (19.1)	925.1 (126.0)	935.2 (94.2)	46.2 (4.7)	992.7 (135.0)	1138.0 (155.0)	5310.0 (724.0)

Notes: 2002 data for Global Consolidated Assets and Global Consolidate Off-balance Sheet Business are as at September; the difference between the totals of resident and non-resident assets and liabilities in 2002 is due to overseas operations.

Source: Reserve Bank of Australia *Bulletin* (2003) Tables B.3, B.4 and B.5.

markets, like Europe and the United States, and the reasons for this are discussed in section 5 below.

The banking sector in Australia is very strong. It is ranked by the World Economic Forum as the second most sound system in the world. The ratio of impaired to total assets is currently about 0.59 per cent: total impaired assets at September 2002 totalled A\$6.7 billion out of global consolidated assets of A\$1.14 trillion (Reserve Bank of Australia 2003). Banks are well capitalised, with average consolidated capital adequacy ratios of 10.3 per cent. Aggregate provisions are high, with specific (A\$2.6 billion) and general (A\$4.9 billion) provisions covering more than 110 per cent of impaired assets. Risk management within the banking system is world-class. Banks' foreign currency exposures are fully hedged, which is possible because the Australian dollar is a highly internationalised currency. Banks make wide use of interest rate and exchange rate derivatives, not just for profit-oriented trading but also as tools for internal risk management. About 90 per cent of the banks' global off-balance sheet business reported in Table 15.2 is in interest rate and exchange rate contracts.

Banks are one class of authorised deposit-taking institutions (ADIs) in Australia. Other ADIs include building societies (basically saving and loan associations) and credit cooperatives. These institutions are also important sources of finance for households and small businesses.

Apart from the banks, there are four other types of financial institutions in Australia which provide specialised banking services. The finance companies, general financing companies, and pastoral financing companies, provide specialist consumer and business financing, like auto finance and leases. Money market corporations (which used to be called merchant banks) focus primarily on investment banking business, as do some of the commercial banks. Their activities encompass corporate finance, capital markets, private infrastructure financing, structured finance, offshore funding, derivatives markets, underwriting, securitisation, and corporate advisory services. International openness is an important element in maintaining dynamism in this sector and in attracting the regional operations of financial intermediaries to Australia: about half of the assets of this sector are from foreign owned entities.

There is also a set of securitisation vehicles, which are special purpose vehicles registered in Australia to securitise selected assets, mostly mortgages but also credit card, trade and lease receivables, operating leases and secured loans. This has been a particularly rapid area of growth in the 1990s. It is regarded as a key source of competitive pressure to bank housing finance: the contraction in banks' housing interest rate margin from around 3 per cent to 1¼ per cent in 1997 is associated with the entry of mortgage originators and securitised mortgages.

1.2 Insurance Companies

There are over 200 firms engaged in various insurance activities in Australia, including general, life, and reinsurance business. It is the second biggest employer after the banks and is the largest export earner in the financial sector (A\$673 million in the year to September 2002). About 85 per cent of the life insurance sector business is in fact in superannuation (that is, pension) assets.

The sector has particular expertise in alternative risk transfer processes, natural disaster risk modelling, and the development of insurance systems. The insurance sector has been adversely affected in recent years by a worsening global environment related mainly to the terrorist attacks in the United States in September 2001 and Indonesia in October 2002. The local sector has also been affected by the failure of a major insurance company, HIH Insurance, in March 2001 due to gross corporate malfeasance. While Australia's regulatory regime is regarded as one of the best in the world (according to the World Economic Forum), this event exposed substantial weaknesses in prudential oversight (see section 4).

1.3 Fund Managers

The fund management industry in Australia has grown rapidly since the early 1990s, fuelled by the Government's compulsory retirement savings policy.⁵ After Japan, Australia has the largest funds management sector in East Asia. Table 15.3 shows the asset structure of superannuation (pension) funds in Australia. These funds have steadily increased both in absolute terms and relative to GDP over the past decade. Investment in securities has declined in relative terms while investment in equities and overseas assets have increased in absolute and relative terms.

The funds management industry in Australia is expected to grow by 10 per cent or more a year over the next few decades, mostly due to compulsory retirement savings. Assets under management in this case would rise from over A\$600 billion currently (including superannuation assets held by life insurance companies) to A\$2.3 trillion in 2015.

This scheme has had three positive unanticipated effects on the development of domestic financial markets in Australia. First, a captive but competitive and transparent market for asset management has attracted a range of foreign financial institutions to Australia, as a location to also run their Asian front and back-office asset management operations (more on this in section 3).

Second, as their liabilities have grown, fund managers have looked for domestic assets to match them. The domestic corporate bond market has

Table 15.3 Assets of superannuation (pension) funds (A\$ billion)

	Cash (per cent of total)	Loans (per cent of total)	Securities (per cent of total)	Equities (per cent of total)	Overseas Assets (per cent of total)	Other (per cent of total)	Total (per cent of GDP)
1990	8.5 (9.9)	4.7 (5.5)	22.1 (25.7)	21.2 (24.7)	8.9 (10.3)	20.4 (23.8)	85.9 (2)2
1991	8.4 (8.4)	5.5 (5.5)	23.9 (24.1)	30.8 (31.1)	11.6 (11.7)	19.1 (19.2)	99.3 (25)
1992	9.5 (9.3)	6.3 (6.1)	26.8 (26.0)	32.5 (31.5)	12.4 (12.1)	15.5 (15.0)	103.0 (25)
1993	9.8 (7.7)	6.5 (5.1)	29.7 (23.5)	45.6 (36.1)	18.4 (14.6)	16.3 (12.9)	126.4 (29)
1994	11.9 (9.3)	5.8 (4.5)	30.4 (23.9)	45.1 (35.5)	17.7 (13.9)	16.3 (12.8)	127.1 (28)
1995	13.3 (8.5)	5.8 (3.7)	30.3 (19.4)	66.4 (42.6)	21.9 (14.0)	18.2 (11.7)	156.0 (32)
1996	13.8 (7.5)	7.3 (4.0)	33.2 (18.1)	80.1 (43.6)	28.1 (15.3)	21.3 (11.6)	183.9 (36)
1997	16.8 (7.6)	8.7 (4.0)	37.3 (17.0)	98.0 (44.6)	35.7 (16.2)	23.4 (10.6)	219.9 (40)
1998	21.3 (8.7)	10.7 (4.4)	42.0 (17.2)	104.9 (43.0)	42.2 (17.3)	22.8 (9.3)	243.8 (42)
1999	24.1 (7.9)	15.2 (5.0)	45.6 (14.9)	131.5 (42.8)	63.1 (20.6)	27.4 (8.9)	306.9 (51)
2000	27.6 (7.9)	15.1 (4.3)	50.9 (14.6)	158.3 (54.4)	67.3 (19.3)	29.4 (8.4)	348.5 (54)
2001	30.7 (8.4)	15.6 (4.2)	44.8 (12.2)	172.2 (46.9)	72.9 (19.9)	30.8 (8.4)	367.1 (53)
2002	31.3 (9.0)	14.3 (4.1)	46.5 (13.3)	157.7 (45.1)	69.1 (19.8)	30.7 (8.8)	349.6 (48)

Source: Reserve Bank of Australia *Bulletin* (2003) Table B.2

been a major beneficiary of this, with rising institutional demand putting pressure on the market to expand and differentiate risk (de Brouwer 2003).

Third, strong growth has enabled a set of well-performing domestic and foreign small or 'boutique' fund managers to emerge. This provides a culture of dynamism and entrepreneurialism in finance, strengthening Australia's competitiveness in regional and global finance. The Boston-based finance consulting firm Cerulli Associates has described Australia as 'the most sophisticated retail fund management marketplace outside of the US' (Axiss Australia 2003).

2. AUSTRALIA'S FINANCIAL MARKETS

Underpinned by the strength and breadth of its financial institutions and their asset base, Australia has developed expertise in the full set of financial markets.

2.1 Money Markets

The Australian money market is underpinned by a range of official, financial and private short-term securities on issue. Table 15.4 provides a snapshot of the main issuers in this market over the period 1992–2002.

The market overall has grown to over A\$230 billion, equivalent in size to about a third of Australian GDP. The composition of this has changed substantially in the past decade, with a marked decline in short-term government paper more than offset by strong growth in short-term liabilities of banks and other financial intermediary. The decline in short-term government paper is due to fiscal consolidation and arrangements which more smoothly spread revenue receipts through the financial year. Money market turnover has increased by 50 per cent in 1997–2002, reaching A\$2.5 trillion in the year to June 2002 (AFMA 2003).

Table 15.4 Money market in Australia short-term debt securities on issue (A\$ billion)

	1992	1997	2002
Government	30.2	17.5	13.0
(per cent of GDP)	(7.3)	(3.2)	(1.8)
Financial institutions	96.9	126.4	195.3
(per cent of GDP)	(23.4)	(23.2)	(26.6)
Non-residents	–	1.2	0.4
(per cent of GDP)		0.2	0
Private sector	5.6	17.0	24.1
(per cent of GDP)	(1.4)	(3.1)	(3.3)
Total	132.6	162.0	232.8
(per cent GDP)	(32.0)	(29.7)	(32.2)

Source: Reserve Bank of Australia *Bulletin* (2003) Table D4 and ABS (2002) Table 22

2.2 Equity Markets

The market capitalisation of domestic equities in Australia was A\$699 billion at the end of 2001, equivalent in value to 101 per cent of Australian GDP. The Australian Stock Exchange (ASX) is ranked twelfth in the world in terms of market capitalisation, and is third in East Asia, following Japan and Hong Kong. It is ranked ninth, with a global weight of 1.82 per cent, in the Morgan Stanley Capital Index (MSCI) and has a 35 per cent weight in the MSCI Asia Pacific ex-Japan index (ASX 2002).⁶

The ASX is regarded as an innovative, liquid and efficient exchange. The six State-based markets integrated and started trading on an electronic platform in 1990. The ASX was the first exchange in the world to demutualise, becoming a listed company in 1998 with over 16 000 shareholders and a strong earnings profile (ASX 2002), even in the uncertainties following the bursting of the US stock market bubble and terror attacks in 2001 and 2002. The exchange's expertise in technology, size and liquidity enabled it to create links with the NASDAQ and NYSE in March 2001 and the Singapore Stock Exchange in December 2001. Internet trading and straight-through-processing have grown rapidly. The ASX's trading, settlement and registry functions are technologically advanced.

The market has grown substantially in recent years, in terms of market capitalisation of domestic and foreign firms, turnover, and range of financial products. Table 15.5 shows the expansion of capitalisation and turnover in recent years. Market capitalisation has more than doubled in the past

Table 15.5 *Equity market capitalisation and turnover*

	1995	1997	1999	2001
<i>Market Capitalisation (A\$b)</i>	<i>546.4</i>	<i>776.8</i>	<i>845.0</i>	<i>1109.6</i>
Domestic equities	329.6	453.9	653.5	732.8*
Overseas-based equities	216.8	322.9	191.4	376.8
<i>Turnover</i>				
Shares (no., trillion)	52.1	88.5	113.2	135.2
Trades (no., million)	3.3	6.0	10.3	13.3
Notional value (A\$ billion)	132.8	229.5	306.9	476.4
Turnover velocity (%)	43.6	54.3	53.0	68.2

Notes:

Turnover velocity is notional value of turnover as a percentage of GDP.

* At November 2002, this had fallen to A\$680 billion.

Source: ASX (2002)

six years. Of the 1410 firms listed on the ASX, 76 are foreign companies; they also account for about a third of market capitalisation.⁷ Turnover and liquidity have increased individual share ownership, with 52 per cent of adults directly or indirectly owning shares (Axiss Australia 2003). The ASX offers liquid markets in a wide gamut of financial products including spot and derivatives trading in equities and interest rate instrument, including warrants.

2.3 Foreign Exchange Markets

The Australian foreign exchange market is large, liquid and growing. It is the eighth largest in the world and the Australian dollar is the seventh most actively traded currency (BIS 2002).⁸ The Australian market was one of few markets to grow between 1998 and 2001, the result of a number of global players centring their Asian time zone business in Sydney (Axiss Australia 2003). Sydney has a comparative time-zone advantage in East Asia, since it is the first significant market in East Asia to open after the US markets close and it closes after the London market opens. The major participants in the market are the large domestic and global banks.

About 40 per cent of Australian dollar trades are conducted onshore, with substantial offshore trade in London and New York. As shown in the Table 15.6, Australian dollar trade has increased substantially over the years, commensurate with offshore Australian dollar liabilities and a market appetite for hedging opportunities provided by the Australian dollar (because of its correlation with commodity prices and proxy for risk

Table 15.6 Australian dollar trading in Australia: daily average turnover (A\$ billion)

	1992	1997	2002
<i>Domestic Australian dollar trade</i>	17.0	36.6	48.9
(per cent of GDP)	(4.1)	(6.7)	(6.7)
Spot market	5.4	10.9	11.1
(per cent of GDP)	(1.3)	(2.0)	(1.5)
Forward market	1.0	1.8	4.2
(per cent of GDP)	(0.2)	(0.3)	(0.6)
Swap market	10.0	22.7	30.8
(per cent of GDP)	(2.4)	(4.2)	(4.2)
Option market	0.6	1.4	2.8
(per cent of GDP)	(0.1)	(0.3)	(0.4)

Source: Reserve Bank of Australia *Bulletin* (2003) Table F9

in East Asia) (de Brouwer 2001, chapter 6). As shown by the decomposition of domestic Australian dollar trades, most of the growth has been in the swap market. This is an important tool in managing foreign currency risk.

The Australian dollar, the major Australian domestic banks and the Reserve Bank of Australia are also part of continuous linked settlement (CLS) in foreign exchange markets. CLS was introduced in September 2002 for real-time gross settlement of foreign exchange transactions between seven major central banks (including the RBA).

2.4 Long-Term Debt Markets

The Australian debt market is one of the most sophisticated in East Asia. Short-term instruments, including securitised instruments, are discussed above with reference to the Australian money market. Table 15.7 summarises long-term debt outstanding, including federal and state government bonds, non-government bonds issued in Australia (issued by financial institutions, non-residents and private-sector corporations), and overseas issues by the Australian private non-financial sector.

Government bonds have historically been the core of the Australian debt market, providing not just a benchmark for pricing but also the backbone

Table 15.7 Australian long-term debt securities outstanding (A\$ billion)

	1992	1997	2002
Total	144.8	200.6	328.6
(per cent of GDP)	(35.2)	(36.8)	(44.8)
Government	99.9	134.4	110.0
(per cent of GDP)	(24.1)	(24.6)	(15.0)
<i>Non-government</i>	28.0	32.3	125.6
<i>(per cent of GDP)</i>	<i>(6.8)</i>	<i>(5.9)</i>	<i>(17.1)</i>
Financial institutions	11.9	6.8	24.6
(per cent of GDP)	(2.9)	(1.2)	(3.4)
Non-residents	2.2	2.6	20.6
(per cent of GDP)	(0.5)	(0.5)	(2.8)
Corporates	14.0	22.8	80.5
(per cent of GDP)	(3.4)	(4.2)	(11.0)
Private overseas issues	16.9	33.9	93.1
(per cent of GDP)	(4.1)	(6.2)	(12.7)

Source: Reserve Bank of Australia *Bulletin* (2003) Table D4

of clearing and settlement processes, standards, liquidity and debt trading expertise. But this has started to change in recent years, as a result of the contraction of government bonds on issue due to privatisation and fiscal consolidation at both the federal and state level. Indeed, one policy issue in Australia is whether the federal government bond market should be closed down, with the proceeds of future privatisations and surpluses dedicated to buying back outstanding bonds (Treasury 2002) (see section 5 below). Australian government bonds are high quality: for example, domestic and foreign-currency issues are rated AAA by Standard & Pools.

There are now more non-government than government bonds on issue in Australia. Growth in the corporate bond market has been particularly robust, largely due to strong demand from institutional investors in search of fixed interest alternatives to the government bond market. This has encouraged market participants to develop skills in risk assessment and has led to the creation of credit risk spreads ranging from AAA to BBB on corporate paper. Foreign firms also use the Australian corporate bond market to issue debt, largely for the purpose of swapping Australian-dollar liabilities for US-dollar liabilities. Most foreign firms are American or European, although some regional firms are active, notably from Singapore.

Private issues overseas have also increased substantially, providing alternative funding sources for Australian firms as well as a key link to deepening expertise and practices in Australian financial markets. Retail investors also have access to the debt securities market through the ASX and internet portals like Yieldbroker.com and electronic mediums like Bloomberg's Tradebook (Axiss Australia 2003).

Turnover in government bonds on the over-the-counter (OTC) market reached A\$929 billion in the year to June 2002, down 16 per cent over the past five years. Turnover in the non-government debt market reached A\$222 billion, up 170 per cent over five years.

2.5 Derivatives Markets

Australia also has a well-developed and rapidly growing derivatives market. Based on BIS over-the-counter data, Australia is the biggest market for domestic interest rate and exchange rate derivatives in East Asia after Japan.⁹ The BIS (2002) survey data for Australia is shown in Table 15.8

Derivatives trade also takes place on two exchanges in Australia, the ASX and the Sydney Futures Exchange (SFE), and includes futures, options and warrants. Table 15.9 summarises market estimates of OTC and exchange-trade derivatives annual turnover in Australia. Most exchange-based derivatives trading is conducted on the SFE. Trading on the SFE is fully electronic and has a 24-hour trading capability. The SFE became

Table 15.8 OTC derivatives market activity in Australia average daily turnover, US\$ billion, net of local inter-dealer double counting

	Total		Foreign exchange		Interest rate	
	April 1998	April 2001	April 1998	April 2001	April 1998	April 2001
Australia	31.6	50.7	28.8	40.9	2.8	9.8

Source: BIS (2002)

Table 15.9 OTC and exchange-based annual derivatives turnover, A\$ billion, year to June

	1998	1999	2000	2001	2002
OTC					
Total OTC derivatives	14 794	16 557	18 249	21 218	28 688
(per cent of GDP)	(2636)	(2794)	(2903)	(3167)	(4025)
Interest rate	4132	5075	7477	7400	11 630
Equity		8	11	15	20
Credit			18	28	22
FX	10 662	11 474	10 743	13 775	17 016
Exchange traded					
Total ET derivatives	9741	10 271	10 413	11 292	11 717
(per cent of GDP)	(1735)	(1733)	(1657)	(1686)	(1644)
ASX options	74	91	104	133	193
SFE futures	8703	9428	9753	10 709	11 129
SFE options	964	752	556	450	395
Total derivatives	24 535	26 828	28 662	32 510	40 405
(per cent of GDP)	(4371)	(4527)	(4559)	(4853)	(5669)

Source: AFMA (2003)

a corporation in September 2000 and merged with Austraclear, one of Australia's main clearing houses, in December 2000.

According to AFMA (2003), in the year to June 2002, exchange-based turnover reached A\$11.7 trillion, up 20 per cent over five years. There is also substantial OTC trading, reaching A\$34.4 trillion in the year to June 2002, up 56 per cent over five years. Exchange-traded and OTC derivatives cover interest rates, foreign exchange, equities, credit, electricity, wool, cattle, the weather, and renewable energy certificates (Axiss Australia 2003; AFMA 2003). The SFE's 90-day bank bill futures contract is the fifth

most actively traded contract of its type in the world; the three-year Government bond contract is the seventh most active bond contract in the world. The OTC swaps markets in both interest rates and foreign exchange are particularly liquid.

3. THE SETTLEMENT, REGULATORY AND SUPERVISORY FRAMEWORK

3.1 Settlement System

The payments system covers cash and non-cash payments at the individual or retail level and the settlement of claims between financial institutions.¹⁰ Clearing of payments between financial institutions is effected by the Australian Payments Clearing Union (APCU), Austraclear, and the Clearing House Electronic Sub-Register System (CHES). When payments are cleared, they accrue obligations which must be settled. Final settlement between financial institutions in Australia is fully electronic and effected on a real-time gross settlement (RTGS) basis – that is, they are settled individually as they are made - through these institutions' exchange settlement accounts (ESAs) at the Reserve Bank of Australia.

Under current arrangements, three systems are settled on an RTGS basis through ESAs. The SWIFT payment delivery system (PDS) is a cash transfer system between financial institutions. Austraclear is a private electronic registry and securities settlement system for government, semi-government and private-sector debt securities. The Reserve Bank Information and Transfer System (RITS) is the RTGS system for transactions with the Reserve Bank, such as intraday repos with the central bank. SWIFT PDS and Austraclear are feeder systems to RITS.¹¹

Table 15.10 provides summary statistics on payment and settlement systems in Australia. The number of bank branches has steadily declined in the past decade as banks have rationalised the provision of banking services in a competitive environment. Other deposit-taking institutions have maintained their branch network. At the same time, the number of ATMs and Electronic Funds Transfer and Point of Sale (EFTPOS) terminals has increased substantially. RTGS transactions, in both number and value, have also steadily increased.

The central bank plays a key role in the payments system. First, it is the issuer of currency notes. Second, under the Reserve Bank of Australia Act 1957, it has regulatory responsibilities for the payments system, including controlling risk and promoting efficiency and competition. Third, it provides facilities for final settlement of payments obligations through

Table 15.10 *Payment and settlement in Australia*

June	Bank branches: number	Other ADI branches: number	ATMs: number	EFTPOS terminals: number	RTGS transactions	
					Annual number (million)	A\$ billion (per cent of GDP)
1990	6921	–	4636	15 514		
1991	6917	–	4956	22 752		
1992	6920	–	5314	26 260		
1993	7064	1519	5483	30 486		
1994	6747	1540	5848	38 875		
1995	6655	1599	6249	62 975		
1996	6508	1536	7178	107 702		
1997	6121	1391	8182	164 199		
1998	5615	1317	8814	218 330	3.66	26 064
1999	5358	1358	9387	265 391	4.35	27 859
2000	5003	1208	10 818	320 372	4.65	29 822
2001	4712	1428	11 915	362 848	4.87	34 677
2002	–	–	14 714	402 084	5.45	34 631

Note: ADI refers to authorised deposit institutions

Source: Reserve Bank of Australia *Bulletin* (2002) Tables C.4 and C.5

exchange settlement accounts. Fourth, it is banker for the federal and some state governments.

3.2 Regulatory System

The regulatory environment for financial services in Australia has been subject to considerable reform and change since the early 1980s. Financial deregulation began in the early 1980s and was largely complete by the mid-1980s.¹² The regulatory system that underpins the operation and behaviour of institutions and markets has changed over time. The Financial System Inquiry (1997) – also called, after its chair, the Wallis Inquiry – had a major impact on the regulatory structure of the financial system, culminating in major reform in 2002.

The Financial Services Reform (FSR) Act 2002 is intended ‘to create a harmonised licensing, disclosure and conduct framework for all financial service providers and to establish a consistent and comparable financial product disclosure regime’ (Axiss Australia 2003, p. 27). The FSR Act sets uniform regulation of all financial products; it establishes a single licensing

framework for all financial services providers; it has uniform disclosure requirements for all financial products; it sets minimum standards of conduct for providers in dealing with clients; and it creates flexible arrangements for the authorisation of market operators and for clearing and settlement facilities (Axiss Australia 2003).

The Australian Securities and Investments Commission (ASIC), reporting to the Treasurer, maintains responsibility for all regulation of financial services, financial products and markets. The Australian Competition and Consumer Commission, which also reports to the Treasurer, has responsibility for preventing anti-competitive behaviour in markets and protecting consumers' interests.

3.3 Supervisory System

The Financial System Inquiry (1997) also recommended major change to the structure of prudential supervision in Australia. The result was the creation of the Australian Prudential Regulatory Authority (APRA) which has responsibility for supervising all financial institutions, including deposit-taking institutions, insurance companies, and superannuation funds. The Reserve Bank also has responsibility for the stability of the financial system. Along with the RBA and ASIC, APRA is a member of the Council of Financial Regulators.

4. INTERNATIONAL AND DOMESTIC SAVING

Australia is a small open economy and depends on international saving to support domestic economic activity. Table 15.11 summarises the structure of net capital inflows to Australia. The level of foreign investment in Australia has steadily increased over the past decade, especially in portfolio and direct investment. More than half of the stock of foreign investment in Australia is now based in equities (FDI or equity portfolio investment), well up from about 30 per cent a decade earlier. The corollary is that Australia's current account deficit in the past decade has been financed largely by FDI and portfolio equity inflows.

Consider, now, aspects of domestic financing. Table 15.12 sets out the financial assets and liabilities of Australian households for the period 1992–2002. There are number of striking features about the financial assets and liabilities of Australian households. First, household financial wealth has more than doubled and, as a share of GDP, has increased by 30 per cent over the past decade. This rise has occurred across the range of financial assets but is most obvious in the direct acquisition of stocks and long-term

Table 15.11 Level of foreign investment into Australia, per cent of GDP

	Total foreign Investment	Direct Investment	Portfolio Investment	Portfolio investment		Other	
				Total equities debt			Total loans
				of which, equities	of which, debt		
1990	73.4	24.1	34.8	6.4	28.3	14.6	10.7
1991	79.0	25.4	39.5	7.2	32.3	14.1	10.6
1992	81.8	26.5	40.0	6.6	33.4	15.3	11.8
1993	89.7	28.1	46.7	12.2	34.5	14.9	10.7
1994	86.7	26.7	45.4	13.0	32.4	12.4	8.3
1995	92.8	28.8	50.2	14.2	36.0	11.8	7.5
1996	94.3	28.3	53.1	14.8	38.3	10.8	6.0
1997	101.2	28.4	57.1	16.9	40.1	13.0	6.6
1998	107.3	29.9	58.9	20.6	38.3	15.8	7.0
1999	113.5	30.3	62.1	24.4	37.7	18.0	8.5
2000	117.7	30.3	65.0	22.3	42.7	18.6	8.0
2001	121.5	30.0	69.0	25.2	43.8	18.9	7.8
2002*	118.0	30.0	64.6	20.5	44.0	19.2	8.3

Notes: * 2002 is at September

Source: ABS Catalogue No. Table 31

Table 15.12 Australian households' financial assets and liabilities (A\$ billion)

	Assets				Liabilities			
	Deposits (share of total assets)	Pension funds (share of total assets)	Stocks (share of total assets)	Other (share of total assets)	Total (share of GDP)	Bank loans (share of total liabilities)	Other (share of total liabilities)	Total (share of GDP)
1992	157.8 (27.8)	201.6 (35.5)	67.3 (11.8)	141.7 (24.9)	568.4 (137)	139.2 (70.1)	59.4 (29.9)	198.6 (48)
1993	165.4 (24.9)	237.8 (35.8)	113.9 (17.1)	146.9 (22.1)	663.9 (152)	153.3 (69.6)	67.0 (30.4)	220.3 (51)
1994	173.5 (26.4)	238.5 (36.3)	92.0 (14.0)	153.6 (23.4)	657.7 (143)	179.0 (71.5)	71.3 (28.5)	250.2 (54)
1995	185.7 (25.7)	269.3 (37.2)	98.6 (13.6)	170.1 (23.5)	723.7 (149)	200.7 (71.0)	82.0 (29.0)	282.7 (58)
1996	197.9 (24.6)	307.3 (38.3)	119.2 (14.8)	178.6 (22.2)	803.1 (155)	222.2 (71.1)	90.5 (28.9)	312.7 (61)
1997	209.4 (23.8)	357.2 (40.6)	134.6 (15.3)	177.6 (20.2)	878.7 (161)	245.4 (69.7)	106.8 (30.3)	352.2 (65)
1998	223.5 (22.7)	387.4 (39.3)	188.1 (19.1)	187.0 (19.0)	986.0 (171)	274.3 (70.6)	114.0 (29.4)	388.3 (67)
1999	227.7 (20.6)	465.8 (42.1)	221.6 (20.0)	190.7 (17.2)	1105.8 (182)	310.4 (70.8)	127.8 (29.2)	438.2 (72)
2000	243.8 (20.8)	511.2 (43.6)	223.8 (19.1)	194.5 (16.6)	1173.3 (180)	344.9 (70.2)	146.3 (29.8)	491.3 (76)

2001	272.0 (21.6)	535.1 (42.6)	249.4 (19.8)	200.4 (15.9)	1256.9 (182)	385.0 (69.8)	166.9 (30.2)	551.9 (80)
2002	290.5 (23.8)	506.1 (41.4)	221.1 (18.1)	205.4 (16.8)	1223.1 (167)	432.7 (69.8)	187.5 (30.2)	620.3 (85)

Notes:

Households includes unincorporated enterprises

2002 figures are at September, all other figures are as at December

'other assets' mainly comprise unfunded superannuation (pension) claims of government employees

Source: Australian Bureau of Statistics (ABS) Catalogue No. 5232.0

saving through the accumulation of superannuation (that is, pension) funds. About one-fifth of Australian household financial wealth is held in stocks, although the recent decline in stock prices makes the current numbers a touch lower.

Second, household financial assets outweigh household financial liabilities by about 2 to 1. Households are net holders of financial wealth. Financial liabilities have also increased substantially over the past decade, with the result that net financial wealth has declined slightly from 89 per cent of GDP in 1992 to 72 per cent of GDP in 2002. Most of this deterioration is due to a relative rise in financial liabilities for the acquisition of real assets, particularly real estate. The fall in net financial wealth as a share of GDP is more than offset by a rise in net wealth: residential real estate prices in Australia have doubled over the past decade. About a fifth of the deterioration in net financial wealth is due to the recent decline in share prices. Bank lending remains the main access point for household finance, with the share of bank loans a constant 70 per cent of household financial liabilities.

Table 15.13 sets out the financial assets and liabilities of Australian firms for the period 1992–2002. As is the case elsewhere, private-sector firms in Australia have more financial liabilities than they have assets. Over the past decade, their financial assets and liabilities have both increased. The rate of increase of financial assets has been substantially greater and is largely due to a build-up of bank deposits. In terms of loans, firms have become relatively more reliant on banks than on other financial institutions for loans over the past decade. The liberalisation of the banking sector has strengthened, not weakened, banks' reach over intermediated funds for the corporate sector. Firms have also expanded their reliance on stocks in external financing.

5. AUSTRALIA AS A GLOBAL FINANCIAL CENTRE IN EAST ASIA

Australia is part of the East Asian region. With respect to regional economic activity, this is most obvious in the trading relationship. In terms of intra-regional trade in goods and services, for example, Australia trades proportionally more with the rest of East Asia than do most other countries in the region (DFAT 2003, p. 4). In terms of finance, this is less obvious, although it is hard in general to obtain data on intra-East Asian financial activity.

The correlation of Australian financial prices with East Asian financial prices is mixed. A notable correlation is in foreign exchange markets. The Australian dollar is the second most traded regional currency: globally, the

Table 15.13 Australian firms' financial assets and liabilities (*A\$ billion*)

	Assets					Liabilities				
	Bank deposits (share of total assets)	Foreign equities (share of total assets)	Other (share of total assets)	Total (share of GDP)	Bank loans (share of total liabilities)	Other loans (share of total liabilities)	Stocks (share of total liabilities)	Other (share of total liabilities)	Total (share of GDP)	
1992	37.9 (22.1)	46.9 (27.3)	86.8 (50.6)	171.6 (41.0)	64.5 (13.3)	96.2 (19.9)	214.0 (44.3)	108.4 (22.4)	483.0 (117.0)	
1993	41.4 (23.4)	49.6 (28.0)	85.8 (48.5)	176.8 (41)	62.9 (11.0)	91.7 (16.0)	311.1 (54.2)	108.5 (18.9)	574.3 (132.0)	
1994	50.7 (27.0)	47.1 (25.0)	90.4 (48.0)	188.2 (41.0)	66.6 (11.8)	87.9 (15.6)	297.8 (52.8)	111.5 (19.8)	563.8 (123.0)	
1995	57.0 (26.8)	54.6 (25.7)	101.0 (47.5)	212.6 (44.0)	78.0 (12.6)	90.0 (14.6)	329.8 (53.4)	119.5 (19.4)	617.3 (127.0)	
1996	65.5 (28.6)	58.6 (25.6)	104.8 (45.8)	228.9 (44.0)	87.2 (13.0)	86.3 (12.9)	365.3 (54.6)	129.7 (19.4)	668.4 (129.0)	
1997	71.5 (27.0)	76.3 (28.8)	116.9 (44.1)	264.7 (49.0)	98.2 (13.8)	96.6 (13.5)	383.3 (53.7)	135.1 (18.9)	713.1 (131.0)	
1998	85.0 (27.6)	83.7 (27.2)	139.0 (45.2)	307.7 (53.0)	115.7 (14.2)	105.4 (13.0)	424.9 (52.3)	166.8 (20.5)	812.8 (141.0)	

Table 15.13 (continued)

	Assets				Liabilities				
	Bank Deposits (share of total assets)	Foreign Equities (share of total assets)	Other (share of total assets)	Total (share of GDP)	Bank Loans (share of total liabilities)	Other loans (share of total liabilities)	Stocks (share of total liabilities)	Other (share of total liabilities)	Total (share of GDP)
1999	91.4 (27.6)	93.7 (28.3)	145.8 (44.1)	330.9 (55.0)	128.2 (13.5)	103.6 (10.9)	529.6 (56.0)	184.8 (19.5)	946.1 (156.0)
2000	100.0 (26.4)	116.8 (30.9)	161.5 (42.7)	378.3 (58.0)	138.8 (13.5)	118.6 (11.6)	537.9 (52.4)	230.5 (22.5)	1025.8 (158.0)
2001	111.2 (26.9)	139.7 (33.7)	163.3 (39.4)	414.3 (60.0)	139.6 (12.9)	118.9 (11.0)	589.8 (54.6)	231.6 (21.4)	1079.9 (156.0)
2002	115.2 (28.0)	112.0 (27.2)	184.5 (44.8)	411.7 (56.0)	149.8 (12.1)	123.7 (12.1)	521.0 (51.0)	227.1 (22.2)	1021.5 (139.0)

Notes:

Firms are in the private non-finance sector

2002 figures are at September, all other figures are as at December

Source: Australian Bureau of Statistics (ABS) Catalogue No. 5232.0

yen is the second-most widely traded currency and the Australian dollar is the seventh. Because of the high liquidity of the Australian dollar market and the close economic ties of Australia with the rest of the region, the Australian dollar has often been used in international markets as an instrument to manage East Asian economic and financial risk. This means that it tends to be correlated with East Asian currencies. This was most obvious in the East Asian financial crisis but is also evident after it (de Brouwer 2001, 2002).¹²

Australian stock prices are also correlated with regional markets, especially with those of Hong Kong and Singapore. But the primary correlation for Australia is, *as for the rest of the region*, with US equity markets. These connections for Australia and East Asia more generally are robust for the pre-crisis, crisis and post-crisis period (de Brouwer 2002). The weakest price correlation between Australia and the rest of the region is in terms of short and long-term interest rates. Australian interest rates have followed a cycle distinct from the rest of the region, reflecting the independence of Australian monetary policy and the strength of the domestic economy.

As discussed in section 1, the assets and liabilities of Australian banks are held mostly on their domestic (that is, Australian) books and most domestic business is done with resident entities. Most of the offshore banking assets of Australian banks are located in the United Kingdom, the United States and Europe, not East Asia. There are two broad reasons for this. First, much of the banking system in East Asia is either not fully open to foreign ownership, not fully liberalised, or else has systemic difficulties that make substantial operations or mergers or acquisitions relatively high risk. The second reason is that a number of Australian banks have experienced problems in East Asia. These experiences have created internal resistance among the major banks to expanding operations in parts of the region. Consider three examples:

- The Australian bank with the biggest exposure to Asia experienced the biggest fall in its stock price during the East Asian financial crisis, even though the quality of its loan book remained high.
- Australian banks are wary of the Japanese banking system.¹³ A major Australian bank was approached by the Japanese authorities in the mid-1990s with a request to buy a local Japanese bank. The Australian bank declined because it was heavily involved in substantial expansion of its operations elsewhere overseas at the time. The Japanese bank offered to it soon failed. That led that Australian bank to then judge that the Japanese banking system and regulation were unreliable and maintain a cautious approach to its operations in Japan.

- An Australian bank with extensive operations in South Korea in the 1980s and early 1990s withdrew from that country because of a years-long industrial campaign against it by Korean labour unions.

While Australian banks have limited cross-border assets in East Asia, Australia is active in regional finance in three important respects. First, Australian financial firms are involved in providing financial services to the region beyond ‘vanilla commercial banking’. Examples include infrastructure financing, privatization, pooled investments and securitisation. These operations are largely off-balance sheet and so do not appear in the BIS measures of cross-border assets and liabilities.

Second, Australian professionals in finance and business services are very active in the region. More Australians work in Hong Kong and Singapore, for example, than in the United States.

Third, Australia’s domestic strengths have meant that international financial institutions are increasingly using Australia as a base for their East Asian and even global front and back-office functions. Expertise in the full gamut of financial markets in Australia is high; the regulatory environment is strict, transparent and market friendly; and markets are liquid and dynamic. While Sydney is the main location, especially for front-office activities, financial firms spread their activities around the nation, especially back-office functions.

Axiss Australia (2003) provides many examples. Consider just a few. Deutsche Bank runs its processing operations for Asia-Pacific foreign exchange operations, asset management, futures, and structured financing in Sydney. Citigroup runs its SSB Citi Asset Management global research group in Melbourne, its Salomon Smith Barney Asia Pacific call centre in Brisbane, and its Citibank Asia Pacific processing centre for foreign exchange and derivatives trade in Sydney. JP Morgan runs its service hub for Asia-based asset management clients in Adelaide. ING has front-office functions located in Sydney but runs its call centre in Tuggerah on the central coast in New South Wales.

Australia is a competitor with other financial centres in East Asia, most notably Hong Kong and Singapore. The great strengths of Hong Kong and Singapore as *regional* financial centres have been that they are open market-based regimes with strong regulatory systems that service their hinterlands – South China for the former and Indonesia and Malaysia for the latter – and the Chinese diaspora in East Asia. Being at the Southern periphery of East Asia means that Australia has no ‘regional hinterland’ to service. In this respect, it is different to Hong Kong and Singapore.

But Australia has a number of other advantages in East Asia. These include an open, transparent and stable regulatory regime, time zone

(bridging New York closing and London opening), low operational costs, high skill base, creative and innovative workforce, multi-language and cultural base, stable economy and society, and attractive lifestyle.¹⁴ Its own geographic and economic peculiarities also give it a global advantage in terms of financial instruments based on resources and weather and the application of technology to finance and business. While Australia's strengths mean that it competes in some of the same areas as Hong Kong and Singapore, like these two economies it also has characteristics that favour it as a regional centre of finance in East Asia.

The Government's approach to supporting Australia as a financial centre have been twofold. The first has been to focus on getting the infrastructure right for financial markets to develop. At its most basic level, this means a strong and stable macroeconomic environment. This has been successful. After two decades of structural reform, Australia has a flexible, competitive and open economy, and a coherent and workable monetary and fiscal framework. It has enjoyed stable 4 per cent growth and 2 per cent inflation since the early 1980s. The value of this was shown in the Asian financial crisis: to many people's surprise, the economy got through relatively unscathed because of these features.

Getting the market infrastructure right also means providing the right structure of incentives, regulatory transparency and certainty, risk management, and skills base for domestic business to thrive. While it certainly has its failures and faults at times, the regulatory system is relatively simple, consistent and market-oriented. Business taxation is the among the lowest in the OECD. Trade and investment are open. The maxim is that if domestic business is thriving, then international business will come. The vitality of the Australian financial markets is itself an attractor to international business.

The second element has been to go out and seek international business. The Government has done this through two mechanisms. The first general one is by setting up Invest Australia, which is enabled to provide financial incentives to bring business to Australia. This has played only a small role in attracting financial institutions to Australia. The other is through Axiss Australia.

Axiss Australia¹⁵ was set up by the Australian Government in August 1999 to position Australia as a global financial services centre in the Asian time zone. Its activities encompass: facilitating financial services providers setting up in Australia; providing data and information on Australia's financial services industry; providing expert policy advice to the Australian Government and liaison between the official and private sectors on financial matters; promoting Australia as a global financial services provider; and working with educational institutions to ensure a stable flow of well-trained skilled labour for financial services. It is a division of the Australian Treasury. This has proven to be a handy body.

Looking forward, there are still a number of areas on which Australia needs to work to strengthen its position. The danger in having done well is complacency. There are four serious challenges that Australia needs to face to maintain and expand its competitive edge.

The first is to correct a problem in its supervision of the insurance sector. According to the Interim Report of the Royal Commission into the failure of HIH Insurance in March 2001 that event was caused by exceptional wrongdoing within the company. The collapse of HIH Insurance itself does not signal the failure of prudential supervision. Indeed, the exit of an insolvent firm may signal that the prudential system is working properly and it may reduce moral hazard for existing firms.

But the HIH failure did reveal some weaknesses in the prudential system. Despite warnings about problems with the company, APRA took too long to act. It lacked a culture of proactive supervision. It was also hamstrung: because of staff losses and problems in recruitment, it lacked the expertise and resources to pursue questions about corporate wrongdoing at HIH. APRA is an amalgam of various regulatory bodies; almost all the staff who had been involved in supervising insurance companies resigned when their body was shifted from Canberra to Sydney. This was not the case with bank and funds management supervisors, who were already Sydney-based. APRA has also had difficulty in recruiting quality experienced staff to the insurance area. APRA will have to attend to its failure to supervise properly, but it also needs the right resources given to it for it to do its job properly.

The second issue is for further consolidation of exchanges in Australia to strengthen its position as a global financial centre. There are two obvious candidates for this. One is amalgamation of the Australian Stock Exchange and Sydney Futures Exchange, which would bring spot and derivatives trading more closely together. This has been discussed but not resolved. The other is the merger of the Australian and New Zealand stock exchanges. The reality for both countries is that their economies are deeply integrated and largely function as a single market. Negotiations for the two countries to merge their stock markets broke down in 2001. As with currency union, this would lower the cost of capital in New Zealand and provide direct economic benefits to both countries.

The third issue is whether Australia needs to maintain its domestic federal government bond market. By the end of 2002, federal government bonds on issue had declined due to privatizations and fiscal surpluses to about A\$60 billion (about 8 per cent of GDP). Of this, A\$13 billion is held by the Federal Government and Reserve Bank. The policy issue is whether the government should issue more debt to support liquidity and demand for zero-risk fixed interest securities, or whether it should

use proceeds from future privatizations and surpluses to pay off debt (Treasury 2002).

There is a range of views about whether an already developed and sophisticated financial system stills needs government bonds. On the one hand, government bonds are a risk-free security and so provide a base price for riskier assets and are a safe-haven in the event of financial turmoil. As a key fixed interest security, they are an important asset in diversified portfolios, especially of fund managers. On the other hand, there are good counter-arguments against this. Government bonds are not essential as a base price for risk since there are close alternatives (like AAA corporate and bank paper). If markets can price government bonds, they can also price prime quality bank and corporate bonds and long-term interest rate swaps. There are also other safe havens in the event of a crisis, including deposits with the central bank. Finally, if fund managers need fixed interest securities, the private sector should issue them at a premium. The shortage of government bonds in fact has driven the rapid development of the corporate bond market in Australia in recent years and this should be able to continue. From this perspective, the proposition that a government bond market is necessary to underpin already developed and sophisticated financial markets is difficult to sustain.

The fourth issue concerns Australia's ability to project itself in the region. Australia has particular strength in financial systems, markets and regulation. East Asia is generally weak in this area, although with important exceptions. Not only does this provide Australians with wonderful opportunities to live and work in the region – there is an Australian diaspora throughout the financial markets of East Asia – and Australian financial institutions with a comparative trading advantage. It also means that Australia has something real and substantial to offer in regional policy dialogue.

The scope for financial development and integration in East Asia is rich. Yet Australia is not part of the regional policy network where much of the dialogue about finance will take place, namely the ASEAN+3 process. This is a political forum and Australia is excluded largely for political reasons. Since Australia is an insider in East Asia, there is a strong argument for it to be fully engaged in regional dialogue. In resolving the political difficulties that exist, it is incumbent on Australian policymakers to constructively affirm Australia's role as an able, respectful and independent participant in the region. In this regard, the recent words of Treasurer Costello (2002) after the Bali bombings provide direction and leadership:

Structural reform . . . positioned our economy to be able to respond flexibly to rapidly changing circumstances. A sound medium-term macroeconomic framework, and the repayment of Commonwealth debt preserved our credibility with

investors and consumers and reduces the risks of policy mistakes. This has made Australia more relevant than ever before as a partner in commerce and economic development to the rest of the region.

Our links to date with Asia have been deep and complex in economic terms. I have no doubt these will continue to deepen to our mutual benefit. Given our geography and the intensity of our economic relationships with East Asia, we see ourselves as an integral member of the East Asia region, and we stand ready to participate further in regional dialogue and mechanisms for financial stability and cooperation. . . . Australians are enmeshed in the rich tapestry of Asia, as Asia is an increasingly important influence on Australia. Moments of crisis highlight our common destiny. In 1997 it was a financial crisis. Today it is a human tragedy. At these points of crisis we must not withdraw. We must heighten our engagement and our cooperation. We must work together. Australia stands ready to do so.

6. CONCLUSION

Australia's financial markets are extensive, sophisticated and liquid, its financial institutions strong and innovative, and its regulatory and supervisory systems effective and transparent. The result is that financial intermediation works well in Australia. It is also outward looking which, combined with its relative strengths - time zone, skilled and creative workforce, cost competitiveness and lifestyle - means that it is also an important financial centre in East Asia. It still has room for improvement, however, notably in insurance supervision, integration of its domestic exchanges, and advancing regional engagement.

The success of the Australian experiment with financial deregulation, liberalization and structural reform suggests that it might be a good model for financial development. There are three general conclusions to be drawn from the Australian experience.

First, well-functioning and robust financial markets and institutions need a sound and stable macroeconomic base: it is important to get the macroeconomic basics right. This provides the certainty and reliability that markets need to develop and it reduces variability and shocks to the balance sheets and profitability of financial institutions. It is also essential to ensure that a broader infrastructure of identifiable and enforceable property rights also exists. This includes a transparent and clean regulatory structure and bureaucracy, contract enforcement, rule of law, and easy and credible transmission of news and ideas.

Second, the focus of financial development is essentially domestic. The gains from efficient intermediation flow to the domestic economy. If the economy can also export financial services or attract regional or global business to its shores, all the better. But the immediate focus is on getting

things right at home. In Australia's case, this involved opening up the domestic sector to international competition.

In the debates about financial deregulation in the early 1980s, there was deep concern that foreign banks would destroy the local banking system. The outcome could not have been further from the truth. In advance of foreign bank entry in 1985, many banks merged and introduced new technology (like ATMS) and products in the early 1980s to strengthen their market position. As it turned out, foreign banks have not penetrated the retail market all that deeply because of the overriding advantages of incumbents (like branch networks and name recognition). Even in investment banking where foreign banks are at their best, domestic institutions have thrived, are strong, and account for half the sector. There was also a fear of being swamped by foreign (mainly American) managers. As it turned out, foreign managers played a useful role in carrying out internal restructuring. But they almost all returned home, with their positions taken over by locals. Fears of foreign takeover were not realised.

Third, there is a fundamental robustness to financial markets because of their capacity to innovate and create. Markets are fungible. We learned this initially by the way markets and institutions circumvented regulations that held them back, creating new instruments or institutions three steps ahead of the regulators. It is also shown more recently by the development of the corporate bond market in Australia. If the infrastructure is right, then the markets will innovate in unexpected but constructive ways. But having a market-based system does not mean that regulation is unimportant. Clear and effective regulatory structures to ensure competition, consumer protection, supervision and good corporate behaviour in finance are essential. These may even need to be relatively invasive at times to make sure the market works efficiently and fairly.

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NOTES

1. As at June 2002, property and business services accounted for 12.2 per cent, and manufacturing accounted for 11.9 per cent, of GDP by industry in Australia.

2. Foreign banks operate in Australia either as branches or as locally incorporated entities.
3. Four domestic banks – the National Australia Bank, Commonwealth Bank of Australia, ANZ Bank, and Westpac Bank – control around 60 per cent of the market. The oligopolistic structure of domestic retail banking has eased since the early 1990s because of foreign banks and the rise of lending brokers which fund their operations from the short-term money market and securitization of existing home loans.
4. Some foreign banks operate in both the retail and wholesale banking markets, most notably, Citibank, ING, HSBC and BankWest (originally a domestic operation). Deutsche Bank, JP Morgan, BNP Paribas, and ABN-Amro have big operations in the wholesale banking market.
5. Australians are required to save 9 per cent of their gross income for retirement. They have choice about risk and asset profile and, in some cases, about fund manager.
6. Japan has a 7.7 per cent share, Korea a 0.8 per cent share, and Hong Kong and Taiwan each have a 0.6 per cent share in the MSCI global index.
7. The five biggest domestic firms are National Australia Bank, News Corporation, BHP Billiton, Commonwealth Bank of Australia and Telstra. The five biggest foreign firms are Philip Morris, Sing Tel, Telecom NZ, Placer Dome and P&O.
8. In 2001, Australia's share of global foreign exchange turnover was 3.2 per cent, below Japan (9.1 per cent), Singapore (6.2 per cent) and Hong Kong (4.1 per cent).
9. According to BIS (2002), Japan's share of OTC derivatives in April 2001 was 2.9 per cent, Australia's was 1.6 per cent, Singapore's was 0.8 per cent, and Hong Kong's was 0.5 per cent.
10. For detail on the payments system in general, see http://www.rba.gov.au/PaymentsSystem/AustralianPaymentsSystem/about_the_australian_payments_system.html.
11. Detailed statistics on payments are available at http://www.rba.gov.au/PaymentsSystem/AustralianPaymentsSystem/payment_statistics.htm.
12. See de Brouwer (1999) for a detailed commentary on this process.
13. Major Australian banks operate in Japan, for example, but limit their operations to servicing Australian clients, foreign exchange operations, or marketing high-yield Australian-dollar deposits.
14. See Axiss Australia (2002) for a detailed comparative analysis of Australia, Hong Kong, India and Singapore.
15. See www.axiss.com.au.

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PART III

Mobilizing the Asian savings within the region

16. A new financial market structure for East Asia: How to promote regional financial market integration

Gordon de Brouwer and Jenny Corbett

1. INTRODUCTION

East Asia's capacity to secure strong and stable economic growth depends on, among other things, a secure foundation of well functioning financial markets, institutions and systems. In general, the region's financial markets are relatively weak, undeveloped and unsophisticated, although there are exceptions, notably Japan, Singapore, Hong Kong and Australia.¹ The region's financial institutions are also generally weak, again with a number of exceptions. Not only are the banking sectors of some of the crisis-affected economies still heavily burdened by the fallout from the financial crises of 1997 and 1998, but most banks in China and Japan are overwhelmed by non-performing loans. Furthermore, domestic markets and institutions in the region are not well integrated with each other.

This has a bearing on the economic outlook of East Asia. Weak financial markets and institutions impede economic efficiency, economic growth and risk management, making East Asia more vulnerable to adverse economic and financial shocks. Financial weakness and fragmentation mean that the region lacks international influence, and remains reactive rather than proactive to international market and policy developments. The current state of East Asia's financial markets, institutions and integration provides many big opportunities for significant improvement and deepening. Ultimately, responsibility for this lies with policymakers – officials and politicians – and how they design and enforce market and institutional mechanisms. But it is also incumbent on financial institutions to deepen their expertise.

This chapter explores East Asian finance in two parts. The first part provides an overview of the state of regional financial markets in East Asia.² It looks at the state of financial market infrastructure and recent developments

in financial markets – stocks, foreign exchange, bonds, and derivatives – in East Asia. It then explores recent trends in capital flows and cross-border banking.

East Asian financial markets are tiered: the developed markets of the region (Japan, Singapore, Hong Kong and Australia) perform well by international standards, most of the others (like Malaysia, South Korea, Taiwan and Thailand) are average, but some (like China, Indonesia and the Philippines) are poor performers. Many countries face serious challenges. Infrastructure and risk management are generally at relatively low levels by international standards, and many institutions are weak. Competitive pressures are also increasing, not just from outside the region, but also within. Developing ASEAN, for example, is having to compete more and more with China for funds. Continued weakness in its financial institutions, market structure, and economy are also diminishing the importance of Japan and impeding regional development.

Section 2 explores in more detail four of the many issues that arise in looking at finance in East Asia.³ The first of these is the need to integrate regional financial markets. The second is a discussion of the methods to pursue integration, including harmonisation, mutual recognition, and private insurance. It includes an analysis of the European experience and a practical case study, e-finance. The third issue is the respective roles of Japan and China in regional financial integration. Finally, section 3 looks ahead at other issues to include in the policy and research agenda, such as an independent stocktake of capacity building and cooperation in finance and consideration of ways to more deeply include the private sector in this programme.

2. FINANCIAL MARKETS AFTER THE CRISIS

2.1 The Quality of Infrastructure

A well-functioning infrastructure is essential to financial market development. The quality of infrastructure can be judged by a number of key factors: an effective legal framework, reliable accounting and disclosure standards, and an efficient and reliable clearing and settlement process, and reliable and easily accessible information (Herring and Chatusripitak 2000).

How does East Asia perform? Based on La Porta et al. (1998), Herring and Chatusripitak (2000) set out a collection of tables assessing countries by the quality of their financial infrastructure, creditor rights, judicial systems and information systems. These are replicated in Table 16.1 but

Table 16.1 Indicators of quality of financial infrastructure: 0 to 10 scale, higher is better

	Total score	Contract realisation	Lack of corruption	Rule of law	Bureaucratic quality	Accounting standards	Press freedom
Developed East Asian markets	8.27	9.02	8.45	8.94	8.81	7.6	6.80
Australia	9.06	8.71	8.52	10.00	10.00	8.0	9.12
Hong Kong	7.75	8.82	8.52	8.22	6.90	7.3	6.72
Japan	8.67	9.69	8.52	8.98	9.82	7.1	7.92
Singapore	7.58	8.86	8.22	8.57	8.52	7.9	3.44
Emerging East Asian markets	5.84	7.27	4.96	5.60	5.02	6.7	5.47
Indonesia	3.52	6.09	2.15	3.98	2.50	n/a	2.86
Korea	6.73	8.59	5.30	5.35	6.97	6.8	7.36
Malaysia	6.55	7.43	7.38	6.78	5.90	7.9	3.90
Philippines	4.14	4.80	2.92	2.73	2.43	6.4	5.54
Taiwan	7.50	9.16	6.85	8.52	n/a	5.8	7.16
Thailand	6.50	7.57	5.18	6.25	7.32	6.6	6.02
Reference markets	8.96	9.32	8.87	9.29	10.00	8.1	8.25
United Kingdom	8.93	9.63	9.10	8.57	10.00	8.5	7.78
United States	8.99	9.00	8.63	10.00	10.00	7.6	8.72

Source: Adapted from Herring and Chatusripitak (2000)

broken down into the four relatively developed markets (Japan, Singapore, Hong Kong and Australia), six emerging markets (Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand), and, as reference markets, the United Kingdom and the United States.

As set out in Herring and Chatusripitak (2000), the quality indicators set out in Table 16.1 include contract realisation (the converse of the risk of contract modification through repudiation, postponement, or scaling down), lack of corruption (special payments or bribes to officials), rule of law (a tradition of law and order), bureaucratic quality, accounting standards (based on inclusion and omission of key items in a large sample of company reports), and press freedom (repressive actions and laws on the press). Press freedom is included because it gives business people and investors a sense of whether they can get full, reliable and easy access to information. These are qualitative subjective assessments. While the exact

ordering may vary slightly, the general placement of ordering of economies is robust to the inclusion of other factors or exclusion of included factors.

The differences between markets are striking. The four developed markets of Japan, Singapore, Hong Kong and Australia stand out as the high quality markets, with Australia and Japan on a par with the quality of infrastructure in the UK and US financial markets. Singapore is disadvantaged by its relative lack of freedom of access to information. The emerging East Asian markets as a whole are substantially below developed market quality but there are three clear sets: Taiwan, Korea, Malaysia and Thailand in the middle, and the Philippines and Indonesia at the bottom. This breakdown should come as no surprise. It largely matches sovereign debt ratings, as shown in Table 16.2. There is room for improvement in all markets, and this is most compelling for the less well developed economies of the region. There is enormous scope for cooperation between countries in the region to build up capacity.

2.2 Developments in Financial Markets

2.2.1 Stock markets

Given that they are relatively developed (compared to other financial markets in the region) and accessible by foreign investors, there is considerable focus on East Asia's stock markets. Regional stock markets have had

Table 16.2 S&P foreign currency sovereign credit rating

	Long term	Ratings outlook	Short term
Australia	AAA	stable	A-1+
China	BBB	stable	A-3
Hong Kong	A+	stable	A-1
Indonesia	CCC+	stable	C
Japan	AA-	negative	A-1+
Malaysia	BBB+	stable	A-2
New Zealand	AA+	stable	A-1+
Philippines	BB+	negative	B
Singapore	AAA	stable	A-1+
South Korea	A-	stable	A-2
Taiwan	AA-	stable	A-1+
Thailand	BBB-	positive	A-3
Vietnam	BB-	stable	B

Note: Ratings as at 3 March 2003; the highest long-term rating is AAA and lowest is C.

Source: Standard & Poors website.

a mixed performance in the post-crisis period, although much of this reflects uncertainty caused elsewhere by the collapse of the US technology bubble and the effects of the US slowdown, terror attacks and war in Iraq. The region as a whole now comprises over 10 per cent of the global stock market indices; Table 16.3 show recent developments in the S&P Global Index. Japan tends to dominate the region but it is waning, with the South Korean and Australian markets recording the largest rises in index share over the past five years.

Serious problems in market microstructure and efficiency also remain that impede solid recovery. De Brouwer and Smiles (2002), for example, examine differences in East Asian stock markets with other markets in the United Kingdom and United States. They report that there are substantial microstructural differences between East Asian equity markets and those elsewhere, especially in terms of size, number of stocks, extent of foreign listings, and trading hours. The US, Japanese and UK markets are the largest in terms of capitalisation, number of listed stocks, and market turnover. The Malaysian, Indonesian, Taiwanese and Thai markets tend to be at the lower end of the spectrum. The investor base is narrow in the equity markets of most economies in East Asia. These economies are associated with restricted and highly regulated contractual savings systems, underdeveloped mutual

Table 16.3 East Asian equity market capitalisation: percentage shares in the S&P Global 1200 Index

	1997	1998	1999	2000	2001	2002
Australia	1.17	1.14	1.12	1.03	1.19	1.38
China	0.06	0.04	0.11	0.14	0.13	0.13
Hong Kong	0.74	0.53	0.58	0.63	0.56	0.55
Japan	7.30	6.16	8.93	7.27	6.11	7.00
Malaysia	0.05	0.04	0.04	0.04	0.04	0.06
New Zealand	0.02	0.01	0.01	0.01	0.00	0.01
Singapore	0.17	0.13	0.22	0.19	0.22	0.25
South Korea	0.04	0.11	0.25	0.19	0.46	0.67
Taiwan	0.25	0.17	0.38	0.28	0.40	0.34
Total	9.8	8.33	11.64	9.78	9.11	10.39
<i>Total ex Japan</i>	2.5	2.17	2.71	2.51	3.00	3.39
Reference – USA	59.7	61.6	58.3	58.8	60.1	59.3

Note: China represents Chinese stocks trading in Hong Kong.

Source: Standard & Poors 2002 Review Global Indices

funds, a highly regulated asset management industry, and a limited role for insurance companies in capital markets. US and UK markets have higher proportions of listed foreign stocks, Japan has a substantially lower share of foreign stocks while Singapore has a very high share. Malaysia, Indonesia, Taiwan and Thailand have either no foreign listings or virtually no foreign listings. The markets also have diverse sectoral weightings, although these do not seem to be related to geography or level of development.

They also look at high-frequency (five-minute) equity returns in 2000. They report that price formation in East Asian equity markets differs from the major markets in two respects. First, market opening price variability is relatively larger in East Asian equity markets. It appears that much of the global price action that matters to equity markets occurs in New York and London, and all this information needs to be incorporated into domestic equity prices. This conforms with the general assessment that stock prices in East Asia are heavily influenced by developments in US markets, especially in the short term (see, for example, de Brouwer 2002; Park 2002).

The other key difference is in the level of relative market efficiency. The weak-form test of market efficiency – testing whether past returns contain information about current and future movements in returns – does not hold in any equity market on high frequency data like five-minute returns.⁴ But past information matters considerably less for the large US and UK markets than for all equity markets in East Asia, including Japan but excluding Singapore. At one extreme, for example, information beyond one hour is irrelevant for US, UK, Hong Kong and Singaporean stocks. At the other extreme, only information beyond five days is irrelevant for China's Shanghai A (domestic) stocks. This is a substantial gap, with the other East Asian equity markets lying somewhere in between. There is still room for development in East Asian equity markets, including in longer trading hours and wider foreign listing and participation in stock markets.

2.2.2 Foreign exchange markets

Almost a quarter of the world's foreign exchange market activity takes place in East Asia, but this is highly concentrated in the regional financial centres in Japan, Singapore, Hong Kong and Australia (Table 16.4).⁵ Most trading in Hong Kong and Singapore is in G-3 currencies, not the local currency. A notable feature of these markets is increased concentration among the firms doing foreign exchange business, although this is also characteristic of other foreign exchange markets like that in the United States, and reflects narrowing margins, increased competition, and the global consolidation of financial institutions. The concentration of activity has increased and the number of players in the markets has generally declined, in some cases very substantially (Table 16.5).

Table 16.4 Foreign exchange market turnover in East Asia

	Amount, US\$ billion					Percentage share of total				
	1989	1992	1995	1998	2001	1989	1992	1995	1998	2001
Australia	29	29	40	47	52	4.0	2.7	2.5	2.4	3.2
China				0	0				0.0	0.0
HK	49	60	90	79	67	6.8	5.6	5.7	4.0	4.1
Indonesia				2	4				0.1	0.2
Japan	111	120	161	136	147	15.5	11.2	10.2	6.9	9.1
Korea				4	10				0.2	0.6
Malaysia				1	0.1				0.1	0.1
NZ		4	7	7	4		0.4	0.4	0.4	0.2
Philippines				1	1				0.1	0.1
Singapore	55	74	105	139	101	7.7	6.9	6.7	7.1	6.2
Taiwan PoC				5	4				0.3	0.2
Thailand				3	2				0.2	0.1
East Asia	244	287	403	424	392.1	34.0	26.7	25.6	21.5	24.2
US	115	167	244	351	254	16.0	15.5	15.5	17.8	15.7
Total (all countries)	718	1076	1572	1969	1618	100.0	100.0	100.0	100.0	100.0

Source: BIS (2002a)

Table 16.5 BIS foreign exchange market survey

	Number of banks covering 75 per cent			Number of participants			
	1995	1998	2001	1992	1995	1998	2001
Australia	10	9	10	72	75	66	56
China					–	426	
HK	22	26	14	375	376	366	272
Indonesia		5			–	25	15
Japan	24	19	17	330	345	356	342
Korea		21	14		–	99	71
Malaysia		5	9		–	5	9
NZ	5	4	4		8	6	5
Philippines		10	10		–	51	42
Singapore	25	23	18	208	218	206	192
Taiwan PoC		24	20		–	49	53
Thailand		12	11		–	33	35
Reference – US	20	20	13	180	130	93	79

Source: BIS (1996, 1999, 2002a)

The fact that Japan has the most foreign exchange market activity in East Asia does not mean that much of the trading activity in the region is done directly in the yen. The dollar-yen is the second most common transaction in foreign exchange markets, after the dollar-euro.⁶ But there is very little direct trade of local East Asian currencies with the yen. As shown in Table 16.6, local East Asian currency trade with the yen is largely done indirectly, through local currency-dollar and dollar-yen trades (and vice versa). Daily average turnover in 2001 of domestic currency trade in non-Japan East Asia with the dollar was \$77 084 million, compared to \$630 million with the yen and \$455 million with the euro. A minuscule 0.3 per cent of local-currency foreign-exchange transactions in East Asian countries are done with the yen as the direct counterpart. For Southeast Asia, the value of direct yen foreign currency trade has even fallen over time.

2.2.3 Bond markets

It is generally accepted that bond markets in East Asia are poorly developed. This reflects a number of factors, namely borrower and lender preference for bank intermediation and generally low government debt associated with a strong policy aversion for fiscal deficits. The decline in directed lending in the 1990s and the severe recessions of the past few years have changed this in many countries. There are now many calls for developing broad and deep bond markets in East Asia (see, for example, Herring and Chatusripitak 2000; Asian Policy Forum 2001). The argument is straightforward: a broader set of financing provides greater opportunity for risk-pooling and risk-sharing for borrowers and lenders, boosting financial and economic efficiency and reducing individual and collective risk.

But with only a few exceptions, notably Australia, Singapore and Japan, regional bond markets in East Asia, especially corporate bond markets, are weak and poorly developed. The development of government bond markets also depends on the degree to which institutions, like banks, insurance companies and pension funds, are forced to acquire bonds and thereby finance government spending or obligations. Generally, forced acquisition of government securities retards market development because it hinders the growth of secondary markets.

2.2.4 Derivatives markets

Derivatives, including swaps, forwards and options, are an essential part of risk management for firms, financial institutions and governments. Table 16.7 provides a snapshot of the depth of derivatives markets in East Asia. As for foreign exchange trading, derivatives trading is concentrated

Table 16.6 Local currency foreign exchange turnover, US\$ million, daily average

	1995				1998				2001			
	Total	– of which		Total	– of which		Total	– of which		Total	– of which	
		dollar	euro		yen	dollar		euro	yen		dollar	euro
Australia	16 327	15 667	167	205	23 600	22 462	196	339	26 839	25 641	265	391
China												
Hong Kong	15 305	14 286			18 711	17 484		17	24 578	24 260	3	3
Indonesia					972	935			579	568	3	
Japan	130 810	121 929	6 689	n.a.	124 045	113 275	6 478	n.a.	109 708	101 634	6 225	n.a.
Korea					2 289	2 222	14	34	8 416	8 297	32	57
New Zealand	3 959	3 675	39	41	4 928	4 702	28	25	2 794	2 517	53	44
Philippines					492	488	0	1	459	454	1	2
Singapore	5 881	5 545	32	65	17 644	17 210	22	104	11 600	11 345	75	53
Taiwan PoC					1 720	1 592	22	63	2 647	2 525	17	57
Thailand					2 574	2 485	7	63	1 520	1 477	9	23
Total East Asia	172 282	161 102	6 927	311	196 975	182 855	6 768	646	189 140	178 718	6 680	630
United Kingdom	74 167	53 147	15 471	3 240	114 817	88 692	21 270	14 666	122 852	102 152	17 104	1 666
United States	211 072		84 819	49 316	315 872	n.a.	103 183	78 541	236 436	n.a.	84 395	62 145
Total (all countries)	693 078	373 220	158 142	57 961	919 930	502 952	163 879	86 426	835 380	518 924	119 724	75 127

Note: In 1995 and 1998, the euro is estimated as the sum of German mark and French franc reported daily average turnover; n.a. indicates not applicable

Source: BIS (2002a)

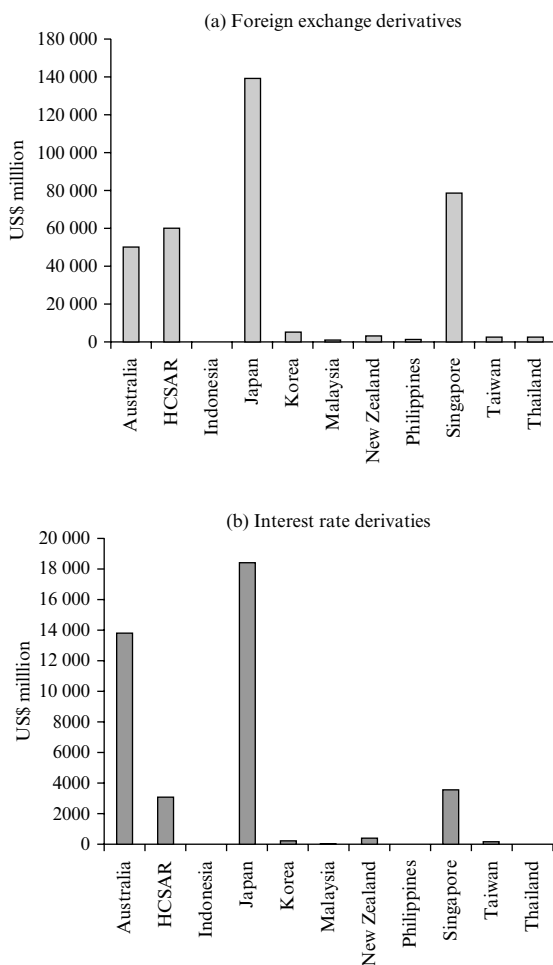
Table 16.7 OTC derivatives market activity in East Asia (average daily turnover, US\$ billion, net of local inter-dealer double counting)

	Total		Foreign exchange		Interest rate	
	April 1998	April 2001	April 1998	April 2001	April 1998	April 2001
Australia	31.6	50.7	28.8	40.9	2.8	9.8
China		0.0		0.0		0.0
Hong Kong	51.4	52.0	48.9	49.4	2.4	2.6
Indonesia	1.0	0.5	1.0	0.5	0.0	0.0
Japan	120.6	131.7	89.0	115.9	31.6	15.8
Korea	1.1	4.0	1.0	3.9	0.0	0.1
Malaysia	0.8	0.9	0.8	0.9	0.0	0.0
NZ	5.4	3.4	5.0	3.1	0.4	0.3
Philippines	0.4	0.6	0.4	0.6	0.0	0.0
Singapore	90.7	72.5	85.4	69.3	5.3	3.2
Taiwan PoC	1.6	1.8	1.5	1.7	0.1	0.1
Thailand	2.2	1.3	2.2	1.3	0.0	0.0
East Asia	306.8	319.4	264.0	287.5	42.6	31.9
Reference:						
UK	591.2	628.1	468.3	390.3	122.9	237.8
US	293.8	284.7	235.4	169.1	58.4	115.7
Total	1681.7	1862.2	1338.1	1186.1	343.6	676.1

Source: BIS (2002a)

in the region's financial centres – Japan, Singapore, Hong Kong and Australia. Over-the-counter derivatives trading elsewhere in the region is negligible, and reflects the limited ability of firms and households to manage financial risk.

The region largely holds its own in terms of foreign exchange derivatives: East Asia's share of foreign exchange derivatives was about 24 per cent in April 2001, on par with its share of world foreign exchange trading. But East Asia is particularly weak when it comes to interest-rate derivatives, with only 4.7 per cent of the world market. These derivatives are simple – only 6 per cent are options with the rest just swaps (68 per cent) and forwards (26 per cent). They are largely concentrated in US dollar interest rates; yen interest rate derivatives have been declining. There is a striking difference between regional financial centres in this regard, with Australia standing out in relative strength (Figure 16.1). The general implication from the low interest rate derivatives activity is that East Asia is poorly developed in its financial risk management.



Source: BIS (2002a)

Figure 16.1 Derivatives trade in East Asia (gross)

2.3 Financial reform

Financial systems in East Asia are dominated by banks. Bank finance provides the bulk of corporate sources of funding and the majority of household assets are held in the form of bank deposits. These features create special difficulties when systems are faced with crisis and can cause political barriers to rapid reform. East Asian financial systems have made

mixed progress in reform with the risk that weak banking systems may remain a constraint on economic growth and efficiency.

Key indicators of the extent of change in the systems are:

- Ownership indicators such as changes in the degree of concentration, and in the extent of public and foreign ownership in the banking system;
- Financial soundness indicators such as the proportion of non-performing loans, and capital ratios in the banking sector;
- Indicators of the ability of the system to deal with weakness, such as the number of corporations that have been 'restructured' or closed and the numbers which still have inadequate interest coverage and/or 'excessive' levels of debt.

Recent and consistent data are not easy to come by but some features of post-crisis banking systems are emerging. While it may seem plausible that high concentration ratios in banking would restrict competition and hamper performance, some theoretical and empirical arguments suggest that the benefits in efficiency from concentration may offset the costs, leaving the impact of concentration on bank performance marginal.⁷ Before the crisis the five crisis-affected countries were, in any case, not particularly highly concentrated. Thailand, the most concentrated, had only 47 per cent of banking assets held by the three largest banks compared to a 99-country average of 72 per cent. As a result of bank closures, mergers and recapitalisations these rates may now be somewhat higher but there is no clear policy implication from the result.

What is clear is the governments' share of ownership in banking systems has increased. Here the range is very wide, running from 72 per cent of all banking assets held by the state in Indonesia in 2000 to 18 per cent in Malaysia, with Korea (58 per cent) and Thailand (30 per cent) in a middle range (Kawai 2002). At the same time the asset share of foreign banks remains very small by international standards (Clarke et al. 2001). While evidence on the impact of ownership structures on banking performance is generally inconclusive, Barth et al. (1999) report that government ownership is associated with a more poorly operating banking system. Foreign entry, however, is associated with reduced profitability and margins for domestic banks, consistent with increased competitive effects (Claessens et al. 2001).

In the crisis-affected economies, there has been some improvement in bank soundness by measures to remove bad loans from bank balance sheets and by public recapitalisations. In some countries centralised asset management vehicles have been used while in others, notably Thailand, banks have been required to do this themselves. While non-performing

loans (NPLs) generally remain high they have fallen steadily. The ADB estimates that NPLs have fallen in most crisis-affected economies, with, for example, Malaysia falling from 15 per cent of loans at end-1999 to 10.7 per cent at end-2001, Korea falling from 13.9 per cent at end-2000 to 9.9 per cent at end-2001, and Indonesia falling from 56.3 per cent at end-2000 to 49.8 per cent at end-2001. There are also severe problems in China and Japan. The FSA in Japan reckons that NPLs in its banks rose to about 7½ per cent of bank loans at September 2001. Private sector estimates are more than twice that. Banking systems are strong in Singapore, Hong Kong and Australia. Direct measures of banking sector health, such as capital asset ratios, suggest there is further to go for most East Asian countries.

The impact of interventions in banks should also be visible in corporate restructurings if real economic reform is to be achieved. Data are slow to emerge so that there is no clear picture of post-crisis performance in this regard. Most countries have achieved some improvements in the legal infrastructure supporting corporate bankruptcies and restructuring but ADB (1999) data show that even among the five crisis countries there is a wide range in bankruptcy codes and in the efficiency and speed of the judicial system and creditor rights (see Claessens et al. 2003). The range must be even wider across the region as a whole. Institutional improvement since the crisis has also been varied (Kawai 2002) so that some countries still have much to achieve. Evidence from the crisis period itself shows that bankruptcy filings are more likely in countries with efficient judicial systems and strong creditor rights (Claessens et al. 2003). Elsewhere corporate restructurings have to be achieved outside court systems, which may sometimes be cheaper but is usually less transparent and can require the intervention of a strong creditor institution. Where the institutions themselves are weak the process can be even further delayed.

Financial systems in most of East Asia are bank-based. There is substantial scope for expanding the range of domestic institutions, including local institutional investors.⁸ Table 16.8 shows the relative size of local mutual funds, or open-ended investment companies, in East Asia. This class of institutional investor, typical of many developed markets, is relatively small in much of East Asia, especially in comparison to the size of bank deposits. East Asia is over-banked and under-uses institutional investors, at a cost to the development, liquidity, and efficiency of its financial markets and the governance and risk management of its business sectors.

There is also scope to make wider use of foreign financial and human capital in developing regional markets. Foreign firms are an important conduit for the transfer of financial skill and technology. It does not mean that they should be allowed unfettered access to a market. Solid supervision and market-consistent regulation are essential.

Table 16.8 Worldwide assets of selected open-ended investment companies
(US\$ billion)

	1995	1996	1997	1998	1999	2000	Sept. 2001	Sept. 2001 bank deposits
Australia	36.5	47.8	42.9	44.1	n.a.	328.1	304.1	225.6
Hong Kong	33.7	41.0	58.5	98.8	182.3	223.0	183.0	n.a.
Japan	470.0	420.1	311.3	376.5	502.8	491.9	466.0	5018.3
Korea	92.4	n.a.	n.a.	n.a.	167.2	124.9	137.1	332.1
New Zealand	6.9	7.7	7.5	7.3	8.5	7.3	6.8	40.5
Philippines	n.a.	n.a.	n.a.	n.a.	0.1	0.1	0.2	36.0
Taiwan	4.4	8.4	12.4	20.3	31.2	38.9	43.6	n.a.
United States	2811	3526	4468	5525	6846	7269	6415	2903.1
World	5386	6343	7238	8668	11 416	12 153	10 939	n.a.

Notes:

Bank deposits equals demand deposits plus time and saving deposits, and, in the case of Japan, certificates of deposit.

Selected countries identified by ICI.

Source: Investment Company Institute, www.ici.org/facts.

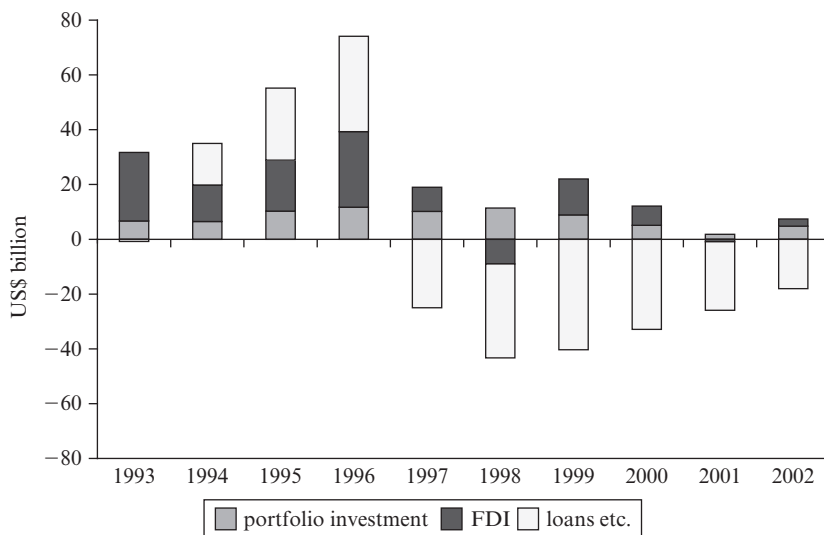
There is a general concern that the entry of foreign institutions and managers in the domestic financial system means a loss of control and sovereignty. So long as effective domestic supervision is in place, a greater role for foreigners does not necessarily mean a loss of control. The risk of loss of sovereignty also tends to be overstated. In the first place, there are very few instances of where countries financial systems have become substantially foreign-owned. New Zealand stands out as an exception with most of the foreign banks being Australian owned; given the relative size of the two economies and the deep integration of the Australian and New Zealand economies, societies and politics, this is hardly surprising. It is actually very hard for foreign institutions to break into retail banking because incumbents enjoy structural advantages in the domestic market, such as established branch network and name recognition. It is also the case that foreign management increases after a crisis, as firms search beyond the local pool of talent, but this tends to be a temporary phenomenon.

1.4 Capital flows and cross-border banking

The financial crises in 1997 and 1998 led to a tumultuous shift in gross and net capital flows to East Asia which still persisted in 2002. These flows have also been affected by the extent of financial reform in regional markets and institutions. Consider net capital flows. Figure 16.2 shows net private capital flows to the five crisis-affected East Asian economies (Indonesia, Malaysia, Korea, the Philippines and Thailand), taken from the IMF's March 2002 *Global Financial Stability Report*. Reflecting their current account surpluses, these countries are net providers of international capital. While FDI and portfolio investment flow into these countries on a net basis, they are still paying back cross-border loans.

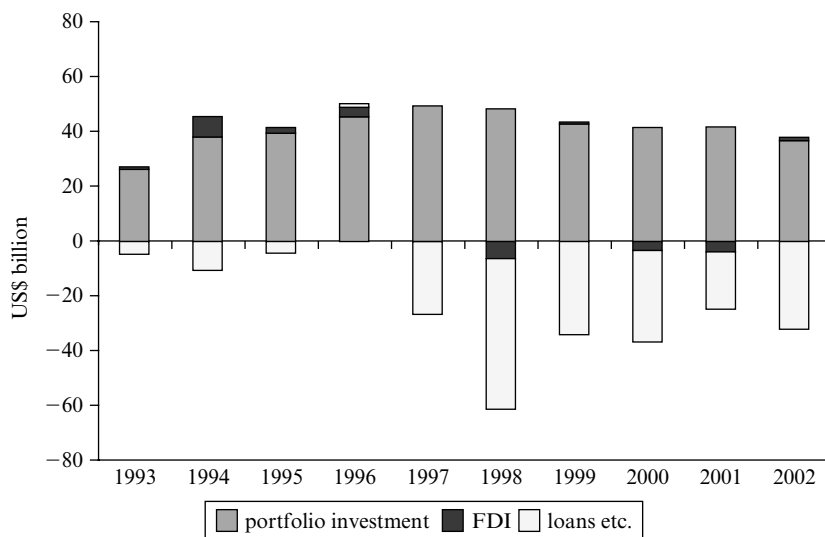
As shown in Figure 16.3, other emerging East Asian economies are also paying back international loans, but in their case the inward portfolio investment is sufficiently large as to dominate these net outflows and make them net importers of international capital (as would seem 'right' for emerging markets).

The net repayment of loans is also seen in the cross-border assets of BIS reporting banks. Table 16.9 shows exchange-rate adjusted changes in banks' cross-border loans in selected East Asian economies. There are three points to note.



Source: IMF (2002)

Figure 16.2 Net private capital flows to the crisis-5 East Asian economies



Source: IMF (2002)

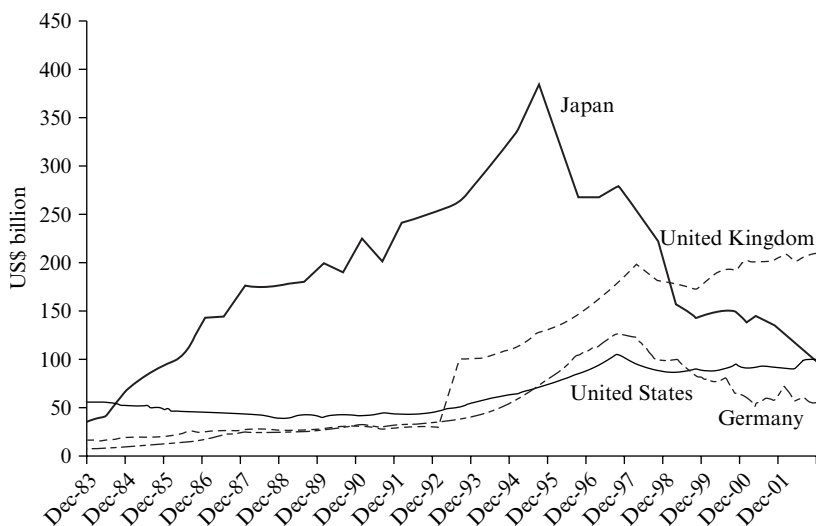
Figure 16.3 Net private capital flows to other Asian emerging markets

Table 16.9 Exchange-rate adjusted changes in cross-border loans of banks (adjusted for exchange rate movements)

	1996	1997	1998	1999	2000	2001	Level, June 2002
China	15.5	9.9	-13.5	-20.5	-8.3	-7.8	42.5
Indonesia	8.4	2.6	-8.1	-9.6	-2.7	-5.5	29.3
Malaysia	11.5	-3.8	-2.9	-3.5	-0.2	1.6	16.6
Philippines	5.8	1.3	-1.1	-0.1	-0.8	2.3	13.4
Korea	20.2	-23.3	-13.0	1.7	-8.2	2.7	57.5
Taiwan PoC	1.5	-1.8	-2.4	-0.9	-5.4	3.7	19.6
Thailand	7.7	-27.4	-24.7	-12.1	-8.2	-3.8	17.8
Total	70.6	-42.4	-65.8	-45.0	-33.7	-6.8	196.7

Source: BIS (2002b, Table 7A)

First, the fall in cross-border loans has been monumental: about \$264 billion has been pulled out of these economies in the past five years, with \$78.5 billion from Thailand, \$63.9 billion from Korea and, accelerated by the ITIC collapses in 1999, \$52.5 billion from China. The bulk has come



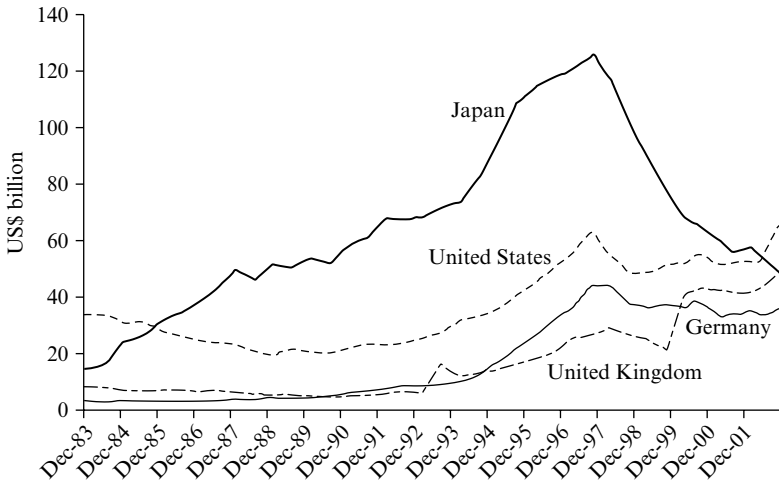
Note: Emerging East Asia includes China, Indonesia, Malaysia, Philippines, South Korea, Taiwan and Thailand

Source: BIS (2002b, Table 9B)

Figure 16.4 Bank consolidated claims on emerging East Asia, including Hong Kong and Singapore offshore financial centres

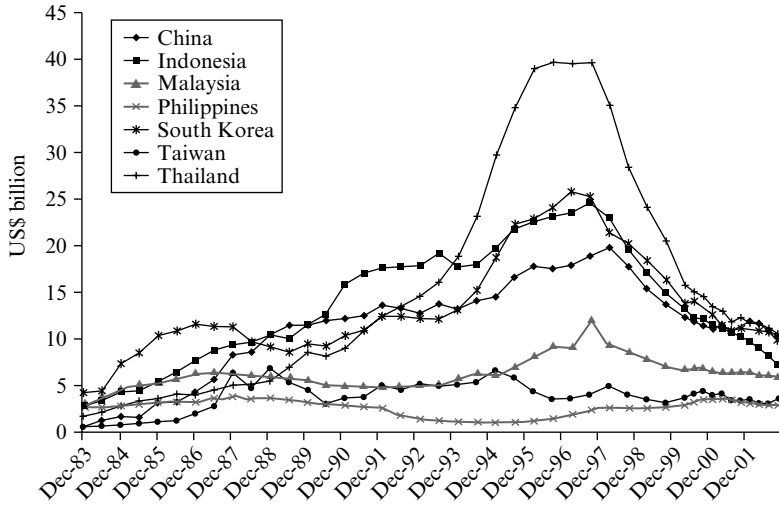
in the collapse of loans from Japan, which was previously the main creditor to emerging East Asia (Figures 16.4 and 16.5), due to the weakness of the Japanese banking system. The consolidated claims of Japanese banks on emerging economies and offshore financial centres in East Asia have fallen from a peak of \$383 billion in June 1995 to \$99.5 billion in June 2002, making UK banks the biggest lenders in the region. In June 2002, US bank assets in East Asia exceeded those of Japan's banks for the first time since statistics were collected in 1983. When loans to offshore financial centres are excluded, the United States features as the biggest provider of bank funds to emerging East Asia (Figure 16.5). The contraction of Japanese bank assets has been widespread in the region, but biggest in the case of Thailand, where Japanese banks' assets have fallen from a peak of \$39.7 billion in June 1997 to a low of \$10.3 billion in June 2002 (Figure 16.6). This is part of a broader pattern of decline of Japanese banks in international finance (BIS 2002c).⁹

Second, the decline in cross-border loans to emerging East Asia looks like it is slowing down. Loans to Malaysia, the Philippines, South Korea and Taiwan actually increased in 2001, and the rate of decline is slowing for



Source: BIS (2002b, Table 9B)

Figure 16.5 Bank cross-border consolidated claims on emerging East Asia (China, Indonesia, Malaysia, Philippines, South Korea, Taiwan and Thailand)



Source: BIS (2002b, Table 9B)

Figure 16.6 Japanese banks' cross-border consolidated lending to emerging East Asia

the others, with the possible exception of Indonesia which remains subject to substantial political uncertainty.

Third, China and South Korea are the main recipients of bank loans from other countries. The decline in Japanese loans to East Asia has been relatively less severe in the case of loans to China than for most other countries. Japanese banks now have more cross-border loans in China (\$10.1 billion) than elsewhere in emerging East Asia except Thailand (\$10.3 billion) (Figure 16.6), reflecting the growing importance of China as a destination for Japanese and other foreign capital. The implication for ASEAN is stark: Southeast Asia faces a serious challenge from China not only in attracting FDI and portfolio investment, but also bank finance.

3. ISSUES

There are many issues that warrant serious discussion with respect to financial integration, markets and institutions in East Asia. Here, we consider four.¹⁰

3.1 The Need to Integrate Regional Financial Markets

Much of the focus on finance in East Asia since the crises of 1997 and 1998 has been on institutional development, especially in repairing the banking and supervisory systems of many of the affected and other economies. The ongoing depth of the NPL problem and the weak structure of banks in East Asia suggest that this has been right and needs to continue. But, as shown above, East Asia is also relatively weak in terms of its financial markets.

The ability of the region to attract international funds and financial expertise is being made more difficult by changes going on elsewhere in the world. The introduction of the euro is having a substantial effect on the development, structure and integration of financial regulations, instruments and institutions in the euro area (see Studener 2002; OECD 2002). The consolidation of trading, clearing and settlement in the European Union is expected to reduce clearing and settlement costs by around \$1 billion a year (see Sheng 2001). European financial markets are becoming more harmonised and, as a result, bigger and more efficient. The Americas are dominated by the US dollar and US regulations and market practices. Many institutions in the Americas are dollarised and focus on US standards, even if they are outside the United States. In a world where everyone else is integrating, it is harder for a yet-to-be-integrated East Asia to remain relevant in global finance.

As cross-border trade and economic activity in East Asia increase and economies themselves become more deeply integrated and enmeshed with each other, it is reasonable to expect that this will flow over to cross-border financial activity. Weakness in individual country's financial markets and institutions will impede economic and financial integration.

It is usual to talk about financial integration in global not regional terms (see de Brouwer 1999; Park 2002), and so some explanation of the gains from regional financial integration is warranted. There are three potential advantages for East Asia from focusing on regional financial integration.

The first advantage is that it creates a set of powerful internal pressures for financial reform and development in East Asia. East Asia is seeking ways to promote regional integration. The region is not strong in finance. The only way that a regional policy agenda on finance will succeed is if there is concerted internal and external pressure for financial reform and development. This means that much of the regional focus on financial integration will be on development and capacity building. East Asia does have the resources to pursue this. As argued in de Brouwer (2003), the four or so most developed financial centres in the region – Japan, Hong Kong, Singapore and Australia – should both cooperate with each other to better integrate their own markets and, at the same time, work closely with the rest of the region in encouraging stable financial liberalisation and upgrading capacity. Of course, regional dialogue and cooperation with countries outside the region, especially the United States, and with private market participants is also essential to achieving full financial development.

The second advantage is that the integration of financially developed markets and systems in East Asia provides opportunities to improve access to, widen the range of, and reduce the costs associated with financial services and instruments available to households and firms in East Asia. This deepens the pool of funds in the region and makes it easier for the region's own large pool of funds to be allocated efficiently within the region. This does not mean that the region has to impose its own standards, forsake integration with the rest of the world, or withdraw into itself. This would ultimately be sub-optimal and self-defeating. Indeed, it would likely fail from the start since global interaction, especially with the United States, is essential for almost all of East Asia.

The third advantage is that regional financial cooperation and integration should also provide East Asia with a stronger voice in global for a and greater influence in global policymaking (see Sheng 2001, 2002; Grenville 2004). Sheng (2001) argues for greater institutional development to discuss and progress cooperation. Grenville (2000, 2003) argues that greater regional policy dialogue and cooperation are important because they provide the region with influence over global rules setting. These matters

cannot just be left to America or Europe. East Asia needs a voice but the only way that it will have influence is if it has strong financial markets and institutions. Rules-setting is not over – and never is – because financial markets are dynamic and fluid. The region has been slow in the past to respond to this challenge but the rise of networks governed by technology means that the markets and regulations that structure them remain contestable. The ASEAN + 3 framework is likely to evolve as the key vehicle for this. The difficulty here is that ASEAN + 3 does not fully capture the region's financial expertise since it excludes Australia and Hong Kong (even though the latter is part of China).

3.2 Methods of Integration: Harmonization, Mutual Recognition and Insurance

There are three basic models for regulating cross-border financial services.¹¹ First, governments can engage in full harmonization, in which the participating countries adopt the same set of rules. Second, governments can agree upon a system of mutual recognition, which requires weak harmonisation as a basis, but leaves more discretion to the individual governments. Finally, private insurance can be used in lieu of formal legal systems, to create a system of self-regulation of financial services firms.

Each of these models has benefits and difficulties in terms of both efficacy and their ability to ensure consumer protection aims.

3.2.1 Harmonization

The harmonization approach requires the development of laws or treaties that govern activity in each of the members of a regional group. Understandably, this approach is in many ways the most difficult of the three regulatory models, as it requires implementation by all of the national governments involved.

Harmonization approaches can be distinguished from one another, depending on their level of rigour. Both 'minimal' and 'full' harmonization schemes may fall into this category. In minimal harmonization regimes, the states involved decide on a minimum set of standards, leaving it up to individual countries to adopt more extensive regulations if desired. Full harmonization leaves less open to chance at the national level, and imposes a higher set of standards.

The drawbacks involved with the harmonization model focus on the difficulties of enacting appropriate rules that are accepted and enforced by all participating countries. Negotiating legislative tools at the international level is a complicated, time-consuming, and costly project, and not necessarily one that governments are ready and willing to enter into. On the one

hand, if such a set of rules is actually negotiated, their potential to provide a predictable wide-ranging and widely understood regulatory regime is relatively high. On the other hand, harmonization removes the competitive market pressure of regulatory arbitrage on countries, which forces them to be responsive to developments elsewhere and maintain 'best practice'. But given that we are talking about harmonization at the regional level, competitive pressures from the United States and elsewhere will still remain.

3.2.2 Mutual recognition

The mutual recognition model is similar to harmonization in that it relies on the state for its enforcement. While harmonization requires participating countries to adopt laws containing the same standards and regulations, mutual recognition provides for each state to recognize minimum standards for firms, allowing governments to assume that financial services firms in other countries have met certain quality and other requirements.

It is based on the notion of home country control. In other words, the firm's home country is responsible for regulating its activities, and must abide by certain minimum standards set by the countries as a group; other countries must recognize the validity of the home country's approach (Coleman 2001).

The main benefit of the mutual recognition model is its relative informality, at least compared with full harmonization schemes. On the other hand, the EU experience with the Investment Services Directive shows that these systems can encounter problems and that eventually deeper harmonization may be necessary. On a more general level, mutual recognition schemes are open to the danger that consumers will only be able to rely upon the lightest of regulatory regimes, and that the nature of consumer protection will thus fall to the lowest common denominator (Coleman 2001).

The best existing example of a mutual recognition system applied to financial services is in the European Union, where the model has been applied directly to the problem of cross-border business-to-consumer financial services (see Corcoran and Hart 2001).¹² The European Union has adopted a number of Directives in the financial services area based on the notion of mutual recognition. These Directives provide that authorization in one Member State to provide banking or investment financial services, serves as authorization to provide those same services in any other Member State, subject to compliance with the provisions of those Directives. The services enjoying mutual recognition under this regime include the provision of investment services, including securities brokerage and underwriting, and dealing in over-the-counter financial derivatives (Corcoran and Hart 2001).

In 1987, a directive provided that if the listing particulars of an issuer of equities or mutual funds was approved by authorities in one Member State, that they must be recognized in other Member States without additional scrutiny. This directive was a first step towards reciprocal recognition of financial services rules in the European Union (Smith 2001).¹³

The Investment Services Directive (the 'ISD') was a further step in this direction. The ISD applies generally to any firms in the business of providing investment services, including brokerage, dealing, market making, portfolio management, securities underwriting, and individual investment advice.¹⁴ Other Directives also provide mutual recognition for financial services within the European Union.

Deeper harmonization is the better alternative. However, there is also a case to be made for less formal assurances for consumers. Legislation touching upon developing technologies suffers from the danger that it will be obsolete by the time it is effective (Strasser 2003). The European Commission admits that technological and other developments have caused the ISD to be outdated very rapidly:

The ISD, pivotal to the integration of the investment services market, was nevertheless designed in 1992 for an era when the underlying securities and money markets were heavily fragmented by exchange risk and where national exchanges were the uncontested point of liquidity for local securities. Now national exchanges are facing increased competition in their core business from alternative trading systems and globalization. Markets are pressing for European-level consolidation of clearing and settlement and retail investors are increasingly seeking to trade securities directly for their own account. (European Commission 2000)

The Financial Services Policy Group of the Commission has argued that revision of the ISD should focus on cross-border provision of investment services, taking account of competition with traditional exchanges from electronic trading alternatives, and the difficulties presented by the consolidation of clearing and settlement procedures (European Commission 2000).

3.2.3 Alternative dispute resolution, quality assurance standards and private insurance

The answer to the problems of mutual recognition is not necessarily full harmonization, but may in fact be less harmonization. The least formal of the regulatory models considered here is not strictly 'regulation' at all, but rather a reliance on private contracting between firms, or self-regulation. This may involve third parties providing alternative dispute resolution mechanisms or providing 'kite marking' and quality assurance schemes.

Alternatively, by obtaining insurance for individual transactions, banks and brokerage companies may be able to create a transnational market for financial services. Financial services firms would be responsible for obtaining private insurance for their services, such that the participating governments would allow these firms to do business on a cross-border basis. However the mechanism for creating a standard accepted by the governments is unclear, and may run into the same problems met by full harmonization and mutual recognition approaches.

The most well-developed example of attempts to integrate regulatory approaches is the experience of the EU. With respect to financial services, the European Union's first approach was to regulate through a strong harmonization approach. When this method was not fully successful, a mutual recognition scheme through the use of Directives was adopted. The efficacy of the current scheme is currently under review; some have even suggested that returning to a full harmonization approach would be advisable (Smith 2000, pp. 205–6). In the European Union, the mutual recognition model requires some minimum standard harmonization. Otherwise there is no guarantee that the laws enacted by each Member State, and recognized by other states as a result of mutual recognition, reflect the goals of the European Union. Furthermore, minimal harmonization allows the responsibility for enforcement of standards to lie with the firm's 'home country'. As a result, Directives that establish mutual recognition schemes (in the field of financial services or elsewhere) tend to provide some level of harmonization as a basis for implementation (Corcoran and Hart 2001, p. 16).

3.2.4 A practical example

The rapidly developing field of electronic finance provides an example of the way in which regional solutions to particular policy problems may be essential and also points to the models which are available to achieve those solutions. The use of the Internet and other electronic formats to deliver financial services has spread rapidly over the last five years. This has been true for the delivery of both domestic and cross-border (international) financial services. While e-finance is estimated to increase efficiency and reduce costs in financial systems it also poses some particular regulatory problems. There is evidence that Internet trading systems may increase volatility in markets. Barber and Odean (2001) conjecture that rapid development of online trading might have contributed to the 'Internet bubble' that burst in the United States in 2000. A large proportion of inexperienced traders, large uncertainty about the future value of the security, and availability of liquidity have contributed to mispricing many 'dot com' securities (Corbett and Sidorenko 2003).

There are also real concerns about consumer protection in the area of B2C electronic transactions where security issues are wide-ranging and where 'asymmetric information' problems can be very significant. These problems are further exacerbated when e-finance transactions are conducted across borders because it is frequently unclear where regulatory jurisdiction lies. This is particularly the case for the enforcement of the range of consumer protection-related regulations because financial service providers do not fall within the easy control of the supervisory authorities in the host country when they do not have a 'physical presence'. In the case of compensation arrangements, if service providers operating on a cross-border basis are not subject to host country regulation, national authorities are not likely to extend compensation coverage for customers and investors dealing with them (Corbett and Sidorenko 2003).

These regulatory issues run the risk of becoming particularly challenging in the Asian region because of the diversity of levels of penetration of e-finance and because of an enormous variation in the regulatory approaches. The extent of domestic ICT development varies widely in the region (Sidorenko and Findlay 2001) and penetration of online banking and brokerage transactions is generally at a low level except in Korea (Claessens et al. 2002). Despite the apparently low level of development of these services in many countries there is significant policy interest at the global level in promoting rapid progress. Within APEC the Brunei Declaration (November 2000) commits to tackling the 'digital divide'; the APEC Finance Ministers (September 2000) set up an EFITS Working Group which has published interim and final reports and the APEC Senior Officials Meeting (SOM) have been examining consumer protection in e-commerce. What is missing from these commitments is the explicit recognition that making progress within an environment of diverse cross-country systems will require some management.

At present the regulatory structures within East Asia which relate to e-finance and, in particular to consumer protection and to the provision of cross-border e-finance services diverge greatly. Corbett and Sidorenko (2003) document the range of experience for the APEC 15 member economies. By constructing indices capturing three areas (general laws relating to e-finance, laws relating to consumer protection and information on the operation of private sector initiatives affecting consumer protection in e-finance¹⁵) they show that there is a considerable distance between member economies in the level of readiness to support open cross-border e-finance. Table 16.10 provides a summary. Countries tend to cluster in three or four groups with Australia, Canada, the United States and South Korea in one constellation, middle-sized APEC economies in one or two groupings together and the developing member economies in a group

Table 16.10 An index of e-finance development (scaled from 0 to 1)

	e-commerce law	Consumer protection	Self-regulation and cooperation	Total e-finance
Australia	0.57	0.79	1.00	0.79
Brunei	0.00	0.07	0.31	0.13
China	0.14	0.29	0.25	0.23
Hong Kong	0.57	0.29	0.81	0.56
Indonesia	0.14	0.29	0.38	0.27
Japan	0.43	0.64	0.81	0.63
South Korea	0.64	0.86	0.94	0.81
Malaysia	0.29	0.43	0.63	0.45
New Zealand	0.21	0.71	1.00	0.64
Singapore	0.57	0.14	1.00	0.57
Taiwan	0.29	0.64	0.69	0.54
Thailand	0.29	0.43	0.56	0.43
Other APEC				
United States	0.64	0.64	1.00	0.76
Canada	0.57	0.64	1.00	0.74
Mexico	0.29	0.64	0.75	0.56

Source: Corbett and Sidorenko (2003)

together. They argue that Japan does not naturally make a model for the developing economy markets. Its legal structure and approach to privacy protection issues leave it a long way from the group of other developed markets.

At the heart of the divergence across the region is a lack of consistent approach to new financial developments within countries. Many countries have simply tried to extend existing financial legislation and regulatory mechanisms to cover e-finance in a 'technology neutral' way. The difficulty is that, as noted above, the starting point in many sectors already involves fundamental incompatibilities between systems based on very different legal systems. A key issue which is raised by this situation is how to structure policy responses towards actual or potential cross-border e-finance transactions which go wrong. Without some agreement on regulatory responses it will be difficult to encourage open liberal systems, and the development of e-finance based transactions will be hampered because of lack of confidence. There have already been a number of examples of scams and scandals that have highlighted the shortcomings of the current level of regulatory cooperation.¹⁶ The fundamental issues

also go beyond those of e-finance to the wider range of international financial transactions.

3.3 The Role of Japan and China

While a successful process of harmonization and mutual recognition will involve all participants, it is natural to ask which countries will provide leadership for this process. In principle, the natural focus for financial integration in East Asia is Japan. While China's economy is perhaps bigger than Japan's economy on a PPP basis,¹⁷ Japan's financial markets, institutions and system are easily the largest in the region. Japan is also a vocal supporter of enhanced regional integration and financial development in East Asia.

Yet there are concerns about Japan's capacity to provide strong leadership in regional financial development and integration. These stem primarily from the fundamental weakness of Japan's financial institutions, including its banks, insurance companies and pension funds. The sharp fall of Japanese banks' cross-border loans to the rest of East Asia over the past five years has weakened domestic financial institutions and reduced the liquidity in financial markets in the region. This has diminished Japan's authority.¹⁸ What the region really wants from Japan is for it to get its economic and financial house in order.

There are three other factors also at work which impede Japan's position. The first impediment is that Japan's legal framework differs from many other key financially developed economies in the region, notably Hong Kong, Singapore, Australia and Malaysia, all of which share a common law legal tradition. Japan's legal system is based on US systems, similar to South Korea and, increasingly, China. This difference is a problem for harmonization: who harmonizes on whom? Does size matter or does the number of countries with common systems matter? It also means that it is possible that harmonization within East Asia will be bifurcated, with Northeast Asian systems more similar to US systems and Southeast Asian systems more similar to the UK system.

This difference also has implications for mutual recognition. Consider a specific example. Cooperation to link regional stock markets is progressing. In one form of this, the Australian and Singaporean stock exchanges set up a mechanism in December 2001 by which investors use their local exchange to access and buy stocks in the other exchange, with their local exchange acting as intermediary and trustee. This enables domestic investors – be it the householder or the institutional investor – to access foreign stocks, boosting both investment opportunities and the potential supply of funds. The Japan–Singapore New Age Economic Agreement provides for both those countries to do the same thing. The Australian and Tokyo exchanges are

also discussing a similar arrangement, which would close the triangle. Participation by Hong Kong and others could follow. The problem with Japan in these arrangements is that Japan can only half-deliver. Japanese, like US, securities law prohibits foreign securities being offered locally unless they are registered, and registration is an involved process akin to listing on the local exchange. Under the process outlined above, Singaporeans can invest in Japanese stocks but, unless there is reform of the securities law, Japanese cannot invest in Singaporean stocks. There is no such regulatory impediment between Australia and Singapore. At present, Japan does not appear to be prepared to change its laws.

The second impediment is that, while much bigger, Japan's markets are less sophisticated than other developed financial markets in the region. They are, for example, more likely to be paper-based than electronic. Oddly for such a major technology provider, Japanese law still requires some financial transactions to be documented in paper. The stock exchanges in the three smaller centres have been demutualised for a fairly long time; the TSE only did so at the end of 2001.

The third impediment is that there is a sense among market participants that the price mechanism in Japanese financial markets is unusually opaque for a major market. The authorities are thought to be more likely to intervene in stock and bond markets through 'price-keeping operations'. And there is concern that some market participants, notoriously the Japanese broking houses, may try to manipulate the market for commercial or political gain. This latter effect is diminishing because foreign access to the Japanese financial system is increasing, notably through liberalization of funds management.

In looking for ways to improve the functioning of their financial markets, institutions and systems, regional policymakers are wary of looking to, and relying on, Japan. Japan, also, is absorbed by its own domestic economic and financial difficulties. This puts the onus on the other developed economies in the region to provide capacity building.

This also has implications for China. China's own markets and institutions are undeveloped and it faces many serious difficulties (see Drysdale and Huang 2003). But China's financial markets and institutions are being transformed and accession to the WTO will put substantial pressure on it to institute a market-conforming financial sector. Looking forward, if financial reform and development are successful in China, then that country will play a major role in finance in East Asia. It is particularly important for the rest of the region to engage now with Chinese policymakers and market practitioners to ensure that China's markets and institutions develop in a way that is consistent with full financial development elsewhere in East Asia.

3.4 Directions in Future Work

Financial development and integration are still in their early days in East Asia. There is considerable work now being done on regional finance. There are two components that warrant further policy and academic work.

The first is a comprehensive and critical stocktake of capacity building and cooperation in the finance domain. This would cover two elements. There are many sources of training and technical and policy assistance provided to the region in finance – like the IMF, ADB, World Bank, SEACEN and EMEAP working groups. These are valuable and important institutions but we need a fair comparative evaluation of these to understand and assess all the various forms in which capacity building is delivered. A lot is provided. Is it effective? Who does it better? There is also a need for detailed intensive market-by-market study of legal frameworks, market practices, cross-border restrictions and the like in regional financial markets.

The second area that warrants focus is how regional policymakers explicitly engage with market participants in the financial sector. Such engagement is important in three respects. It is a vehicle for knowledge transfer from the private sector to officials in the region. Regulators are always on the back foot when it comes to knowing and understanding what the market is doing. Second, it establishes relationships and mechanisms for market practitioners to talk with the official sector. This does not matter so much in ordinary times but it can be crucial in minimizing the spread or effects of a financial crisis (see Gai 2004). Third, it acts as a discipline on policymakers and politicians.

4. CONCLUSION

In January 2002, Japan's Prime Minister Junichiro Koizumi spoke in Singapore about his vision for an East Asian Community, spanning China, Japan and Korea, the ASEAN-10 countries, and Australia and New Zealand. This is one powerful example of the vision of many in the region for a more integrated and cohesive East Asia. One element that is discussed in this context is the scope for developing and integrating the region's financial markets. There is scope for doing this, but it is a big job and requires commitment, capacity building and cooperation. In general, financial markets in the region are undeveloped and inefficient, and financial institutions are weak. Finance in East Asia does not underpin economic growth and development to the degree it should, leaving economies vulnerable to adverse economic and financial shocks. The work agenda on financial development and integration in East Asia will remain a full and rich one for many years to come.

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NOTES

1. To make reading easier, Hong Kong, Special Administrative Region of China, and Taiwan, Province of China, are referred to as Hong Kong and Taiwan in this chapter.
2. This updates de Brouwer (2003).
3. See de Brouwer (2003) for a discussion of other or similar issues.
4. This is tested by including past 30-minute, hourly and daily returns and variances in GARCH(1,1) specifications of 5-minute changes in regional equity prices.
5. The Singapore figures for foreign exchange trading are regarded by some as artificially high. Sheng (2001, 2002) argues that the limited foreign exchange trading in much of East Asia shows the region's lack of financial sophistication and influence.
6. The dollar-euro currency pair accounted for 30 per cent of global turnover in April 2001, compared to 20 per cent for the dollar-yen and 11 per cent for dollar-sterling (BIS 2002a, p. 2).
7. See Demirgüç-Kunt and Levine (2000). This is also the source for the figures quoted in this paragraph.
8. This argument is also raised by Sheng (2001, 2002).
9. Jeanneau and Micu (2002) trace the shifts in cross-border lending to push and pull, internal and external factors like high domestic real interest rates, bilateral trade, emerging economy economic growth, bilateral exchange rate volatility, external debt (to GDP), and risk aversion – although this last factor looks circular: what explains risk aversion?
10. See de Brouwer (2003) for a discussion of some other (and some related) topics.
11. We are indebted to Sarah Strasser, Tony Warren and Christopher Findlay for discussion of the issues in this section. Related arguments can be found in Sidorenko and Findlay 2003 and Strasser 2003.
12. The European Union first moved towards a mutual recognition approach in 1979 in the case of *Rewe-Zentral AG v. Bundesmonopolverwaltung für Branntwein* (commonly referred to as 'Cassis de Dijon'), in which the European Court of Justice established a principle based on the freedom of goods between Member States, that if goods could legally be marketed in a Member State, then they also could be exported into and sold in another Member State, unless restricted by a specific provision in the EC Treaty or a requirement justified in the general good. This holding meant that Member States should respect the adequacy of other Member States' laws in regard to the marketing of products (Corcoran and Hart 2001, p. 15).
13. Smith (2000, p. 209); Council Directive 87/345/EEC of 22 June 1987 amending Directive 80/390/EEC coordinating the requirements for the drawing-up, scrutiny and distribution of the listing particulars to be published for the admission of securities to official stock exchange listing.
14. Council Directive 93/22/EEC of 10 May 1993 on investment services in the securities field.

15. 1. General laws relating to e-commerce, e-finance and cross-border finance: digital contract law, digital signature law, whether these laws were UNCITRAL based, whether there was a separate law for e-finance (or whether e-finance was handled within existing banking law), whether there was a separate e-finance regulator, whether a special licence was required for providers of on-line banking, and whether there were specific laws on cross-border finance. Laws relating to consumer protection: the existence of data protection law, privacy law, general consumer protection law; separate law on consumer protection in e-commerce, separate law on consumer protection in e-finance; whether there is a consumer protection agency; whether there are specific prohibitions on unsolicited selling on the Internet or on sending of spam.
2. Information on the operation of private sector initiatives affecting consumer protection in e-finance: codes of practice for banking/e-banking, systems to handle consumer complaints, trust mark schemes, formal dispute resolution mechanisms, ADRs, consumer education programs, separate enforcement agency, MOUs for international co-operation of regulators
16. See Corbett and Sidorenko (2003) and the APEC EFITS Working Group Final Report for details of some examples.
17. The World Bank estimates that China's economy was US\$501.9 billion on a PPP basis in 2000, compared to US\$339.4 billion for Japan. This corresponds to US\$ 3976 per capita for China and US\$ 26 755 for Japan. On a current exchange rate basis, China was US\$ 1079.8 billion in 2000 and Japan was US\$ 4454.6 billion.
18. In a number of recent conversations, senior officials from North and South East Asia noted the seriousness of Japan's financial sector problems and incapacity to deal with them. They then said that they no longer regard Japan as a model for financial development.

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17. How to mobilize the Asian savings within the region: Securitization and credit enhancement for the development of East Asia's bond market

Gyutaeg Oh, Dae Keun Park, Jaeha Park and Doo Yong Yang

1. INTRODUCTION

The way and structure of capital movement in East Asia present highly significant implications on the development of East Asia's capital market. Traditionally, capital inflows in most East Asian countries except for Japan consisted of public financing and bank loans. With the turn to the 1990s, capital inflows started to take various forms, as investors from advanced economies diversified their assets internationally. The changes in the form of capital flows in East Asia have been induced by both push and pull effects. That is to say, with low interest rates and dropping asset investment returns due to economic slowdown in advanced economies, investors' demand for investment in emerging market portfolio began to soar. At the same time, major East Asian countries relaxed their regulatory measures on foreigners' portfolio investment through capital liberalization, further spurring the changes in the form of capital inflow into East Asia.

On the other hand, the Asian crisis in 1997 has brought significant changes to the form of capital flows in East Asia, and to the structure of capital market in the region. One of the biggest changes in the capital movement in East Asia and development of the East Asian capital market is the current account surplus of most major East Asian countries, including the crisis countries, since the 1997 Asian currency crisis. This led them to switch from being capital importers to capital exporters. Further, the current account surplus was translated into a rapid increase in foreign exchange reserves. Expanded foreign exchange reserves prompted East Asian countries to import safe assets and export risky assets. This recent trend of

capital movement is likely to undermine capital market development in the region and have a negative impact on the East Asian economy. First, the strong tendency of East Asian countries to invest in safe assets of advanced economies and of advanced economies to invest in risky assets of East Asia all but causes East Asian economies to reduce the earnings from asset management and to raise the East Asian risk premium. Second, such capital flows do not contribute positively to the development of the East Asian capital market. It would mean the same as deliberately abandoning the opportunity for the East Asian financial market to grow. Third, the characteristic of such capital flows results in raising the possibility of a currency crisis in East Asia. Investment of advanced economies in East Asia is concentrated on risky assets, regardless of enough foreign exchange reserves, which can induce a sensitive response to even a slight increase of risk. There lies a problem in trying to avert a possible currency crisis every time the size of import of risky capital grows: to get more foreign exchange reserves. Steady current account surpluses are critical for steady growth of foreign exchange reserves, but this would further increase the overseas liabilities of the United States. That would lead to bigger risks to the international financial market, in the case of US dollar depreciation in an attempt to manage the risk of increasing current account deficit in the United States. In particular, East Asian countries whose foreign exchange reserves are for the most part made up of dollar-denominated assets would suffer bigger losses.

The most important issue in East Asia's current problem is, in short, risk management. The development of a bond market, therefore, is important for supplementing the vulnerable structure in East Asia. It would turn the investment of advanced economies in risky assets to investment in safe assets, as well as contributing to the development of the East Asian capital market. A stumbling block to the current bond market development in East Asia is generally low credit and liquidity. The investment of surplus capital in Asia is concentrated on foreign exchange reserves. Considering that the central bank has to manage foreign exchange reserves safe and sound, surplus capital should be invested in assets with high credit and abundant liquidity. However, the credit rating of East Asian bonds, except for those of Japan and Singapore, is not high enough. Furthermore, the liquidity in bond markets is so low that liquidity risks prevent active investments by foreign and regional investors. East Asian bond markets with quality and liquidity would surely promote more regional investment as well as investment from advanced countries.

To change the way and structure of capital flows in East Asia in vulnerable and unsustainable situations, securitization can be provided as an initial step toward more circulation of risky assets within or out of the

region. Securitization can be helpful to capital inflows in the region, since it can not only increase the supply of assets to the East Asian capital market but also enhance credit and liquidity of Asian bonds. This would, in turn, increase the demand for Asian financial assets. Ultimately, securitization can contribute to the development of the Asian bond market, since it would create a better risk management scheme in the region by strengthening risk assessment and valuation.

This chapter is organized as follows. The next section looks at the characteristics of the capital flow in East Asia. We explore the characteristics of capital flows in East Asia after the Asian crisis. Since East Asian countries are compelled to manage their assets safely due to massive foreign exchange reserves and the Asian currency crisis promoted the risk-averse behavior, both public and private investors in the region have a strong preference for safe assets, hence the rising trend of importing safe assets. Section 3 presents the reason why capital surplus in East Asia has not been circulated within the region. Section 4 examines the rationales for a securitization scheme in the region. First, we analyse the major problems on current capital flows in East Asia, and reasons for development of an Asian bond market.¹ These issues are related to solving the current problems associated with the characteristics of the capital flow in East Asia, and how to make more sound capital flows in the region. In addition, we present the reasons why East Asia needs a securitization scheme. It shows that a securitization is helpful in many ways to the development of the East Asian bond market and the increase of capital flows in the region. By improving the credit rating and liquidity of asset-backed securities, securitization can also boost demand for assets in the East Asian financial market. Besides, securitization can in itself increase the supply of assets to the East Asian financial market and expand capital flows in the region. Section 5 discusses the mechanism of securitization and credit enhancement in East Asia. Section 6 concludes.

2. TRENDS AND CHARACTERISTICS OF CAPITAL FLOWS IN EAST ASIA

One of the biggest changes in the capital movement in East Asia since the Asian crisis is the current account surplus of most major East Asian countries, including the crisis countries. This led them to switch from being capital importers to capital exporters. Further, the current account surplus was translated into a rapid increase in foreign exchange reserves. Expanded foreign exchange reserves prompted East Asian countries to import safe assets and export risky assets.

2.1 From Capital Importer to Capital Exporter

The direction and form of capital inflows into East Asia since the Asian currency crisis are changing swiftly. This is because the current account status of major East Asian countries has been rapidly turning around. When we look at how the current account of major East Asian countries has changed in the 1990s, we find that most of the countries except Japan and Singapore recorded current account deficits before the Asian currency crisis. Just before the Asian currency crisis, in 1996, East Asia's current account deficit excluding Japan exceeded \$36 billion (Table 17.1). However, East Asia on the whole, again excluding Japan, recorded a current account surplus of \$23 billion in 1997 reaching a climax of \$125 billion in 1998, East Asia's current account surplus is shrinking steadily, slumping to \$80 billion as of 2001 (Table 17.1). Including Japan, East Asia's total current account surplus was \$244 billion in 1998, falling somewhat to \$168 billion in 2001. Such current account swing had its root in the rapid devaluation of foreign exchange, reduction of domestic imports, and increase of exports, which are after-effects of the crisis. East Asia's current account surplus promoted the economic recovery of countries in the region, exerting a positive effect on the post-crisis restructuring of East Asian countries.

The current account swing is brought on by the relatively rapid pace of contraction in investment in East Asia. The size of investment in most East Asian crisis countries has diminished drastically after the crisis (Table 17.2). Indonesia's investment/GDP ratio fell from 31 percent in 1997 to 16 percent

Table 17.1 Current account trends in East Asia (US\$ billion)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
China	13.27	6.40	-11.61	6.91	1.62	7.24	36.96	31.47	21.12	20.52	17.40
Indonesia	-4.26	-2.78	-2.11	-2.79	-6.43	-7.66	-4.89	4.10	5.78	7.99	6.90
Korea	-8.32	-3.94	0.99	-3.87	-8.51	-23.01	-8.17	40.36	24.48	12.24	8.62
Malaysia	-4.18	-2.17	-2.99	-4.52	-8.64	-4.46	-5.94	9.53	12.61	8.41	0.18
Philippines	-1.03	-1.00	-3.02	-2.95	-1.98	-3.95	-4.35	1.55	7.91	8.46	4.50
Singapore	4.88	5.91	4.21	11.40	14.90	12.57	18.12	19.71	16.53	15.92	17.88
Thailand	-7.57	-6.30	-6.36	-8.09	-13.55	-14.69	-3.02	14.24	12.43	9.31	6.23
Hong Kong	5.68	5.37	9.87	3.13	-3.34	-2.13	-4.99	4.43	12.04	9.11	11.74
<i>Total</i> <i>(excluding</i> <i>Japan)</i>	-1.53	1.49	-11.02	-0.78	-25.93	-36.09	23.72	125.39	112.9	91.96	80.55
Japan	68.20	112.57	131.64	130.26	111.04	65.79	96.81	118.75	114.60	119.66	87.80
Total	66.67	114.06	120.62	129.48	85.11	29.7	120.53	244.14	227.5	211.62	168.35

Source: World Bank and OECD

Table 17.2 *Investment/GDP and savings/GDP ratios in Asia*

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Investment/GDP ratio (%)										
China	34.77	36.17	43.30	41.19	40.83	39.58	38.22	37.71	37.16	37.27
Indonesia	31.55	30.48	29.48	31.06	31.93	30.69	31.75	16.77	12.19	17.87
Korea	39.85	37.34	35.51	36.51	37.17	37.94	34.23	21.17	26.67	28.66
Malaysia	35.63	35.98	38.30	39.74	43.15	42.11	42.77	26.83	22.14	25.58
Philippines	20.21	21.34	23.98	24.06	22.45	24.02	24.78	20.34	18.75	17.84
Singapore	34.82	36.36	37.87	33.47	34.58	36.92	38.92	32.34	32.44	31.30
Thailand	42.84	39.96	39.94	40.18	41.85	41.58	33.33	20.32	19.94	22.67
Hong Kong	27.20	28.49	27.58	31.89	34.84	32.06	34.54	29.02	24.95	27.55
Japan	32.44	30.69	29.24	28.06	28.20	29.13	28.70	26.89	26.01	25.99
Savings/GDP ratio (%)										
China	38.11	37.72	41.78	43.06	43.13	41.73	42.98	42.34	40.05	39.94
Indonesia	33.25	33.41	32.46	32.20	30.59	30.08	31.48	26.53	20.20	25.72
Korea	36.84	35.85	35.57	35.37	35.70	33.83	33.22	34.63	33.53	31.44
Malaysia	31.97	37.33	38.20	38.14	39.21	43.49	43.68	48.82	47.21	46.17
Philippines	17.22	16.44	15.53	17.75	14.63	15.24	14.44	13.71	18.91	23.98
Singapore	45.54	46.23	45.77	48.50	50.21	50.56	52.27	52.04	51.78	49.76
Thailand	36.30	35.95	36.19	35.34	35.13	35.32	34.75	36.20	32.57	30.73
Hong Kong	33.80	33.82	34.61	33.10	30.49	30.66	31.10	30.12	30.35	32.29
Japan	34.05	32.85	31.45	30.07	29.59	29.62	29.80	28.72	27.55	29.28

Source: World Bank and OECD

in 1998, still remaining low at 17 percent in 2001. The investment/GDP ratio of Korea dropped to 21 percent in 1998 from 34 percent in 1997; however, it showed a slight increase to 28 percent in 2000. Thailand's investment/GDP ratio also shrank from 33 percent in 1997 to 20 percent in 1998, maintaining at 22 percent in 2000. On the contrary, China suffered relatively less from the crisis and its investment/GDP ratio stayed around 37 percent or higher on average in the 1990s. On the other hand, the size of domestic savings in most East Asian countries has not been as much reduced as that of investment since the Asian crisis, with the exception of Indonesia and Thailand.

The accumulated current account surplus of East Asia, including Japan, from 1997 to 2001 amounts to \$930 billion in total. During the same period, Japan recorded the biggest current account surplus of \$537 billion, China \$127 billion, Singapore \$39 billion, Korea \$77 billion, and other East Asian countries \$20 billion or more. This signifies that in the past some East Asian countries, such as Japan, China, and Singapore, had abundant capital to export, but the Asian currency crisis changed everything. Owing to the

current account reverse, most East Asian countries have turned from capital importers to capital exporters after the crisis.

2.2 Rapid Increases in Foreign Reserves

Due to the huge current account surplus since the Asian crisis, foreign exchange reserves in the region have increased significantly. As an example, Korea's foreign exchange reserves just before the foreign currency crisis in 1997 were a mere \$20 billion, but they grew back to \$102 billion in 2001. China's foreign exchange reserves showed a notable increase, jumping from \$142 billion in 1997 to \$215 billion in 2001. Japan's foreign exchange reserves in 1997 were \$219 billion, which went on to \$395 billion in 2001 (Table 17.3). Foreign exchange reserves of most East Asian developing countries, although smaller in scale, also showed an increase. The total foreign exchange reserves in all of East Asia including Japan were \$240 billion in 1991, taking up 26 percent of the total foreign exchange reserves in the world. As of 2001, East Asia's foreign exchange reserves amounted to \$1061 billion in 2001, reaching 48 percent of the total foreign exchange reserves in the world.

The increase in foreign exchange reserves can be explained by the fact that capital inflows into East Asia since the Asian currency crisis led to the increase in foreign exchange reserves, most of which were public funds. As mentioned earlier on, 76 percent of the amount of increase in East Asia's current account surplus (excluding Japan) was seen as the increase in the foreign exchange reserves in East Asia. \$444 billion, which is 47 percent of the total current account surplus in East Asia (excluding Japan) of \$930 billion, were added to foreign exchange reserves. The increase in East Asia's foreign exchange reserves was the result of the realization of East Asian countries that the lack of foreign currency liquidity caused the foreign currency crisis, motivating them to expand their foreign exchange reserves for economic stability. In addition, East Asian countries, with their export-led economic structure, had to suppress foreign exchange depreciation due to the increase in net capital inflows after the Asian currency crisis, setting a policy goal of expanding their foreign exchange reserves.

2.3 Exporting risky assets and importing safe assets

Against the backdrop of a drastic rise in the regional risk since the Asian currency crisis, investors in developed countries purchased most of the risky assets of East Asia, and surplus capital in East Asia was invested in the safe assets of developed capital markets. In other words, East Asia shows a clear tendency to export risky assets and import safe assets.²

Table 17.3 Foreign reserves in Asia (US\$ billion)

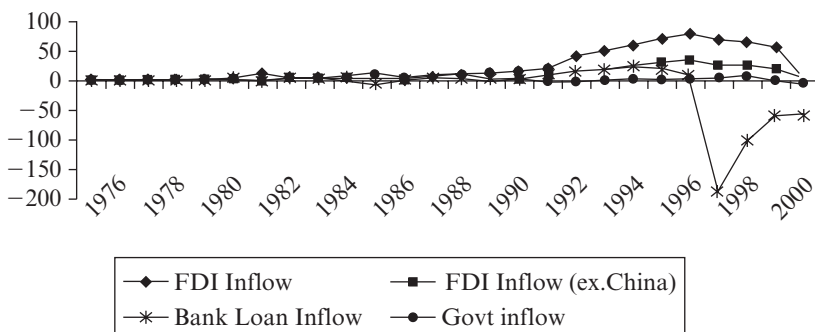
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
China	43.67	20.62	22.39	52.91	75.38	107.0	142.7	149.1	157.7	168.2	215.6
Indonesia	9.26	10.45	11.26	12.13	13.71	18.25	16.59	22.71	26.45	28.50	27.25
Korea	13.70	17.12	20.23	25.64	32.68	34.04	20.37	51.97	73.99	96.13	102.7
Malaysia	10.89	17.23	27.25	25.42	23.77	27.01	20.79	25.56	30.59	29.52	30.47
Philippines	3.25	4.40	4.68	6.02	6.37	10.03	7.27	9.23	13.23	13.05	13.44
Singapore	34.13	39.89	48.36	58.18	68.70	76.85	71.29	74.93	76.84	80.13	75.37
Thailand	17.52	20.36	24.47	29.33	35.98	37.73	26.18	28.83	34.06	32.02	32.35
Hong Kong	28.81	35.17	42.99	49.25	55.40	63.81	92.80	89.65	96.24	107.5	111.1
Japan	72.06	71.62	98.52	125.8	183.2	216.6	219.6	215.4	286.9	354.9	395.1

Source: IMF, IFS

2.3.1 Exporting risky assets

If we look at the patterns of capital flows in to East Asia, we can see that East Asia exports risky assets to advanced countries (Figure 17.1). FDI capital inflows have been an important part of capital flows in East Asia, showing a stable trend since the Asian currency crisis. However, FDI capital flows are concentrated on a number of countries, especially China, and this tendency is further deepening since the crisis. Cross-border stock inflows, since the Asian currency crisis, are found prominently in East Asia. Stock inflows into East Asia amounted to only \$4 billion in 1997. However, foreign stock inflows reached \$77 billion in 1999, \$59 billion in 2000, and \$11.1 billion in 2001. Bond inflows into East Asian countries since the Asian currency crisis were smaller in size than stock inflows. In 1999, bond inflows were \$2.29 billion, whereas in 2000 and 2001 redemption of investment in bonds visibly depressed bond investment. Moreover, the size of outflows in bank loan flows grew rapidly following the Asian currency crisis, continuing even until recently. Considering that stocks are riskier than bonds or bank loans, it is clear that East Asia exports risky assets, or, in other words, East Asia sells risky assets to the rest of the world, especially to advanced economies.

From further examination of foreign portfolio investments by the United States, we can see that the US investors have purchased a considerable amount of risky assets in East Asia. Table 17.4 indicates that portfolio investments by the United States in East Asia have concentrated on equity investment rather than bond investment. Overseas portfolio investment of the United States in 1997 was in total, \$1207 billion, \$193.5 billion or 16 percent of which was put in East Asia; investment in Japan took up 70 percent of that, or \$136.4 billion. In 2001, \$262.6 billion, or 16 percent of \$1599.3 billion, the



Source: IMF, IFS

Figure 17.1 Capital inflows in Asia (US\$ billion)

Table 17.4 US holdings of Asian financial products (US\$ billion)

	Equity		Bond	
	1997	2001	1997	2001
China	2.25	2.39	3.17	0.59
Indonesia	2.48	1.54	1.85	0.29
Korea	4.42	29.64	10.83	4.68
Malaysia	4.17	2.60	4.35	1.58
Philippines	2.84	1.35	4.47	2.54
Singapore	10.18	21.34	0.55	1.36
Thailand	2.15	1.93	3.46	0.74
Hong Kong	28.1	30.25	3.52	1.76
Japan	136.4	171.59	30.35	36.27
Asian total	193.53	262.6	62.55	49.81
	(16%)	(16%)	(11%)	(8%)
US total	1207.7	1599.36	547.2	624.72

Source: US Department of the Treasury, 2002

total overseas portfolio investment of the United States, went to East Asia. Out of the total US overseas portfolio investment in East Asia, 65 percent was made in Japan; the US stock investment in the East Asian stock market excluding Japan rose from \$57 billion in 1997 to \$91 billion in 2001. What is noteworthy is that the US equity investment in Korea increased from \$4.4 billion in 1997 to \$29.64 billion in 2001. The US investment in the East Asian bond market was 11 percent of the total overseas bond investment by the United States in 1997, but it shrank to 7 percent in 2001.

From the portfolio investment pattern in which investment in stocks that are relatively more risky was higher than investment in bonds, we can see that investors from advanced economies such as the United States took on risks from East Asian financial assets by purchasing a large quantity of East Asia's risky assets. The East Asian financial market has exported risky assets to investors from advanced economies.

Moreover, the foreign portfolio investment in Japan has shown that the majority of foreign purchasers of domestic financial assets in Japan are investors from the United States and Europe. According to Table 17.5, 2001 purchases of Japanese stocks by European and US investors were over 86 percent of the total stock purchase by foreigners in Japan. Purchase of Japanese bonds by European and US investors surpass 72 percent of the total bond purchase by foreigners. In contrast, stock investment by East Asian countries reaches a mere 2.0 percent in 2000. Investment in Japanese

Table 17.5 *Foreign investment in the Japanese domestic portfolio (trillion yen)*

	Region	2000	2001
Equity	United States	20.3 (31.7%)	14.07 (28.4%)
	Europe	37.2 (57.7%)	28.8 (58.2%)
	Asia	2.7 (2.0%)	2.3 (4.6%)
	Latin America	1.2 (2.0%)	1.8 (2.4%)
Bond	United States	4.3 (14.2%)	4.6 (13.9%)
	Europe	17.3 (56.7%)	19.4 (58%)
	Asia	5.9 (19.4%)	5.8 (17.4%)
	Latin America	1.7 (5.6%)	1.8 (5.4%)

Source: Bank of Japan, *Quarterly Bulletin*, 2001 and 2002.

bonds by East Asian countries, on the other hand, shows a relatively higher proportion to stock investment. In 2001, Singapore's investment in Japanese bonds amounted to 2.4 trillion yen, the highest in East Asia, with Korea standing at 0.9 trillion yen, and China 0.7 trillion yen.

2.3.2 Importing safe assets

East Asia as a whole has a high inclination to invest in safe assets. As mentioned earlier, the current account surplus, the source of surplus capital for investment, which usually led to the increase in foreign exchange reserves, is another important factor for the inclination. This is not too far from the characteristic of foreign exchange reserves management to make limited investment in risky assets. In addition, techniques of risk assessment and analysis fall behind those of financial institutions of advanced economies, and institutional investors in East Asia have become more risk-averse since the Asian currency crisis, resulting in the investment in safe assets.

Generally, the foreign exchange reserves assets of central banks are divided largely into cash and bond. They keep cash to use for necessary foreign exchange market intervention; and put a part of the cash in commercial and investment banks in the form of time deposits. Some of the cash is traded with financial institutions in the form of repos. A significant part of foreign exchange reserves are invested in bonds, mostly in government bonds that have high credit and liquidity.³ Hong Kong invests 80 percent of its total foreign exchange reserves in bonds, 80 percent of which is invested in US government bonds. Korea, to improve the liquidity of foreign exchange reserves in 1998, structured over 99 percent of its total foreign exchange reserves into cash and liquid securities. The duration of bond investment in foreign

Table 17.6 Overseas portfolio investment of Japan by region (trillion yen)

	Region	2000	2001
Equity	United States	15.4 (51.1%)	16.2 (54.3%)
	Europe	11.5 (38.8%)	10.1 (33.8%)
	Asia	0.97 (3.2%)	1.08 (3.6%)
	Latin America	1.26 (4.2%)	1.6 (5.4%)
Bond	United States	32.6 (31.1%)	29.96 (34.5%)
	Europe	44.7 (42.6%)	53.9 (40.7%)
	Asia	1.87 (1.8%)	1.7 (1.3%)
	Latin America	15.9 (15.2%)	132.4 (14.1%)

Source: Bank of Japan, *Quarterly Bulletin*, 2001 and 2002.

exchange reserves of the central bank differs by country, but generally the duration is three years or shorter.⁴ This shows that the typical central bank is highly risk-averse in managing foreign exchange reserves.

East Asian countries are also very risk-averse in overseas investment. The bond investment part of total overseas portfolio investment of Japan, the biggest capital exporter of East Asia, is mostly made up of government bonds that have high credit and liquidity. As of the end of 2000, Japan's overseas portfolio investment reached 143 trillion yen; while 30.3 trillion yen was used for equity investment, 105 trillion yen was put into bond investment and 7.9 trillion yen was invested into money market instruments. Japan's overseas long-term portfolio investment is not particularly keen on East Asia; only 2.77 trillion yen, or 2.9 percent of total investment, went to investment in East Asia (Table 17.6). Japan's overseas portfolio investment is concentrated on advanced economies, the United States and Europe.

This inclination is not exclusive to Japan but to most East Asian countries. Overseas portfolio investment of East Asian countries is mostly centered on assets that are safe and high in liquidity, such as the US government bond (Table 17.7). Only Japan, Singapore, and Hong Kong are investing in the US stock market; equity investment by other East Asian countries in the United States is negligible. Investment in the US stock market by East Asian countries including Japan is about 11 percent of the total foreign equity investment.

Notwithstanding, investment in the US bond market by East Asian countries is not limited to Japan. In particular, China's purchase of US bonds has shown a marked increase in 2000 to \$91 billion. Korea invested \$38 billion in US bonds in 2000, surging from \$5 billion in 1989. East Asia's investment in the US bond market makes up about 29 percent of the total foreign investment in the US bond market.

Table 17.7 *Investment in US financial assets by major East Asian countries (US\$ billion)*

	Equity			Bond		
	1989	1994	2000	1989	1994	2000
China	–	–	1	–	18	91
Indonesia	–	–	–	–	2	9
Korea	–	–	1	5	6	38
Malaysia	–	–	–	–	6	2
Philippines	–	–	–	–	2	5
Singapore	2	8	37	11	26	45
Thailand	–	–	–	1	7	11
Hong Kong	3	6	18	8	15	58
Japan	28	34	144	151	196	286
Asian total	33 (12%)	48 (12%)	201 (11%)	176 (30%)	278 (32%)	545 (29%)
US total	275	398	1709	572	846	1849

Source: US Department of the Treasury, 2002

Table 17.8 *Investment pattern by financial asset of major East Asian countries in the US financial market (2000) (US\$ billion)*

	Total (A)	Common stock	Other equity	U.S. Treasury bond (B)	U.S. govt. agency bond (C)	Corporate and municipal bond	(B + C)/A*100 (%)
China	92	0.9	0.49	71	19.6	0.15	98
Indonesia	10	0.27	0.24	8.9	0.13	0.27	90
Korea	39	0.37	0.2	23.7	14.6	0.09	98
Malaysia	3.0	0.32	0.18	2.3	0.02	0.1	77
Philippines	5.62	0.64	0.27	3.0	1.53	0.13	80
Singapore	82.2	33.8	3.4	34.19	4.59	6.0	47
Thailand	11.4	0.25	0.17	10.97	0.09	0.014	97
Hong Kong	76.2	16.1	2.1	38.1	17.6	2.11	73
Japan	430.5	128.1	16.3	221.2	42.6	22.2	61

Source: US Department of the Treasury, 2002

The majority of East Asian countries' investment in US financial assets is concentrated on safe assets, such as the US Treasury bond and US government agency bond (Table 17.8). China and Korea have placed more than 98 percent of their total financial asset investment in the United States in US

bonds, Thailand 97 percent, and Indonesia 90 percent. Investment by financially advanced East Asian countries in the US bond market is not as high; only 47 percent of Singapore's investment in US financial assets is set aside for US bond investment, Japan 61 percent, and Hong Kong 73 percent.

In conclusion, we can say that East Asian countries are highly risk-averse in their overseas investment behavior. Because they are compelled to manage their assets safely due to massive foreign exchange reserves, and as a result of the Asian currency crisis which promoted risk-averse behavior, even private investors have a strong preference for safe assets, hence the rising trend of importing them.

3. Why Have Intra-regional Capital Flows Been Limited

Another important feature of capital flows in East Asia is that capital surplus has not been circulated within the region. The combining stylized facts from the previous section produce the most significant consequence related to capital flows and capital market development in East Asia. Surplus capital in the East Asian region shows a strong tendency to be invested in financial markets elsewhere since such foreign investment by East Asia clearly favors safe assets, but there are not many safe and liquid assets in the region.

Two criticisms have been raised of this particular pattern of capital flows in East Asia (Crockett 2002). First, capital flows from East Asia to the developed countries are not sustainable. It means that capital is flowing from economies that are catching up in productivity to mature economies that are assumed to have less productivity. There are concerns that the longer this pattern lasts, the greater the adjustment will have to be, which would prove to be devastating to East Asia. Second, there are concerns that the gross flows from Asia to developed countries and back to East Asia signify missed opportunities for capital market development in East Asia. This subsection explores the reasons for limited capital movement within the East Asian region.

When talking about limited capital circulation within the region, it is appropriate to separate the reasons into the demand side and supply side of capital in East Asia. For example, with the exception of Japan, East Asian countries include overseas savings as their foreign exchange reserves; limiting the assets that can be held as foreign exchange reserves can limit the demand. Why, then, is Japan not making enough investment in East Asia, with abundant private overseas assets besides foreign exchange reserves? The reason can be found in the problem of asset supply and demand in East Asia. On the supply side, capital control and regulation have restricted foreign investment in domestic assets; however, most countries in the region recently allowed foreign investors to buy domestic financial assets. The low

credit or lower quality assets in the region also prevent the circulation of capital within the region. On the demand side, the risk-averse behavior of regional investors and rudimentary institutional investors are the main reasons for low capital investment within the region.

3.1 Capital Control and Regulation

Government capital control and regulation create a distortion in international capital flows. Generally government capital control can never fully restrain the entire cross-border capital flows, but it can raise the cost of capital flows to in order to suppress certain types.

Capital control and regulation are often most pronounced in the restriction on foreign financial institutions entering the domestic financial market. They can also appear in the form of a cap on foreign equity ownership in domestic financial institutions, which can reduce competition in the domestic financial market and ensure steady profits for domestic financial institutions. Such restrictions have disappeared in advanced economies, but still a good number of East Asian countries are limiting foreign financial institutions' access. Capital flows in East Asia before the 1990s were made up of official financing and bank loans, largely due to capital control and regulation.

Let us take a look at the restrictions on the purchase of domestic financial products by non-residents in major East Asian countries in 2002 and on the purchase of overseas financial products by domestic residents (Table 17.9). Japan, Korea, Hong Kong, and Singapore do not have restrictions on capital flows, whereas China, Malaysia, Indonesia, the Philippines, and Thailand still control them in many ways. There are some notable features of this control in major East Asian countries. First, there are more restrictions on capital outflows than on capital inflows. This is a reflection of the concerns on the part of some countries about capital flight, after having experienced the Asian currency crisis. Second, in some countries, control on capital inflows related to bonds is stronger than on capital inflows related to stocks. In China, foreign investment in Chinese stocks is allowed but limited to B-type stocks; foreign investment in Chinese bonds is prohibited. Table 17.9 does not show it, but Korea has restricted foreign investment in the stock market less than foreign investment in the bond market.

In conclusion, in a situation where foreign investment in bond markets is limited, it is difficult to expect Japan to make investment in East Asia, considering the fact that more than 80 percent of Japan's overseas investment is through bonds. Capital control in East Asian countries has repressed particular types of capital inflow, which has resulted in the restriction on capital investment in East Asia.

Table 17.9 Restrictions on capital flows in selected Asian countries

	Korea	China	Hong Kong Malaysia	Indonesia	Singapore	Philippines	Thailand	Japan
	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Control on the Capital Flow								
Stock	No	Only B-type shares	No	A limit on the ownership of a joint securities company	No	Registration is necessary only if non-residents purchase the foreign exchange from the banking system	25% of the total amount of shares sold in local market	No
Restrictions on purchase by non-residents								
Bond	No	Not permitted	No	Banks are prohibited from purchasing securities denominated in rupiah issued by non-residents	No	Registration is necessary only if non-residents purchase the foreign exchange from the banking system	No	No
Money instrument	No	Not permitted	No	Yes	No	No	No	No
Collective investment securities	No	Not permitted	No	Less than 1% of any fund	No	No	No	No

Table 17.9 (continued)

	Korea	China	Hong Kong	Malaysia	Indonesia	Singapore	Philippines	Thailand	Japan
Restrictions on purchase of foreign assets by domestic residents									
Stock	No	Prior approval from the CSRC ^(a) , SAFE ^(b)	No	For those amounting to R M 10,000 or more, prior approval is required	No	No	Yes, outward investments of domestic banks are required to be registered with the BSP ^(c)	The approval of the BOT is required	No
Bond	No	Banks authorized by PBC may purchase foreign bonds, using their own foreign exchange funds	No	The regulations governing shares or other securities of a participating nature apply	No	No	Amounts above the equivalent of \$6 millions require prior approval and registration with the BSP	The approval of the BOT is required	No
Money instrument	Purchases of short-term overseas securities	Banks authorized by PBC ^(d) may purchase	No	The regulations governing shares or other	Yes	No	Yes	The approval of the BOT is required	No

Collective investment securities	No	denominated foreign bonds, require BOK approval	Yes	securities of a participating nature apply	No	The regulations governing shares or other securities of a participating nature apply	Yes	The approval of the BOT is required	No
investment securities	No	Banks authorized by PBC may purchase foreign bonds, using their own foreign exchange funds	No	The regulations governing shares or other securities of a participating nature apply	No	The approval of the BOT is required	Yes		No

Notes:

- (a) CSRC—China Securities Regulatory Commission
- (b) SAFE—State Administration of Foreign Exchange
- (c) BSP—Bangko Sentral ng Pilipinas
- (d) PBC—People's Bank of China

Source: Annual Report on Exchange Arrangements and Exchange Restrictions, IMF, 2002

3.2 Lack of Risk Taking

From the late 1990s, capital market liberalization in East Asia was rigorously executed and capital flows in the region took various forms. Yet capital movement within the East Asian region has not increased significantly. This is because both public and private investors from Japan, China, Korea, Hong Kong, and Singapore, who are able to invest abroad, have been reluctant to take risks, as investment risk in East Asia on the whole has risen after the Asian currency crisis. As aforementioned, East Asia tends to export risky assets and import safe ones. This tendency comes from the fact that foreign asset accumulation has led to the increase of foreign exchange reserves that are public funds. This is creating a situation that structurally forces East Asian countries to manage their assets safely. While investors from advanced economies including the United States are purchasing risky assets of East Asia, East Asian investors buy safer assets, for they have a relatively weaker capability to evaluate and manage risks.

The crisis reinforced the risk-averse behavior of East Asian private investors, discouraging active capital movement within the East Asian region. If we compare the way Korean and Japanese institutional investors manage their assets with the way advanced institutional investors manage theirs, we can witness different patterns in risk-taking behaviors of the two groups (Table 17.10). In Japan, investment by domestic institutional investors in stocks with relatively high risks was 32 percent of the total investment in 1990. However, when the bubble economy burst, investment in stocks decreased sharply, maintaining a 19 percent level in the late 1990s. The dependency on bonds and bank loans, however, rose from 60 percent in the early 1990s to 70 percent later in the decade, demonstrating a turn toward safe asset management. What is interesting in Korea's case is that investment in bonds grew rapidly after the foreign currency crisis. Bond investment took up 37 percent of the total assets managed in 1997, but it rose to 54 percent in 1998. Equity investment faced a serious contraction after the foreign currency crisis, such that only 4 percent of the total assets managed by institutional investors went to stocks in 1998.

Germany, an advanced economy with a bank-oriented financial system, has a high tendency to rely on bonds and bank loans, but its dependency on equity investment is comparatively higher than that of Korea and Japan. In the cases of the United States and the United Kingdom, institutional investors show a different pattern in managing risky assets. The asset management based on stocks in the United Kingdom retained 68 percent of the total assets in the 1990s, and the US asset management based on equity exceeded 50 percent in the late 1990s.

Table 17.10 Portfolio composition of institutional investors (% of total financial assets)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Korea										
Bonds	31	29	34	37	36	35	36	37	54	49
Loans	36	35	32	31	32	31	30	30	20	17
Stocks	19	16	14	12	14	13	12	8	4	11
Others	15	20	20	19	17	21	23	25	22	23
Japan										
Bonds	31	36	37	38	41	44	47	48	49	49
Loans	26	29	29	28	29	26	26	26	23	21
Stocks	32	24	22	22	18	19	17	15	16	19
Others	10	11	12	13	12	11	10	11	12	11
UK										
Bonds	14	13	14	15	16	16	16	16	17	14
Loans	2	1	1	1	1	1	1	1	1	1
Stocks	66	70	68	70	69	68	67	68	65	68
Others	18	16	16	15	15	15	16	16	17	17
USA										
Bonds	45	44	45	45	44	40	38	35	34	32
Loans	16	14	13	11	11	10	9	9	8	8
Stocks	25	29	30	33	33	38	42	46	48	51
Others	14	13	12	11	11	11	11	10	10	10
Germany										
Bonds	39	41	42	43	42	43	43	42	43	40
Loans	47	45	43	40	40	40	40	34	30	28
Stocks	9	10	10	12	12	12	12	19	22	28
Others	5	5	4	5	6	5	5	5	5	5

Source: OECD, *Institutional Investors Statistical Yearbook 2001*

In summary, combining the higher concentration on surplus capital of foreign reserves and the risk-averse behavior of domestic investors resulted in lesser capital flows within East Asia.

3.3 Underdeveloped Institutional Investors Base

As we can see from advanced economies in the 1980s, super-sized institutional investors cut down financial transaction costs and promoted international diversification of their portfolios. Unlike individuals, institutional investors pool their capital for concentrated investment, reducing unit

transaction cost and allowing diversified international financial asset transactions.

East Asian institutional investors are for the most part small-sized and underdeveloped. Pension, mutual funds, and insurance companies' assets constitute a small portion of the overall financial market size in the Asian countries (see Table 17.11).

Although the number of institutional investors in emerging economies, such as Korea and Thailand, is increasing, most East Asian countries, particularly China, are still far from financial institutionalization. The reasons for such a weak institutional investor base are as follows. First, most East Asian countries have bank-dominated financial intermediation. The extensive branch network of banks is tapping the high domestic savings, hindering the development of institutional investors. Second, the corporate governance structure in East Asia is not well suited to nurture institutional investors. With the family-controlled conglomerates dominating corporate governance, expansion of capital through business profits or bank loans is preferred to that through capital market. Third, absence of a long-term capital market and lack of long-term investment products are interfering with the diversified management of institutional investors. Fourth, government legislations or decrees restricting the pension fund or investment criteria of insurance companies are hampering the development of an institutional investor base.

In sum, East Asia's underdeveloped institutional investor base, unlike the institutional investor base of advanced economies, is not capable of expanding cross-border portfolio transactions. Most institutional investors in Asia are concentrating on domestic financial assets.⁵ Poor capital flows in the region are partially due to the underdevelopment of domestic bond markets in East Asian countries.

Table 17.11 *Financial assets in selected Asian countries*

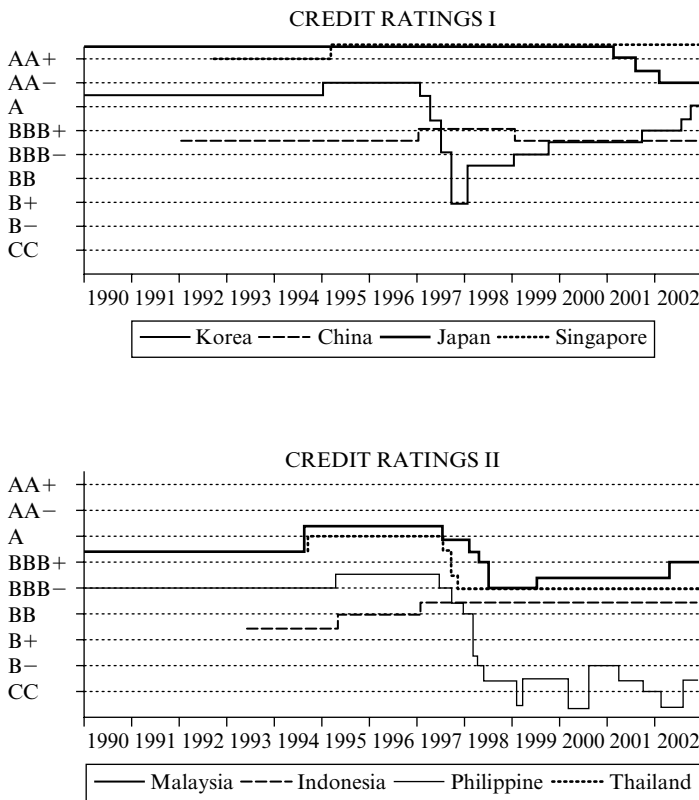
	Pension fund assets		Life insurance		Mutual fund			Bank assets	Stock markets	Bond markets
	Assets (\$ mil.)	% of GDP	Premium (\$ mil.)	% of GDP	No. of funds	Assets (\$ mil.)	% of GDP			
China	–	–	8246	0.9	10	2416	0.3	164.4	58.6	14.0
Indonesia	4031	2.9	588	0.6	81	633	0.6	82.0	19.6	32.0
Korea	43432	10.7	35703	10.3	11861	211780	61.1	113.8	36.5	75.2
Malaysia	46859	59.5	1347	1.9	89	10184	14.4	152.3	148.5	67.3
Philippines	7194	9.4	466	0.7	16	138	0.2	79.8	67.3	32.2
Thailand	8270	6.7	1342	1.2	291	8020	7.7	133.9	23.8	28.6

Source: OECD, *Financial Market Trends*, 2001

3.4 Low Credit Rating

The low credit rating of bonds issued by East Asian governments or corporations is also a reason for stagnant capital movement in the region. As Figure 17.2 shows, the credit ratings of many East Asian countries have been below investment grades. In order to qualify as the investment portfolio for institutional investors, East Asian bond issues need a higher credit rating.

The low credit rating of major East Asian countries makes it difficult for international investors to make investment without constraints. As we have seen earlier, with surplus capital in East Asia turning into public funds and private investors' risk-averse behavior, the credit rating of major East Asian countries since the Asian currency crisis is non-investment grade. All this works to restrict the capital movement in the East Asian region.



Source: Bloomberg

Figure 17.2 Trends of credit rating in selected Asian countries

In particular, Japan's overseas capital investment is mostly centered on bonds, so that the low credit rating of major East Asian countries narrows Japan's choices in portfolio investment.

One of the reasons for the low credit rating is the high political risk of certain East Asian countries such as Indonesia. This makes corporate bonds of companies located in those countries risky assets. Political risk means the risk of returns on investment brought on by sovereign act. For example, there is no limit on the repatriation of investment proceeds by foreign investors, but change of government, war, shortage of foreign exchange, and embargo are possibilities that can pose limits in the future.

4. THE RATIONALE FOR DEVELOPING REGIONAL BOND MARKETS IN EAST ASIA

4.1 Major Shortcomings of the Current Capital Flows in East Asia

We saw in the earlier subsection that since the Asian currency crisis East Asia has been exporting risky assets to and importing safe assets from advanced economies, and as a result capital flows within the region have been sluggish. There are several problems arising from this particular pattern of capital flows.

4.1.1 Loss of high return investment opportunities

First of all, the fact that East Asia is investing in safe assets of advanced economies and advanced economies are investing in risky assets of East Asian countries means the loss of opportunities for East Asia as a whole to make higher returns on investment. The expected rate of returns from investment in safe assets of advanced economies is lower than the rate of returns from risky assets. The difference in the rate of returns reflects risk premium, but there arises the question of why such premium cannot be collected by East Asian investors. Moreover, considering that the characteristics of capital flows in East Asia are the result of expansion of foreign exchange reserves and restrictions on the management of foreign exchange reserves, there is room for East Asia to collect such risk premium by taking more risk.

4.1.2 Impediment in capital market development

The investment of East Asian capital directly in to government bonds of advanced economies without going through East Asian financial markets or financial institutions means, in a way, loss of opportunities for East Asian financial markets to develop. If East Asia's savings could be invested

in East Asian countries through a regional financial market, they could increase its size which in turn could create a virtuous cycle of increasing liquidity and further boosting participation of investors and issuers in the East Asian financial market. East Asia's savings invested in safe assets of advanced economies and companies raising the necessary funds from advanced financial markets, only feeds advanced financial markets.

4.1.3 Loss of opportunities to develop regional financial institutions

The reinvestment of East Asian funds, which are, at the moment, invested in advanced financial markets, in East Asia by advanced financial institutions also means the loss of opportunities for other East Asian financial institutions to develop. If the investment in East Asian assets is made through East Asian financial institutions, the regional financial market can develop in size and efficiency. East Asian regional financial institutions can also utilize the abundant funds to make additional profits and build experience in investing in risky assets to develop techniques of risk assessment and management.

4.1.4 Increase in system risk of the region

The current patterns of capital flows may well still expose East Asian countries to a currency crisis, regardless of enlarged foreign exchange reserves. Investment in East Asian assets is basically investment in risky assets; capital from advanced economies invested in East Asia can show sensitive reactions to even a slight increase of risk. In that case, a weak shock can change the direction of capital flows from massive inflows to massive outflows, and the sudden reversal of capital flows can set off a currency crisis. To avert such a possibility, more foreign exchange reserves should be secured as the import of risky capital increases. However, increase in foreign reserves will induce more safe asset investment by East Asia, and in turn it will induce more risky asset investment by advanced countries' investors into the region. As a consequence, it will increase the vulnerability of the capital market investment in the region. If regional savings in East Asia can be invested in those assets through raising the credit rating of East Asian assets, the exposure of East Asian countries to currency crises can be reduced and the necessity to maintain large foreign exchange reserves can also tail off.

4.1.5 Increase in system risk on a global scale

The patterns of capital flows in East Asia increase not only system risk in East Asia, but also globally. East Asian countries need to have current account surpluses in order to increase their foreign exchange reserves, which means a continuous increase in the overseas liabilities of the United States.

If the current account deficit or overseas liabilities of the United States were to expand on a continuous basis, skepticism could surface on how long the US current account deficit or overseas liabilities can go on. The US dollar would be greatly devalued and East Asian countries that have a considerable amount of their foreign exchange reserves in dollar-denominated assets could suffer tremendous losses.

From this, we may conclude that the current status of the direction and structure of capital movement in East Asia may create a highly vulnerable and unstable financial environment in East Asia, raising the likelihood of a future crisis impeding the development of capital market in the region.

4.2 The Rationale for Developing the Asian Bond Market

Since the Asian crisis, the development of financial markets has become one of the most important policy goals in the region. This reflects recognition that the weakness in the financial structure in East Asia was the root cause of the crisis. In particular, the bank-dominated financial structure had contributed to the higher economic growth prior to the crisis since it could be more efficient in reducing monitoring cost in the financial environment characterized by asymmetric information in under-developed capital markets. However, the bank-dominated financial system resulted in the corporate sector's over-reliance on unhedged short-term borrowing, and produced double mismatches (maturity and currency mismatches), which are prone to a sudden capital reversal.

To solve the double mismatch problem and prevent future crises, the most crucial issue in East Asia is to develop long-term institutional investors and markets for bonds denominated in domestic currencies. This would increase the borrowing capacity of corporations producing for the domestic market without introducing the financial vulnerability that comes with currency and maturity mismatches, and there would be greater diversification of corporate financing and less concentration of financial risks. At the same time, East Asia would undoubtedly benefit from more capital circulation in the region and further development of the regional bond market. The capital circulation within the region would significantly improve if local borrowers could issue local currency bonds rather than US dollar or euro bonds to secure longer-duration investment. On the other hand, regional institutional investors could benefit from being able to purchase longer duration bonds in their domestic currencies to eliminate the asset and liability currency mismatches. Furthermore, investors from advanced economies could invest in relatively safe and longer duration assets, which would mitigate the risk of sudden capital reversal in capital

flows and reduce the volatility of asset prices in the region. In addition, liquid and deep bond markets would check and screen financial risks more efficiently, based on market information.

The problem is how to develop the Asian bond market. In order to do this, each East Asian country needs to build a bond market infrastructure. Reliable clearing and settlement schemes need to be set up and competent market makers or inter-dealer brokers are required. Credit rating agencies and bond price evaluation agencies should be introduced and their capability enhanced. Accounting standards and disclosure systems to raise the transparency of companies need to be reinforced. Comprehensive efforts to build the necessary infrastructure are thus called for to develop the East Asian bond market, but it is likely to take a long time before visible results are obtained. Therefore, to foster the market expeditiously, ways to increase direct participation of issuers and investors in the East Asian bond market should be sought along with efforts to build the infrastructure.

To achieve this, the East Asian bond market should play the role of a regional hub for East Asian savings to be invested directly in East Asia. Instead of the pattern of capital flows in which East Asian savings are invested in advanced markets such as the United States and those funds in advanced markets are reinvested in East Asian issuers, the East Asian bond market as the regional hub can reduce the net flow between the bond market of advanced economies and increase the capital flow within East Asia. A virtuous cycle can be created when the quantitative growth of the bond market makes the East Asian bond market a more efficient and deep bond market, attracting good quality issuers and investors to the region.

Considering the current conditions of capital market structure and capital movement in East Asia, one of the ways to increase participation of regional investors in the regional bond market is to form conditions allowing East Asian central banks to convert foreign exchange reserves into foreign exchange assets to be invested in Asian bonds. However, we saw earlier that foreign exchange reserves by nature are required to be invested in safe assets with high liquidity and credit, so it is difficult, even with strengthened credit, to invest them in East Asian government or corporate bonds. Yet East Asia's foreign exchange reserves amount to \$1.2 trillion and are still increasing. Unless instability in the international financial market grows, it is not necessary to make rigid investment with the over-abundant foreign exchange reserves. Therefore, central banks need to create conditions allowing some of their foreign exchange reserves to turn into foreign exchange assets to invest in East Asian government or corporate bonds.

Such a condition can be provided by the two main components of the Chiang Mai Initiative (CMI), bilateral swap arrangements and the ASEAN Swap Arrangement. These swap arrangements implemented under the

platform of ASEAN + 3, are intended to help central banks manage their holdings of foreign exchange reserves against speculative attacks. There are doubts, however, as to whether the swap arrangements could serve as a credible and effective system of defense against currency crises because the amount of liquidity available through the swap arrangements is limited in the absence of a proper monitoring and surveillance process (Park 2002; Wang 2002).

Another way to increase participation of regional investors is to create an Asian Bond Fund and use the pooled capital to invest in the East Asian government or corporate bonds. The merits of a bond fund are that risk diversification is possible by diversified investment in bonds of many countries and that investment by professional managers can reap more lucrative profits. The East Asian bond fund has to be large enough in size to keep a workforce that can assess sovereign and corporate credit risks. To attract investment in the bond fund at the initial stage, East Asian countries may draw up an agreement that asks the central banks of member countries to acquire shares of the bond fund as a part of their holdings of foreign assets. Central banks or pension funds from countries outside East Asia can also be asked to make an investment. There will be restrictions on the nationality, credit rating, and size of issuance of the bonds that the can fund acquire.

Although the East Asian bond fund can enjoy benefits of risk diversification, operation by professional managers, and economies of scales, there remains a problem that is fundamentally insoluble: credit and liquidity. Foreign exchange reserves of the central bank need to be, for the sake of their purpose, invested in assets with high credit and liquidity, but East Asian government bonds, unless of Japan and Singapore, have insufficient credit and liquidity. The credit and liquidity of the bond fund would correspond to the credit and liquidity of the East Asian bonds that constitute the fund. In that case, how many central banks would invest in the bond fund as such based on voluntary investment principles is questionable.

The discussion so far leads to the conclusion that in order for East Asian bond issues to be suitable for investment by central banks or regional private investors as well as investors from advanced economies, their credit ratings and liquidity in East Asian bonds have to be enhanced. Securitization is one of the ways to obtain such a goal.

4.3 The Role of Securitization Developing the Asian Bond Market

Securitization is a transaction in which securities are issued through repackaging of a series of assets that generate cash flows in a way that separates these assets from the credit profile of the company that originally

owned them. Securitization can take on a broad variety of attributes depending on the structure, the underlying assets, the way underlying assets are managed, the types of securities issued, and so on.

In a typical securitization structure, an asset holder (originator) sells assets to a stand-alone entity that has been set up with the sole purpose of facilitating the securitization transaction. These assets are then repackaged to a variety of tranches, typically with different seniority and term structure that suit the needs of investors.

Securitization is helpful in many ways to the development of the East Asian bond market and the increase of capital flows in the region. By improving the credit rating and liquidity of asset-backed securities, securitization can also boost demand for assets in the East Asian financial market. Besides, securitization can in itself increase the supply of assets to the East Asian financial market and expand capital flows in the region. The following subsection delves into how securitization can work out the credit risk and liquidity problems.

4.3.1 Reducing credit quality gap

Securitization can provide a solution for the lower credit problem for an Asian bond market. There are in general two ways of enhancing the credit ratings of bonds. The traditional way is to receive a credit guarantee from credit guarantee agencies or to receive corporate guarantees from other companies. However, it would cost bonds with a very low credit rating dearly to enhance their credit rating to an investment grade through credit guarantee alone, as the risk exposure is large for the credit guarantee agencies. Therefore, ways should be sought to enhance credit at a lower cost.

Securitization can be a means of raising credit ratings. Securitization allows the creditworthiness of the asset-backed securities (ABS) independent of the creditworthiness of the company that originally owned the underlying assets. The credit assessment of asset-backed securities is made solely on the basis of the cash flows created by underlying assets. In addition, bonds with a higher credit rating than underlying assets can be issued by using the senior/subordinate tranches. Generally, senior bonds can receive credit ratings higher than the collateralized assets, thus the corporate bond market is able to absorb them. In addition, guarantees, credit swaps and reserve funds can be used to enhance the creditworthiness of the asset-backed securities, making them desirable for an even greater range of investors.

4.3.2 Narrowing the maturity gap through asset-backed commercial paper

If credit rating for Asian bonds is increased by a securitization, the liquidity for Asian bonds would improve. It is simply because the securitization will

provide bonds with higher quality. However, this will not automatically increase the secondary market activities. In other words, the demand will not increase automatically as the supply increases. Securitization can provide a way to resolve the problem of liquidity gap; that is to issue asset-backed commercial papers (ABCP) with short maturities.

Government bonds issued by East Asian countries vary in the timing of interest payments and maturity. One way to raise the liquidity of bonds is to shorten their maturity. For example, bonds with one-month or three-month maturity would have higher liquidity than bonds with three- or five-year maturity. The ABCP scheme is used when cash flow from securitization is made before maturity, as in the case of the securitization of credit card receivables. If bonds with a single maturity are issued for all the cash flows, a cash flow mismatch will occur. The following method can be used for solving the mismatch. First, six-month bonds are issued; interest and principal of the short maturity bonds nearing maturity can be redeemed in part with the cash flow occurring six months later. To redeem the remainder of the interest and principal, commercial papers with a three-month maturity are issued. Three months later, some of the interest and principal of the commercial papers can be redeemed with the cash flow occurring from the credit card receivables, and the rest of the interest and principal of the commercial papers can be taken care of by newly issuing three-month commercial papers. In this way, the issue amount of commercial papers gradually decreases.

The ABCP has an advantage of shortening the bond maturity and raising liquidity, but it has the following shortcomings. First, additional cost is involved for the refunding of commercial paper. Second, there is a risk when the deterioration of financial market conditions hampers the issuance of commercial papers equal to the amount needed for refunding: this is called rollover risk. Third, when the interest rate applying to refunding changes according to the demand and supply status of the financial market, the ABCP is exposed to interest-rate risk. If bonds with a three-year maturity at fixed rate are issued, the interest rate can be decided, but commercial paper in that case is exposed to interest-rate risk upon issuance. The interest-rate risk can be reduced by collateralizing floating-rate notes rather than fixed-rate notes or by using interest rate swaps. Ultimately the risk of asset-backed commercial papers becomes the cost risk upon revolving issues; therefore, management of cost based on cost at risk (CaR) framework is necessary when issuing asset-backed commercial papers.

4.3.3 Reducing political risk

Securitization can be also useful in raising funds for emerging market firms located in countries with very high levels of political risk. It is because by

using securitization of hard currency-denominated receivables to be generated in the future, firms can carve out securities with levels of political risk acceptable to foreign capital market investors. Hill (1998, p. 55) argues that 'because the transactions are structured to minimize investors' exposure to the countries' governments, future flows transactions tend to be cost-effective primarily for high-quality firms in countries of somewhat lesser quality—good firms with bad zip codes.'

5. SECURITIZATION AND CREDIT ENHANCEMENT IN EAST ASIA

To launch a successful securitization scheme, the joint effort of East Asian countries is essential for stimulating cross-border transactions among them.⁶ To minimize the risks from cross-border securities transactions, regional settlement and clearing systems are needed for delivery versus payment to be possible. Cross-border and multi-currency netting and settlement schemes can facilitate foreign exchange settlement in East Asia. The role of credit guarantee agencies is also critical in bridging the credit quality gap between potential issuers and investors. Establishment of a regional financial guarantee facility with sufficient capability for guarantee and high credit rating is also necessary. There are some international financial institutions such as the ADB and IBRD/IFC providing credit guarantees, but they have limited capability for credit guarantee and operational restrictions. Credit guarantee facilities with a high credit rating that is sufficient to improve the credit of issuers to the level demanded by international investors can do much to encourage international investors into the East Asian bond market. This section explores some of important issues on a securitization scheme in East Asia.

5.1 Asset-Backed Securities Market in East Asia

Although short in history and small in absolute size, the asset-backed securities market of East Asian countries has been growing at a fast pace; as a result, it now takes a significant part of the East Asian financial market. As illustrated in Table 17.12, securitized issuance of East Asian countries except for Japan amounted to only \$506 million in 1996, but it is estimated to have grown by almost 24 times to \$12.4 billion in 2000.

The proportion of asset-backed securities in East Asian bond markets has greatly increased. Whereas securitized issuance was only 5 percent of the total in the region in 1995 and 1996, it went on to take 21.6 percent and 26.9 percent in 1999 and 2000, respectively.

Table 17.12 Asian corporate and securitized bond issuance, 1995–2000
(US\$ million)

	1995	1996	1997	1998	1999	2000
Hong Kong						
Securitized bonds	235	134	2 056	711	1 615	450
Non- securitized bonds	2 280	3 096	6 977	2 444	7 617	5 492
Indonesia						
Securitized bonds	21	589	489	400	n.a.	n.a.
Non- securitized bonds	1 674	5 007	8 271	254	80	999
Korea						
Securitized bonds	n.a.	n.a.	1 150	600	940	10 114
Non- securitized bonds	2 815	3 349	6 668	1 656	2 689	8 746
Malaysia						
Securitized bonds	n.a.	32	n.a.	400	592	53
Non- securitized bonds	2 783	3 121	9 337	2 722	5 600	7 363
Singapore						
Securitized bonds	n.a.	225	n.a.	550	2 543	1 711
Non- securitized bonds	1 844	2 490	2 593	2 093	2 078	7 989
Thailand						
Securitized bonds	250	n.a.	333	100	108	100
Non- securitized bonds	538	952	1 268	1 645	3 004	3 161
Total corporate issuance	12 440	18 995	39 142	13 575	26 868	46 178
<i>Total securitized bonds</i>	508	980	4 028	2 761	5 798	12 428
	(4.1%)	(5.2%)	(10.3%)	(20.3%)	(21.6%)	(26.9%)
<i>Total non-securitized bonds</i>	11 934	18 015	35 114	10 614	21 068	33 750
	(95.8%)	(84.8%)	(89.7%)	(79.7%)	(78.4%)	(73.1%)
Japan						
Securitized bonds	417	1 083	2 331	14 083	20 781	21 184
Non- securitized bonds	50 233	81 700	56 646	118 656	80 104	82 999

Source: World Bank 2002

Korea's ABS market showed the fastest growth during this period. The ABS market was virtually non-existent in Korea until 1997; now it is the second biggest ABS market in the region, behind the Japanese market. The Korean ABS market was able to grow so quickly due to the financial restructuring after the 1997 financial crisis.

To liquidate the non-performing loans held by the financial sector, securitization was selected. The Asset Securitization Act of 1998 laid the institutional foundation for securitization. The Korea Asset Management Corporation played a key role in liquidating the non-performing loans through securitization.

From 1999, investment trust companies had to liquidate non-performing loans from the collapse of Daewoo in their hands and the redemption of corporate bonds was difficult due to the deepened flight-to-quality. To alleviate the dire situation, CBO (collateralized bond obligation) and CLO (collateralized loan obligation) were issued rapidly in large volumes.

As the liquidation of the non-performing loans and the flight-to-quality problem were somewhat resolved, securitization of credit card receivables became a growth factor for the Korean ABS market from 2001. For the purpose of tax collection, the Korean government adopted policy measures encouraging the use of credit card, such as tax benefits for credit card use, and the growth of credit card issuance and sales soared.

Excluding Korea, Hong Kong, and Singapore, the ABS markets of Malaysia, Thailand, and other East Asian countries are not so big. Many institutional restrictions are impeding the growth of ABS markets in East Asia. Generally, institutional factors affecting the ABS market are legal frameworks, accounting systems, tax, underdeveloped credit rating agencies, currency swaps, and credit guarantee facilities.

To develop the ABS market, a legal framework facilitating true sale transactions for securitization is necessary. From that perspective, the common law practice of Hong Kong, Singapore, and Malaysia that acknowledges trusts already provides an institutional foundation required for securitization. Hong Kong and Singapore, which have the most advanced financial markets in East Asia, have the institutional framework and conditions needed for the development of the ABS market. The growth of the ABS market in these two economies depends on the demand for securitization. On the other hand, Malaysia has problems related to securitization that are not resolved yet, such as the capital gains tax levied on real estates owned by special purpose vehicles and the bankruptcy law that does not guarantee exemption of special purpose vehicles from the bankruptcy of the original owner of assets. The existing problems are hampering the development of the ABS market in Malaysia, despite the high potential demand for securitization.

Korea and Thailand, whose legal systems are based on civil law, either have underdeveloped trusts or deny trusts, so they need a unique securitization law suited for their situation. Korea adopted the Asset Securitization Act to resolve problems rising from non-performing loans. This Act provides comprehensive legal and regulatory foundations, encompassing legal issues related to securitization, tax, accounting, and management. It is considered to be a crucial factor behind the fast development of the Korean ABS market from the late 1990s. In contrast, Thailand also enacted an ABS law in 1997, but it fell short of clearly responding to uncertainties in issues like assessment of collateralized assets, legal status of special purpose vehicles, tax, and foreclosure, thus hindering the development of the market.

5.2 Credit Guarantee Facility

As pointed out earlier, securitization issues senior bonds with credit ratings acceptable to investors by using the senior/subordinate tranches. However, the success of securitization depends on how subordinate bonds are disposed of. It is because the size or price of subordinate bonds has the most important effect on the size and cost of funds created through securitization. Generally subordinate bonds are high-risk, high return bonds, having a low credit rating and a high expected rate of returns; therefore, subordinate bonds can appeal to investors focusing on high yield bonds. Nevertheless, a high yield bond market is underdeveloped in most East Asian countries. For securitization to develop in East Asia, the issue of how to place subordinate bonds has to be taken care of.

As was shown in Figure 17.2, East Asian countries have on average credit ratings of BBB; as a substantial portion of East Asia's overseas assets is held as foreign exchange reserves, senior bonds with ratings of AAA are necessary to boost the regional savings to be invested in the region. How to effectively narrow the credit quality gap is a key factor in increasing the utilization of the regional savings within the region.

The most typical way to bridge the credit quality gap in terms of securitization is to use tranches such as senior and subordinate bonds, but there are other ways to do that. Normally, there are internal and external methods to improve credit rating in securitization. Internal methods for credit reinforcement include tranches, over-collateralization, and spread accounts; external methods include guarantee by credit guarantee facilities, corporate guarantees, letters of credit, and cash collateral accounts.

Among these, credit guarantee is the most widely used method for credit enhancement. Credit guarantee enhances the credit rating of bond issues by guaranteeing timely payment of interests and principals. Bond issues with a credit guarantee are subject to the credit rating of the guarantee agency, as the guaranteed rating is dependent upon the claims-paying abilities of the credit guarantee agency. Credit guarantee agencies may provide coverage for the entire issue or the specific classes. Credit enhancement through credit guarantee can improve the credit rating of senior bonds or increase the proportion of senior bonds that can be placed in the market.

Credit guarantee services can be provided by credit guarantee agencies or international monoline or multi-lines insurance companies. However, the existing credit guarantee providers have limited capacity to properly guarantee credit of East Asian bonds that are known to be limited in operation or with low credit ratings. Therefore, the establishment of a regional

credit guarantee facility is critical to resolving the credit gap issue of East Asian bonds, and further to developing the East Asian bonds market. An East Asian regional guarantee facility would induce many potential issuers in East Asia to bring funds to the regional market, and encourage diverse investors to participate in the regional bond market. When designing the new regional guarantee facility, the lesson of the sole credit guarantee agency in Asia, Asian Securitization & Infrastructure Assurance (pte) Ltd (or ASIA Ltd) is useful.

ASIA Ltd was established in 1995 as the first and only financial guarantee company in Asia with the special mandate of helping bond market development in the region. Due to this mandate, the credit insurance portfolio of ASIA Ltd was limited to Asia. The geographical concentration of this insurance portfolio finally put ASIA Ltd in trouble. When the Asian currency crisis broke out in 1997, the solvency of ASIA Ltd decreased markedly and its credit rating was downgraded to below A. Now it is in a runoff and can no longer provide new credit guarantee service.

The new regional guarantee facility should be highly capitalized in order to have a high credit rating; more importantly, it should not limit its target markets to emerging market economies in Asia, but cover countries outside Asia such as Australia and New Zealand, and developed economies such as Japan. The facility's business should be diversified into guarantee for structured financing like securitization, general credit guarantee, interest swap, currency swap, and default swap.

5.3 Specific Utilization of Securitization in East Asia

Bonds can be issued through securitization in bond markets of different countries that have the necessary institutional framework. However, to induce East Asian funds to be utilized within the region, a securitization model that can involve East Asian countries more actively should be sought. A good starting point is the issuance of primary CBO collateralizing government bonds issued by East Asian countries. Figure 17.3 illustrates the issuance structure of CBO collateralizing East Asian government bonds.

First, the originator underwrites all of the bonds issued by East Asian governments through private placement. The originator establishes a special purpose vehicle (SPV) and sells all of the underwritten bonds to the SPV. The SPV newly issues bonds collateralizing the underwritten government bonds, which then are divided into various tranches of different seniorities, as in Figure 17.3. Senior bonds can be placed in the market, but subordinate bonds that are not placed in the market can be repurchased by the originator or the underwriter of the securitization or the obligator who

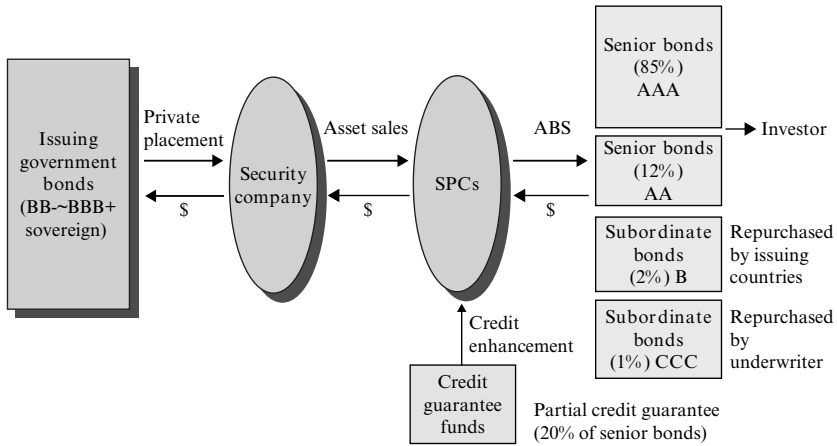


Figure 17.3 A regional government bond CBO

raised the funds through bond issuance. If necessary, credit guarantee can be utilized to enhance credit ratings. The advantage of CBO is that, as long as CBO has no correlation with the credit of collateralized bonds, it can issue bonds whose amount is higher than the sum of bonds issued by individual issuers, through the coinsurance effect.

An additional issue in the securitization collateralizing bonds issued by issuers from different countries is the currency in which to denominate the bonds. If currency swap markets of the countries are well developed, it does not matter greatly in which currency the collateralized bonds or CBO collateralizing the bonds are denominated. Unfortunately, markets for currency swap in East Asia are not that developed. Thus, it would be a good idea for different countries to issue dollar-denominated bonds and dollar-denominated CBO at the initial stage. Nevertheless, as currency swap markets develop, issuers from different countries can issue bonds denominated in their own currencies and issue CBO collateralizing those bonds in the currency desired by investors.

With sufficient credit enhancement, securitization collateralizing either bonds issued by small and medium-sized companies (SMEs) with low credit ratings or loans to the SMEs is also possible. The credit rating of the SMEs in East Asia is lower than the sovereign credit rating, so a more complex credit enhancement structure is necessary to issue CLOs collateralizing on loans to SMEs. In particular, if the risk is too high, reinsurance can be purchased to lower the risk bearing for the credit guarantee agency, as shown in figure 17.3.

New structures to reduce the cost of credit enhancement are emerging. One example is the active management CBO, in which a credit guarantor plays the role of originator. Here, the credit grantor becomes the collateral manager and manages the asset pool dynamically, such as excluding collateralized assets with high credit risk and adding new collateralized assets. By doing so, the credit grantor-turned-originator can raise the credit quality of the total asset pool and lower the risk it bears.

Another scheme is the synthetic ABS. In the traditional cash-flow securitization scheme, CBOs or CLOs collateralizing on all underlying assets are issued. In the synthetic ABS scheme, credit default swaps can be utilized to decrease the volume of CBOs or CLOs issued. By enhancing the credit rating of underlying assets of the same amount, the volume of CBO and CLO issuance can be reduced, saving costs for the entire securitization.

5.4 Policy Recommendations

In order to stimulate and promote securitization in East Asia, relevant infrastructures first need to be built by countries in the region. As noted in the previous section, many institutional restrictions have been impeding the growth of ABS market in East Asia. The main impediments affecting ABS markets in East Asia are: (1) legal and regulatory framework; (2) accounting; (3) taxation; (4) role of credit rating agencies; (5) foreign currency swap; (6) credit guarantee facility; and (7) centralized credit information (World Bank 2002). In particular, legal frameworks should be able to recognize the 'true sale' of assets so that the SPV should be remote from the bankruptcy of the original asset holder. Securitization should bring tax benefits or, in the worst case, be tax neutral.

East Asian countries have different institutional impediments, whose degrees are also different. Hong Kong, Japan, Korea and Singapore have a relatively well-developed infrastructure for securitization. As for Malaysia, comprehensive legislation for securitization is necessary. In addition, the bankruptcy law should be revised to ensure that SPVs are bankruptcy-remote. Thailand has enacted the Securitization Law but there are uncertainties regarding collateral valuation, taxation on SPVs, and their legal status. Both Malaysia and Thailand are in need of a credit guarantee facility (World Bank 2002).

In most of the East Asian countries, however, considerable amounts of time and effort are needed to build a comprehensive institutional infrastructure that suffices for stimulation and promotion of securitization. Therefore, pursuing securitization in a country that already has a well-developed infrastructure for it can be an option in the short run. To that end, a legal framework that ensures cross-border true sale and free

cross-border capital flows as well as a well-developed swap market is necessary. Institutional restrictions of each country are at work in this respect. For example, even in a country like Korea, which has a sophisticated institution for securitization by domestic entities, securitization by foreign special purpose companies is impossible due to the demand for business history. Under-development of foreign currency swap market is a stumbling block to the structuring of cross-border securitization transactions in Malaysia, Thailand, the Philippines, and to a lesser degree in Korea. With a developed swap market, those countries can issue bonds denominated in other currencies by collateralizing assets denominated in their own currency. Otherwise, only cross-border securitization of dollar-denominated assets would be possible.

6. CONCLUSION

The development of a capital market is the necessary condition for the maintenance of stable capital flows in East Asia. Importing safe assets and exporting risky assets, which is the current pattern of capital flows between East Asia and advanced economies, raises the possibility of a crisis in East Asia and in that perspective the development of the East Asian capital market carries great importance. In particular, the development of the bond market rather than the stock market is expected to play a critical role in resolving the problems of capital flows in East Asia. However, the development of bond markets in East Asian countries requires much time and effort to build comprehensive market infrastructure. In advanced economies, the emergence of various types of institutional investors and asset diversification led to the expansion of gross capital flows among advanced economies. In this vein, the increase of gross capital flows in East Asia is closely related to the risk attitude of regional investors and the risk profile of regional issuers.

At present, most surplus assets are concentrated on public funds; the important investment source of regional capital movement in the East Asian region is foreign exchange reserves management. However, the characteristics of this allow only investment in assets with high credit rating and liquidity, limiting the capital movement in the region. Securitization is a scheme that is capable of narrowing the credit gap and the maturity gap between investors and issuers in the region.

When looking at the progress of securitization of advanced economies, we find that securitization generally began with simple structured products, gradually moving to complex ones. That is to say, various innovative products have been created, from mortgage-backed securities to lease and bank loan securitization, securitization of high yield bonds, and securitization of

future cash flows. Securitization, therefore, can be a highly valuable alternative way of solving East Asia's structural cash flow problems. However, it should be noted that East Asia's financial environment is very different from that of advanced economies. Adoption of securitization does not mean immediate growth of a well-functioning securitization market in East Asia. In that perspective, the role of government is critical.

To promote securitization in East Asia, strategic agents are indispensable, but under the present circumstances it is difficult to expect strategic agents to emerge from the private sector. As in the case of Korea, the government can actively build the infrastructure for securitization and create supply and demand for specific products (such as securitization of non-performing loans), and the private sector can utilize that in expanding the supply and demand of other products such as mortgage-backed securities and collateralized loan obligations. In that respect, the East Asian governments should play the role of strategic agents to stimulate securitization in the region at this stage.

In the short run, securitization can be a measure to increase the capital flow within the East Asian region. Nonetheless, capital movement in the East Asian region is fundamentally a comprehensive issue that involves development of regional capital market infrastructure and an increase of institutional investors.

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NOTES

1. In this chapter, we refer to Asian bonds as bonds which are denominated, priced, issued and traded in local currency both in domestic and in cross-border bond markets in East Asia.
2. Crockett (2002) mentions that one of the biggest features of capital flows in East Asia since the Asian currency crisis is that East Asia is exporting safe capital while importing risky capital.
3. In the case of Australia, bond and cash investment is made through financial institutions whose credit rating is AA or above.
4. See details on foreign reserve management in selected countries in Scobie and Cagliesi (2000)
5. See details on portfolio management in *Institutional Investors Magazine*, October 2000.
6. As was pointed out by Eichengreen (2002), 'although monetary and exchange rate cooperation may be the wrong project for Asia, there is a case for cooperation to deepen and strengthen regional financial markets.'

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18. The role of regional development banks: Financing for development in East Asia

**Choong Yong Ahn, Woosik Moon
and Deok Ryong Yoon**

1. INTRODUCTION

In East Asia, the banking sector has played an important role acting as the dominant savings-investment conduit. In particular, development banks (hereafter DBs), as institutions focusing on long-term finance, have played a critical role in promoting the economic development of East Asia. Generally speaking, private finance has been inadequate in providing the necessary financial resources to expedite development in developing countries.

As a result, there is a need for public or state intervention in the form of special policy loans, such as those provided by development banks. Given that capital markets are poorly developed in most developing countries, development banks help to fill the gap by providing financial resources, especially long-term financing. Obviously, the role of development banks diminishes as an economy develops in the real and financial sectors.

For economic development, international and regional development banks have been of vital importance and played a much more prominent role than those of the national local development banks in developing countries. International development banks provide long-term international loans which, as a catalyst, would facilitate and promote foreign private investment. From the borrower's point of view, obtaining foreign capital from international DBs is thus a low cost-financing scheme used in addition to national DBs.

Over the coming years the role of international development banks is expected to decline more rapidly than that of national development banks. The first reason is the globalization of international financial markets. Given that there is less and less regulation on the movement of

capital, it is highly unlikely that a project with good economic rationale and prospects will fail to obtain financing on the international capital market. The second reason is that, if a country is too poor to obtain loans on the international capital market, it is unlikely that the country would provide an investment for international development banks. This situation leads more towards the receipt of concessional funds or grant rather than loans for the economic development of these very poor countries.

However, there emerges a new rationale for international DBs with regard to regional integration.

When some countries intends to pursue economic cooperation and integration, there is a strong need for regional DBs as institutions that provide solidarity funds, in the way that the European Union does through the Structural and Solidarity Funds and European Investment Bank. In this context, regional development banks are useful (indispensable) instruments for economic integration because they help to nourish regional identity and solidarity by supporting the economic growth of poorer countries in the region.

This chapter aims to re-examine the role of national, international and regional development banks in the economic development process of East Asian countries. A special attention will be paid to the existing functions of the Asian Development Bank (ADB). The ADB's lending is stretched too thinly over the various sub-regions with very different economic conditions in Asia (Pascha 2000). In particular, because of the wide income gap that exists between East Asian countries, compared to any other region in the world, an initiative for regional economic cooperation would be extremely difficult to undertake. In this regard, it may be necessary to create sub-regional development banks, especially if sub-regional economic cooperation is envisaged. If this is the case, a new sub-regional development bank should focus on reducing the wide income differentials among member countries of the sub-region, by financing economic development for its poorer member countries.

The organization of this chapter is as follows. Section 2 will evaluate the role of national and international DBs in the process of economic development in East Asia. Section 3 will examine the need for regional development banks, focusing especially on the current economic disparities that exist among 10 East Asian countries. Section 4 addresses whether a sub-regional development bank in Northeast Asia is necessary and finally section 5 presents the main conclusions.

2. THE ROLE OF NATIONAL AND INTERNATIONAL DEVELOPMENT BANKS IN EAST ASIAN ECONOMIC DEVELOPMENT

In East Asian countries, the banking sector has dominated the financial markets as the major savings-investment conduit. With the exception of Hong Kong and Singapore, equity and bond markets are small in this region, representing no more than one quarter of the banking sector. In other East Asian economies, capital markets are even smaller (UN-ESCAP 2001, p.173). Therefore, their systems were and still are bank-based, despite the recent development of capital markets (Takaki 2002). Moreover, in the early stage of economic development, governments have usually played a role in mobilizing and allocating the financial resources by exercising strong control over the banking sector. These government interventions usually relied on special banks for development financing.

The industrial development strategy of many East Asian governments has been reflected in the industrial or development financing structure, which has often been led by the government-owned development banks. Because commercial bank loans are more often short-term, the client companies cannot undertake fixed investments such as infrastructure building projects, which usually have a long capital gestation period. Thus, there is a significant mismatch between the maturity structure of assets and liabilities of firms and banks. Companies need long-term funding while commercial banks prefer to lend short term. In order to fill this gap, the governments of East Asian countries need to set up development finance institutions, particularly development banks.¹ Indeed, the establishment of these development banks could be seen as a means of coping with the inadequacies of capital markets, especially the corporate bond market. Moreover, these banks were established as institutions with specific mandates or policy objectives, which were either wholly-owned by the government or jointly-owned by the government and private sector. The JDB in Japan and KDB in Korea are most typical development banks. (See the Appendix for a full list of the most representative development institutions in East Asia.)

Figure 18.1(a) shows the importance of these state-controlled development banks measured in terms of their assets relative to those of the whole banking sector. State-controlled development banks are dominant in China and Indonesia, where they explain 90 percent and 50 percent of the banking activity respectively,² while in other East Asian countries, state-controlled development banks account for less than one quarter of the entire banking sector.

As developing countries continue to grow in both the real and financial sectors, however, the role of national development banks is likely to

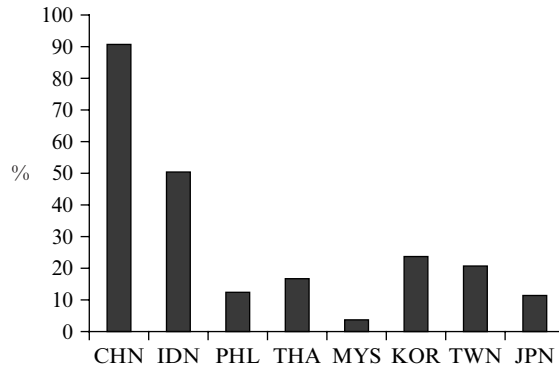
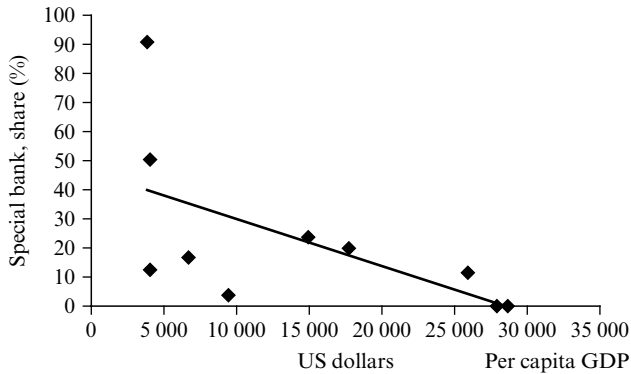


Figure 18.1a Share of state-controlled special banks relative to the whole banking sector



Note: a. 2000 value

Source: Financial Statement or Annual Report available at the website of each bank, Central Bank Statistics available at the website of each central bank, China Banking Annual, Bank of Korea, Economic Statistics Yearly. See Appendix for more detail.

Figure 18.1b Share of state-controlled special banks and per capita GDP^(a)

diminish. Indeed, Table 18.1b shows that for the ten most advanced East Asian countries, the role of the state-controlled development banks is negatively related with their economic development stages. In the advanced country, the roles of the domestic development banks created or controlled by the government are more and more related to the domestic capital markets and increased access to international financial markets. However,

Table 18.1 Domestic bonds and equity outstanding in East Asia, 2000

	<i>Market value of domestic bonds</i>		<i>Capitalization of stock markets</i>	
	(billion \$)	(% of GDP)	(billion \$)	(% of GDP)
Japan	5083.3	106.7	3193.9	67.0
Korea	335.7	72.7	148.3	32.1
China	–	–	330.7*	30.6
Taiwan	48.4	15.6	247.6	80.0
Hong Kong	89.7	55.0	623.3	383.3
Singapore	218.7	236.9	155.1	168.0
Malaysia	1.56	1.7	113.1	126.1
Philippines	0.0	0.0	25.2	33.7
Thailand	0.15	0.1	29.2	23.9
Indonesia	0.05	0.0	26.8	17.6

Note: * The figure is for 1999.

Source: International Federation of Stock Exchanges, available at www.world-exchange.org

in the case of East Asian developing countries, their capital markets are still inadequately developed to meet the financial requirements for large development projects. For example, as seen in Table 18.1, the bond market in ASEAN countries and China is either absent or very shallow. Compared to the bond market, stock markets in East Asia are slightly more active. With the exception of Malaysia as well as Hong Kong and Singapore, however, stock markets in East Asia remain insufficient in channeling savings into investment.

Also, it is clear that international capital markets cannot be a stable source of investment funds. Indeed, as Table 18.2 shows, East Asian countries have seldom been successful in attracting foreign capital from international capital markets because of their high sovereign risk and low credit ratings. The informational asymmetry problem that exists for the domestic capital market also exists for the international capital market.

Under this situation, international development banks can play an important role as conduits of foreign capital funds in the same way that local or domestic development banks filled the investment and saving gap in the domestic market. Unlike domestic development banks, international development banks have the purpose of facilitating and promoting foreign investment, i.e., the loans made, participated in or guaranteed by them are international long-term loans denominated in key foreign currencies. As local development banks enjoy some advantages vis-à-vis commercial

Table 18.2 Bonds and equity issued on international capital markets by East Asian countries, 2000

	<i>Bonds</i>		<i>Equities</i>	
	(billion \$)	(% of GDP)	(billion \$)	(% of GDP)
Japan	291.5	6.1	11.2	0.2
Korea	49.4	10.7	1.0	0.2
China	18.0	1.7	21.3	2.0
Taiwan	7.0	2.3	4.2	1.4
Hong Kong	30.9	19.0	10.8	6.6
Singapore	11.5	12.5	3.6	3.9
Malaysia	14.3	15.9	0.1	0.1
Philippines	15.6	20.9	0.1	0.1
Thailand	13.8	11.3	0.9	0.7
Indonesia	11.0	7.2	0.0	0.0

Source: Bank for International Settlement, *Quarterly Review*

banks in terms of borrowing costs and loan interest, international development banks, with their high credibility and capacity to spread risks, enjoy low costs to raise funds, which enables them to provide cheap foreign capital to help debtor countries' economic and social development. For creditor countries, international development banks can reduce the risk connected with foreign loans by spreading the possible future losses proportionately according to the members' subscription.

As economic development proceeds and capital is becoming global, however, this advantage of international or regional DBs is likely to be eroded. International or regional DBs face the same destiny as domestic DBs. Two reasons could be offered to explain why this occurs. Firstly, it is clearly related to the development of private capital markets and the globalization of financial markets. Given that there is less and less regulation on the movement of capital, it is very rare for a project with good economic rationale and prospects to fail in being financed in the international capital markets. It means that local DBs and commercial banks can replace the international or regional DBs in attracting foreign capital. Second, if a country is too poor to obtain a loan on the international financial market, it will also be difficult for that country to obtain funds from a development bank.

What is of more importance in the economic development of a developing country are concessional funds or grants, rather than loans. At any rate, due to rapid economic development and globalization, domestic DBs in most East Asian countries are increasingly assuming the role previously

taken by regional or international DBs as suppliers of foreign capital. It suggests that the future prospects for international or regional DBs are quite gloomy (see especially Hurst and Pereé (1998) and Lindbaek et al. (1998) in the EIB 40th anniversary papers).

Thus there seems only a limited place for international or regional development banks in the age of globalization. Cooperation would be a necessary instrument in dealing with regional issues. It enables the various nations involved to reap benefits from positive external economies due to international cooperation and to mitigate the adverse effects of negative externalities, such as cross-border pollution and the spread of infectious diseases (Vaubel 1986). The international and regional DBs play a vital role helping to mitigate these negative externalities and promote the positive ones.

3. REGIONALISM AND THE NEW ROLES OF REGIONAL DEVELOPMENT BANKS

Another rationale behind regional DBs is related to the issue of regional solidarity. When a program for regional integration has been launched, or there is the intention to do so, there is a reason for strengthening the solidarity among the prospective member countries and ensuring that they remain in the regional cooperative arrangement.

Regarding the future of regional economic cooperation in East Asia, a pessimistic view has prevailed so far.³ The main problem referred to has been the absence of solidarity among the countries in the region. Economic partnerships presuppose economic solidarity because it reduces the possibility of economic and political conflicts. All these factors suggest that it is imperative for East Asia to nurture regional solidarity as well as poverty reduction and thereby strengthen its regional identity. The first step seems to be to encourage voluntary efforts to reduce the regional economic and social disparities, especially the differences in the per capita income in the region. Regional integration can expand the existing large differences of per capita income, which can the integration process in danger.

At the theoretical and empirical level, there is no proof that economic integration necessarily leads to the convergence of economic performances across member nations. Some studies suggest that the opposite case is true (e.g. Krugman 1993; Hanson 1998). It is then natural that solidarity and economic convergence must be separate as final goals of economic integration. This is especially true in the case of Europe. It was initially considered that through the removal of barriers to trade on commodities and capital, the factors of production would be redistributed to the different regions and used in their most efficient way, stimulating a convergence of

incomes. Nevertheless, there was strong evidence that even the founders of the EU did not believe that the free market would bring about such a convergence.⁴ In addition, the implementation of common policies (agricultural, regional and social) by the EU immediately after its successful launch in 1958 indicate the need for common action in favor of solidarity, i.e., correcting the possible rising imbalance across regions. In fact, in the case of Europe, even the idea of a 'Community' let alone a 'Union' already implied some kind of solidarity (Pelkmans 1997).

Table 18.3 displays the extent of the economic disparities and convergence of incomes in the East Asian region relative to the European Union and United States. Two interesting facts emerge.

First, the economic disparities measured in terms of per capita GDP are far larger in the East Asian region than those in Europe or the United States. For instance, if we consider the per capita income of the poorest countries in East Asia as of 2000, the per capita GDP in China accounts for a mere 15 percent of the per capita GDP in Japan. Similarly, the per capita GDP in Indonesia and the Philippines represent 16 percent of the Japanese per capita GDP.⁵ In contrast, the per capita GDP of Portugal, the poorest country in Europe, represents 71 percent of the per capita GDP in Germany, and the personal incomes of the Southeastern states, the poorest area in the US, accounts for 73 percent of that of New England.

In contrast, there is far more inequality and diversity in East Asia if per capita GDP is compared at the inter-regional level of a given nation. Figure 18.2 shows distribution of per capita GRDP for three economic regions of the world in terms of current US dollars (in year 2000). It is clear that the per capita income in East Asia ranges from a mere US\$1000 (some Indonesian provinces and province of Guizhou in China) to more than US\$45 000 (Tokyo metropolitan area in Japan). Most of the per capita GRDP ranges from US\$1 000 to US\$31 000 in East Asia. In comparison, most of the per capita GRDP range from US\$11 000 to US\$32 000 in Europe and from US\$21 000 to US\$36 000 in the US.

Second, there is no proof that the income gap between Japan and other developing countries in East Asia has been diminishing. The convergence trend is clear for the two small city states – Hong Kong and Singapore, and also for Taiwan and Korea. However, for the poorest countries such as China, Indonesia and the Philippines, the convergence seems unclear. It seems that since the start of Japan's deep depression in the early 1990s, some countries have started to catch up with Japan's per capita income, but there is still a large and important income gap left between them and Japan. Compared to East Asia, the European experience shows clear evidence in favor of income convergence. The three countries, Portugal, Spain and Ireland, which fell most behind in the 1960s, have been steadily catching up

Table 18.3 *Relative per capita GDP as a ratio of Japan, Europe, and the US respectively in the three regions^(a)*

	1960 ^(b)	1970	1980	1990	2000
East Asia					
<i>Japan</i>	1.00	1.00	1.00	1.00	1.00
Korea	0.31	0.22	0.30	0.45	0.58
China	0.14	0.07	0.07	0.08	0.15
Hong Kong	0.62	0.55	0.80	0.95	1.08
Indonesia	0.15	0.07	0.13	0.13	0.16
Singapore	0.44	0.43	0.69	0.77	1.10
Philippines	0.44	0.21	0.21	0.13	0.16
Thailand	0.25	0.17	0.18	0.21	0.26
Malaysia	0.50	0.23	0.33	0.28	0.36
Taiwan	0.29	0.24	0.36	0.50	0.72
Europe					
<i>Germany</i>	1.00	1.00	1.00	1.00	1.00
Luxembourg	1.54	1.35	1.14	1.37	2.05
Denmark	1.30	1.28	1.14	1.11	1.19
Netherlands	1.11	1.08	1.04	1.01	1.08
Great Britain	1.16	0.97	0.91	0.94	1.01
Ireland	0.61	0.59	0.62	0.75	1.14
Italy	0.83	0.91	0.94	0.99	0.96
Belgium	0.94	0.99	1.03	1.03	1.05
Spain	0.57	0.73	0.72	0.74	0.80
France	0.95	1.00	1.03	1.03	0.99
Portugal	0.40	0.49	0.53	0.61	0.71
US					
<i>New England</i>	1.00	1.00	1.00	1.00	1.00
Mideast	1.04	1.04	1.03	0.99	0.94
Far West	1.08	1.05	1.10	0.93	0.88
Great Lakes	0.96	0.94	0.97	0.84	0.82
Plains	0.84	0.86	0.90	0.80	0.79
Southeast	0.67	0.75	0.81	0.76	0.73
Southwest	0.78	0.81	0.91	0.75	0.74
Rocky Mountain	0.86	0.85	0.92	0.76	0.78

Notes:

(a) Per capita GDP for East Asia and Europe, and per capita personal income for the US.

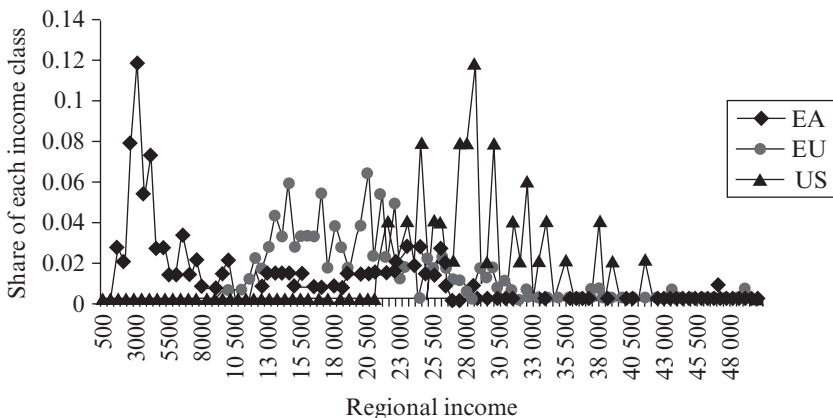
(b) 1961 values for the US.

(c) 1998 value for Taiwan.

Source: Penn World Table VI, US Bureau of Economic Analysis

with Germany. For instance, the per capita GDPs of Portugal and Ireland have increased from 40 percent and 61 percent of that of Germany to 71 percent and 114 percent respectively during the period 1960–2000. In the case of the US, the income gap had been narrowing down throughout the period 1960–2000. Table 18.4 summarizes these patterns more clearly.

If the existing wide income divergences in East Asia were to be sustained, they could undermine political solidarity. It is more likely that the poor countries would not participate in the regional integration if it did not contribute to their economic improvement. This necessitates a minimum equity standard across the region. Thus, to boost and maintain regional cohesion, attention must be given to regional income disparities. It means that there needs to be regional effort to reduce the income gap in the region through diverse means including aid. In fact, in the existing federations, federal transfers and taxes together help to narrow interregional income gaps. In the case of Europe, since the European Union has no power over the tax systems of the member countries, the goals of equity and solidarity are achieved through the EU budget. For instance, there are the Structural and Cohesion Funds, together with some regional development banks such as the European Investment Bank, contributing to narrow the convergence



Note: This figure is based on the per capita GRDP data of the 155 regions for 10 East Asian countries, 189 regions for 12 EU countries and 51 states for the US, with each GRDP of different countries, converted to common unit with the help of Penn World Table 6.

Source: Each National Statistical Agency for East Asian countries, Regions 2002, Eurostat, for the EU countries, and US Bureau of Economic Analysis for the US.

Figure 18.2 Regional income disparities of East Asia, EU and the US (2000)

gap between member countries and thereby tying the different member countries to the Union.

In the case of East Asia, there have been no such efforts so far. Thus, if East Asia is to be developed into a real regional community, starting with trade and monetary cooperation, the wide income gap problem needs to be addressed because the existing economic imbalances can no longer be solved through facilitating intra-regional trade or through monetary cooperation. However, given the current situation of regional arrangements in East Asia, which is characterized by the absence of any meaningful regional

Table 18.4a Dispersion of per capita GDP over time in East Asia

	JAP	KOR	CHN	HKG	IND	SGP	PHL	THAI	MYS	TWN
1960	1.00	0.31	0.14	0.62	0.15	0.44	0.44	0.25	0.50	0.29
1964	1.00	0.25	0.10	0.61	0.11	0.64	0.31	0.21	0.35	0.27
1968	1.00	0.22	0.07	0.56	0.08	0.42	0.25	0.19	0.26	0.24
1972	1.00	0.22	0.06	0.59	0.07	0.48	0.19	0.15	0.21	0.27
1976	1.00	0.29	0.06	0.70	0.09	0.59	0.20	0.17	0.28	0.32
1980	1.00	0.30	0.07	0.80	0.13	0.69	0.21	0.18	0.33	0.36
1984	1.00	0.36	0.09	0.91	0.14	0.79	0.17	0.19	0.34	0.43
1988	1.00	0.45	0.09	0.98	0.12	0.74	0.15	0.20	0.28	0.49
1992	1.00	0.50	0.10	1.03	0.14	0.81	0.12	0.24	0.30	0.54
1996	1.00	0.60	0.12	1.08	0.16	1.04	0.13	0.30	0.38	0.65
2000	1.00	0.58	0.15	1.08	0.16	1.10	0.16	0.26	0.36	n/a

Source: Penn World Table VI from the website <http://www.pwt.econ.upenn.edu>

Table 18.4b Dispersion of per capita GDP over time in Europe

	GER	BEL	DNK	ESP	FRA	IRE	ITA	LUX	NLD	GBR	PRT
1960	1.00	0.94	1.30	0.57	0.95	0.61	0.83	1.54	1.11	1.16	0.40
1964	1.00	0.98	1.35	0.67	0.99	0.61	0.87	1.36	1.08	1.10	0.42
1968	1.00	0.99	1.35	0.75	1.03	0.64	0.94	1.28	1.14	1.07	0.51
1972	1.00	1.00	1.29	0.77	1.02	0.62	0.89	1.28	1.09	0.96	0.55
1976	1.00	1.04	1.23	0.78	1.02	0.60	0.91	1.22	1.11	0.92	0.51
1980	1.00	1.03	1.14	0.72	1.03	0.62	0.94	1.14	1.04	0.91	0.53
1984	1.00	0.98	1.16	0.69	1.03	0.66	0.95	1.15	1.03	0.93	0.51
1988	1.00	1.01	1.15	0.72	1.03	0.68	0.99	1.25	0.98	0.96	0.57
1992	1.00	1.00	1.07	0.72	0.97	0.72	0.96	1.40	0.98	0.88	0.63
1996	1.00	1.00	1.14	0.74	0.96	0.88	0.97	1.66	1.01	0.95	0.64
2000	1.00	1.05	1.19	0.80	0.99	1.14	0.96	2.05	1.08	1.01	0.71

Source: Penn World Table VI from the website <http://www.pwt.econ.upenn.edu>

Table 18.4c Dispersion of per capita GDP over time in the US

	New England	Mideast	Great Lakes	Plains	Southeast	Southwest	Rocky Mountain	Far West
1961	1.00	1.04	0.96	0.84	0.67	0.78	0.86	1.08
1964	1.00	1.04	0.98	0.85	0.70	0.78	0.85	1.08
1968	1.00	1.04	0.97	0.85	0.73	0.79	0.81	1.06
1972	1.00	1.05	0.97	0.90	0.79	0.83	0.89	1.06
1976	1.00	1.06	1.01	0.93	0.82	0.89	0.93	1.11
1980	1.00	1.03	0.97	0.90	0.81	0.91	0.92	1.10
1984	1.00	1.00	0.89	0.86	0.79	0.85	0.85	1.01
1988	1.00	0.96	0.82	0.77	0.74	0.72	0.73	0.91
1992	1.00	1.00	0.85	0.82	0.77	0.76	0.78	0.92
1996	1.00	0.98	0.86	0.83	0.78	0.76	0.79	0.89
2000	1.00	0.94	0.82	0.79	0.73	0.74	0.78	0.88

Source: US Bureau of Economic Analysis

institutions, it will be difficult for East Asia to carry out the transfer of income through some kind of central budget at the community level for some time.

In this sense, a new and strengthened role for the regional development bank needs to emerge, whatever its precise form might be, be it an extension of the already existing Asian Development Bank or a new development institution. The focus of this new institution will be to reduce the disparities in economic and social development across regions and states, and to raise the standard of living in the less developed states.

4. THE POSSIBILITY FOR ESTABLISHING SUB-REGIONAL DEVELOPMENT BANKS IN EAST ASIA

4.1 Limitations of the Asian Development Bank

Though large in terms of population and geographical area covered, there is only one large multilateral development bank in Asia. As the only regional DB the Asian Development Bank (ADB) currently comprises 61 member countries. The idea of establishing the ADB began in Japan in the early 1960s. The US was initially reluctant to accept the proposal on the grounds that the new development bank would unnecessarily duplicate efforts and compete with the World Bank. However, the aspirations of the countries in Asia after the colonial period, towards greater regional

cooperation and the US geopolitical strategy during the Cold War, made the idea of ADB a reality (Culpeper 1994). ADB began its operation in December 1966 after three years of discussion initiated by the UN Economic Commission for Asia and Far East with 31 member countries including 14 non-regional members.

The ADB's primary role is to reduce poverty in Asia and the Pacific. It aims to improve the quality of people's lives by providing loans and technical assistance for a broad range of economic and social development activities. The ADB focuses on poverty reduction emphasizing the promotion of poorer regions, sustainable economic growth, social development, and good governance.⁶ Initially the functions of the ADB were more narrowly focused on economic issues, such as fostering economic growth and cooperation and it lent to the national governments and to public and private enterprises in its developing member countries.

During the past few decades, Asian countries have achieved great success in economic growth. East Asian Tiger economies have multiplied their GDP several times. Many countries have been able to move on from the poverty that they once had to endure to a much higher improved standard of living. ADB financed many projects in these countries to support the endeavor of economic development. Table 18.5 shows the economic performances of the ADB's member countries and the cumulative loans for them. Although it cannot be empirically proved how much ADB's financing contributed to the economic growth in this region, clearly it has been the main provider of foreign capital to the region.

It seems that the existing ADB has played a role in helping poorer regions and countries, thereby reducing poverty. But it seems that the specific goal of building solidarity by reducing the inter-regional income gap was never given proper recognition.

As discussed, East Asian countries remain too diverse in terms of economic and social development for envisaged regional economic integration. Considering this diversity, can the ADB successfully cope with the widening regional income disparities? If, in particular, some of Asian countries want to form some kind of regional arrangement and thereby to accelerate regional economic integration, is the ADB capable of helping the possible member countries reduce the income gap between them and finance the investment in more under-developed member countries?

The ADB is not likely to be capable of fulfilling this task because its functions are too widely defined and its membership too broad. First, the current primary objective of the ADB is not to directly reduce inter-regional income disparities but rather to reduce poverty in the less well-off sub-regions. The focus was put on the general philanthropic purpose such as helping poor people and regions.⁷ Table 18.5 suggests that the ADB

Table 18.5 *GDP per capita of member countries and cumulative loans by ADB*

	Year joined ADB	GDP per capita ^(a)			Cumulative net ^(b) effective loans ^(c) (2000)	Ratio loans for each country: total amount of loans of ADB
		Joined year(A)	2000(B)	B/A		
Indonesia	1966	248.2	993.7	4.0	14 461.85	19.86
Pakistan	1966	231.9	516.2	2.2	9 174.83	12.60
China	1986	278.9	824.0	3.0	8 672.45	11.91
India	1966	189.3	459.4	2.4	7 239.02	9.94
Philippines	1966	812.0	1 167.4	1.4	6 664.30	9.15
Korea, Rep.	1966	1 702.5	13 062.1	7.7	5 562.07	7.64
Bangladesh	1973	193.3	373.2	1.9	5 349.18	7.34
Thailand	1966	610.4	2 804.9	4.6	4 465.73	6.13
Sri Lanka	1966	299.8	860.5	2.9	2 185.58	3.00
Vietnam	1966	–	355.7	–	1 718.39	2.36
Malaysia	1966	1 221.2	4 796.6	3.9	1 458.69	2.00
Nepal	1966	149.7	241.3	1.6	1 397.84	1.92
Lao PDR	1966	–	450.2	–	792.72	1.09
Papua New Guinea	1971	902.3	927.1	1.0	774.17	1.06
Mongolia	1991	436.7	428.3	1.0	413.10	0.57
Myanmar	1973	–	–	–	411.83	0.57
Kazakhstan	1994	1 361.7	1 512.4	1.1	411.23	0.56
Kyrgyzstan, Kyrgyz Republic	1994	785.9	885.1	1.1	407.41	0.56
Uzbekistan	1995	446.4	485.1	1.1	208.87	0.29
Fiji	1970	1 747.0	2 394.9	1.4	153.47	0.21
Singapore	1966	3 505.0	28 229.6	8.1	144.44	0.20
Samoa	1966	–	1 440.5	–	100.89	0.14
Hong Kong, China	1969	5 457.7	24 218	4.4	94.50	0.13
Taipei, China	1966	1 169.7	13 056.8	11.2	91.14	0.13
Bhutan	1982	258.0	532.2	2.1	87.91	0.12
Maldives	1978	–	1 932.7	–	54.47	0.07
Solomon Islands	1973	397.9	642.8	1.6	54.30	0.07
Vanuatu	1981	1 339.3	1 176.6	0.9	49.06	0.07
Marshall Islands	1990	–	1 602.4	–	46.61	0.06
Tajikistan	1998	346.0	385.9	1.1	42.72	0.06
Tonga	1972	–	1 768.2	–	41.47	0.06
Micronesia, Fed. Sts	1990	1 748.3	1 735.3	1.0	33.44	0.05
Afghanistan	1966	–	–	–	27.90	0.04
Cook Islands	–	–	–	–	23.25	0.03
Kiribati	1974	1 916.5	561.0	0.3	13.25	0.02
Nauru	1991	–	–	–	5.00	0.01
Tuvalu	1993	–	–	–	4.02	0.01

Table 18.5 (continued)

	Year joined ADB	GDP per capita ^(a)			Cumulative net ^(b) effective loans ^(c) (2000)	Ratio loans for each country: total amount of loans of ADB
		Joined year(A)	2000(B)	B/A		
Cambodia	1966	–	296.5	–	–	
Australia	1966	11 664.0	23 837.7	2.0	–	
Azerbaijan	1999	–	505.8	–	–	
Japan	1966	13 705.3	44 830.4	3.3	–	
New Zealand	1966	12 897.3	17 547.8	1.4	–	
Turkmenistan	2000	–	1 376.6	–	–	

Notes:

– Data not available

(a) GDP per capita: Amounts in US\$

(b) Net refers to cancellation and refund of unused loan amounts

(c) Cumulative net effective loans: Amounts in \$ million (as of 31 December 2000)

Source: ADB Annual Report (2000), World Development Indicators (2002), Taiwan Statistical Data Book (2001)

provided relatively more in the way of loans to the countries with poverty problems. Even though the two objectives are related, it is clear that balancing out the living conditions across the region cannot be considered the final objective of the ADB. Also the ADB is now accumulating different tasks, including short-term crisis prevention, as well as proper long-term development financing, although these are quite distinct tasks. It seems that even the founding fathers of the Bretton Woods System were well aware of their distinctive roles because the IBRD was conceived as an essential sister institution of the IMF. In so far as the IMF was charged solely with providing short-term credit facilities in temporary illiquid situations, it is clear that this goal must be supplemented by the institution providing long-term development loans and assistance to address structural and development issues.

Second, there are too many differing member countries to form a unified regional identity. The ADB assistance is destined for 43 Asia-Pacific countries overlapping with different cultures (e.g. Indian, Chinese and Muslims). It means that there are limits to the ability to strengthen solidarity among members. It will be very difficult to bring all these countries together to form a regional cooperative arrangement.

Third, the ADB is restricted in its ability to support sub-regional cooperation when non-ADB member countries are involved since it is barred from

providing direct assistance to non-member countries. Furthermore, a commitment to ensuring a balanced distribution of financial resources among members also hinders the ADB from fully addressing the interests of any one particular sub-region.

More importantly, it does not have sufficient financial resources to support regional infrastructure projects. As Table 18.5 showed, ADB covers too many people and too many countries. With total assets of ADB, it can offer just \$13 for each person in the member countries, while the European Development Bank can provide almost \$300 per person, and for IDB \$110 per person. With regard to the subscribed capital, ADB is placed last on the list of regional development banks. This implies it needs supplementary institutions.

This suggests that there is a need to further divide the functions assumed by the current ADB and, if possible, to set up sub-regional or other institutions that focus on more specific goals. There should be no problem of institutional duplication between new institutions and the ADB here just as there is no overlap with the World Bank vis-à-vis the IMF.

In the case of Europe, there was also no duplication of roles between institutions. Similar financial institutions can coexist if they have well differentiated goals. For instance, in addition to the Structural and Cohesion Funds managed through the EU budget, there are several institutions with different goals, as is clear from Table 18.6. For instance, the European Investment Bank (EIB) was established under the European Community Law to further European integration by reducing the development gap across different regions. It nourishes economic and social cohesion within the European Union, channeling its lending towards those areas lagging behind in their development. Also, there is a sub-regional Nordic investment bank with the role of supporting economic cooperation between the Nordic countries, and the CEB with an exclusively social goal.⁸

Thus, as is the case in Europe, specific regions in Asia would benefit greatly from the establishment of sub-regional development institutions working in addition to the ADB. Functionally specific banks are much more efficient where countries within a region share the same specific objectives.

4.2 Sub-regional Development Bank as a Way for Better Financial Circulation in Asia?

A geographically more concentrated regional DB can supplement the existing ADB, because it can concentrate on specific regions as the experiences in Europe revealed. The most viable discussion on a sub-regional bank in

Table 18.6 *Some basic statistics on international development banks*

	AFDB	ADB	EIB	CEB	EBRD	NIB	IDB	IBRD	IFC
Creation	1964	1966	1958	1956	1991	1975	1959	1945	1956
Major operation area (total number of members)	African countries (77)	43 countries in Asia-Pacific region (61)	EU 15 (15)	35 European countries (35)	26 Eastern Europe and CIS countries (60)	5 Nordic countries	26 countries in Latin America and the Caribbean (46)	Worldwide (184)	Worldwide (175)
Major features	Poverty reduction as a primary goal and private sector lending is strictly limited	General goal such as poverty reduction: Private sector lending is very limited	Set up under the Treaty of Rome to further European integration by reducing development gaps.	As a bank with an exclusively social vocation, the prior new objective is to strengthen the social solidarity.	Supports the development of market economies: Private sector lending is promoted (60% of turnover)	Support investment furthering industrial cooperation within the region: a catalyst for Nordic economic cooperation	Similar to ADB but social equity looks more stressed (equipped with Inter-American Investment Corporation like World Bank)	Poverty reduction as a general goal and prohibited from lending directly to private sector	The goal is to promote economic growth through private sectors and therefore lends only to the private sector

Table 18.6 (continued)

	AFDB	ADB	EIB	CEB	EBRD	NIB	IDB	IBRD	IFC
Creation	1964	1966	1958	1956	1991	1975	1959	1945	1956
Size (billion US\$) ^(a)									
Total assets									
Capital	8.8	44.9	209.3	13.9	20.9	15.0	58.5	222.8	26.1
• Subscribed	21.4 ^(b)	43.6 ^(c)	100.0 ^(d)	3.0	19.7	4.0	100.9 ^(e)	189.5	2.3
• Paid-in	2.0	3.0	6.0	0.3	5.1	0.4	4.3	11.4	2.3
Population (million of persons)	811.3	3431.6					532.7		
Ratio Total (US\$) assets per person	10.8	13.1			299.5		109.8		
Subscribed capital per person	26.4	12.7			116.5		189.4		

Notes:

(a) For 4 European Development Banks (EIB, CEB, EBRD, NIB) billion euros.

(b) Except for African Development Fund and Nigeria Trust Fund.

(c) Except for separate special funds with a total capital 20.9 billion US dollars.

(d) Except for the European Investment Fund with a capital of 2 billion US dollars.

(e) Except for the Fund for Special Operations, which totals 10 billion US dollars.

Asia originates from the call for the establishment of a Northeast Asian Development Bank (NEADB). The Northeast Asian Economic Forum suggested establishing a sub-regional bank for Northeast Asia – Northeast China, Mongolia, the Korean Peninsula, the Russian Far East, and Japan – in 1991.⁹ Since then, many papers and researchers have elaborated the idea and publicized different versions.¹⁰

The rationale for establishing NEADB is that some Northeast Asian countries or regions were so poor, having no means at all for acquiring the needed domestic and international capital for investment, despite the fact that the region has a large population suffering poverty even with a huge reservoir of natural resources. Indeed, Northeast Asian countries are culturally and historically akin to each other. Nevertheless, differences in political systems and economic conditions during the Cold War period and even the post-Cold War period have prevented them from cooperating with each other. The wide income disparity among these countries is again an important issue to be addressed. The income differences become even larger if some Northeast Asian countries such as North Korea and Mongolia are included. For instance, as seen in Table 18.7, the per capita income of North Korea, the poorest country in Northeast Asia, is only one third of China's, one thirteenth of South Korea's and one nineteenth of Japan's.¹¹ Thus, in order to pursue economic cooperation in Northeast Asia it is necessary to establish a development bank specifically to meet the needs of Northeast Asia. The problem, however, is that the many discussions about the Northeast Asian development bank have focused too much on the short-term objective of investment in infrastructure.¹² Given that one of the major development impediments in Northeast Asia is a poor state of infrastructure, it is understandable that the first step to reduce the development gap be started by dealing with it. But it is important not to forget that the final goal of such financial cooperation should be to strengthen the economic and social ties among the countries of the region by nourishing solidarity.

Table 18.7 Per capita income (GNI as of 2001) (unit: current international dollar)

North Korea	Mongolia	China	Russia	South Korea	Japan
1 437*	1 800	4 260	8 660	18 110	27 430

Note: * The per capita GNI of North Korea was estimated to be 0.08 of South Korea's by the Bank of Korea.

Source: World Bank, Bank of Korea

Another rationale for NEADB is the fact that, under current conditions, the traditional international financial institutions cannot provide capital which would be adequate enough to meet the region's investment and development needs. In particular, ADB, World Bank and other international sources are not likely to provide the appropriate capital for the economic development in this region. The international financial institutions seek to maintain a reasonable balance in their distribution of loans to various countries competing for funds because of concerns of inequitable distribution, which may lead to the tension among the Board of Directors of these institutions. In this vein, it is difficult for ADB to take into account the disproportionately large size of the Chinese economy and its correspondingly large demand for capital. Northeast China has to compete with other regions like Beijing, Shanghai and so on for funds. The Russian Far East has to compete with Eastern Europe and Western Russia as well. Mongolia does not attract any interest from the ADB. This is why there must be a special effort for establishing NEADB.

Northeast Asian countries are famous for their huge foreign reserves and current account surplus.¹³ However, the capital accumulation in this region flows out instead of being invested in the region because of the under-developed capital market. A regionally specialized lending institution like NEADB is therefore a possible solution to overcome this problem.

5. CONCLUSION

Asian countries are indebted to development banks for their rapid economic growth. Domestic development banks in particular have played the vital role of both intermediary and coordinator in connection with lending activity. In East Asia, development banks have dictated where financial resources should go, thus maximizing the efficiency of the scarce resources. International development banks also play almost the same role. The main difference is that domestic development banks' objective is to maximize economic growth, while international development banks target not only economic but also social development. Even though the roles of development banks are disputed due to the globalized capital market, development banks are needed to help poorer countries and to foster regional cooperation. Without DBs, a financing source for multilateral projects supporting regional cooperation would not be easily available. There would not be enough financial sources to support projects aimed at reducing the income gap and eliminating absolute poverty in under-developed regions.

As the sole multilateral DB in Asia, ADB has contributed much to economic and social development in this region. However, Asia is too big both

geographically and in terms of population for it to cover all the financial needs. Priority in poverty alleviation and expanded objectives with given capital volume has left many regions disregarded, even if the countries have high potential of economic growth on the basis of abundant natural resources and labor.

Northeast Asia is a prime example showing the need for a supplementary financial institution to be introduced. Many people in Northeast Asia suffer still under severe poverty in spite of the fact that the region contains a huge stock of natural resources. Vast amounts of investment are needed to develop the natural resources and to improve the infrastructure. The existing large income gap needs to be reduced before regional integration can succeed.

ADB, however, cannot provide the necessary capital due to its loan policy which seeks balanced lending. Also, the differing economic systems that have resulted from each country's distinct reform policies have prevented many of them from being eligible to receive loans from the ADB. The shortage of financial resources in ADB almost excludes the regions in Northeast Asia from the potential beneficiaries, because each belongs to the periphery of its own country.

Northeast Asia actually includes the countries of Japan, Korea, and China, all of which hold current account surpluses and high foreign reserves. Establishing a sub-regional development bank like the Northeast Development Bank (NEADB) would be therefore a good instrument to develop Northeast Asia and to pursue the regional integration process. Such a sub-regional development bank could play the role of a regional financial institution in a region which has under-developed capital markets, because of its ability to attract a good credit rating and its multiplier effect. More active efforts should be made to design a better functioning sub-regional bank in this era of regionalism.

NOTES

1. However, the goal of such development banks is not to take the place of the private investor. Far from it, they have the purpose of supplementing private investment, by diverse means such as guarantee, participation and loan. For the recent theoretical review on this point, see Takaki (2002).
2. It should be noted that in China and Indonesia, state commercial banks are also included in the calculation. For instance, four state-owned commercial banks, which occupy the largest part of the Chinese banking system, are counted as state-owned special banks in addition to the three policy banks. This is because they do not operate much differently from policy banks. Similarly in Indonesia, state-owned commercial banks and state-owned development institutions can both take deposits and in this sense do not differ significantly. For international comparison, they are all classified in our analysis as state-owned special banks.

3. For instance, see Eichengreen (2002). However, the perspective for free trade areas in East Asia looks far brighter now than in any other period. Apart from ASEAN, Japan has already reached an agreement to create a FTA with Singapore. China has also agreed to form a FTA with ASEAN countries and a Korea-Japan FTA is currently under discussion.
4. The preamble of the Treaty of Rome, for instance, mentions 'harmonious development' as one of its economic objectives.
5. In fact, the economic disparities are far larger if countries such as the new members of ASEAN (Vietnam, Laos, Cambodia, etc.) and North Korea are included.
6. See the official website of ADB at <http://www.ADB.org>
7. The Charter establishing the Asian Development Bank (ADB) mandates the ADB to foster economic growth and cooperation in the Asia and Pacific region, and to accelerate the economic development of the developing member countries in the region, collectively and individually.
8. Also in Latin America, several regional and sub-regional development institutions operate side by side with each other. For example, the Inter-American Development Bank coexists with the Caribbean Development Bank and the Andean Development Corporation.
9. The chairman of Northeast Asian Economic Forum, Duck Woo Nam, former Prime Minister of South Korea, introduced the idea at the Northeast Economic Forum Meeting in Tianjin, China, 2–7 September 1991.
10. Dr Stanley Katz, former executive vice-president of the ADB, has published several research results on NEADB following Burnham O. Campbell's pioneering work. The Tokyo Foundation has released the latest version on this issue in 2002.
11. If future cooperation is to take place, it will be centered possibly around the five original ASEAN countries and three Northeast Asian countries (Korea, Japan and China). But the possibility of the participation of other ASEAN countries as well as North Korea and Mongolia in regional cooperation cannot be completely excluded.
12. It seems that this is one of the main reasons why this idea failed to attract any serious attention from the countries in the region, despite its ten-year history.
13. The accumulated current account surplus of East Asia from 1997 to 2001 amounted to \$930 billion in total, see Oh et al. (2003, p. 29).

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APPENDIX: STATE DEVELOPMENT BANKS AND FINANCIAL INSTITUTIONS IN EAST ASIA

	Representative development bank	Assets as of 2001 (share as a percentage of all banking assets) %	Other state banks
Japan	Development Bank of Japan ^(a)	144 Billion \$ (1.4)	Government financial institutions including JBIC, Okinawa Development Corporation, National Life Finance Corporation, Housing Loan Corporation, AFC of Japan, Japan Finance Corporation for Municipal Enterprises
Korea	Korea Development Bank (KDB)	61.4 Billion \$ (7.1)	Export-Import Bank of Korea Industrial Bank of Korea
Taiwan	Chiao Tung Bank ^(b)	15.9 Billion \$ (2.5)	Agricultural Cooperatives Export-Import Bank of China, Land Bank of Taiwan, Bank of Taiwan
China	China Development Bank	110.1 Billion \$ (5.6)	Export and Import Bank, Agricultural Development Bank of China, four State Commercial Banks ^(c)
Malaysia	Malaysian Industrial Development Finance Berhad (MIDF)	0.6 Billion \$ (0.4)	Agricultural Bank of Malaysia, Bank Pembangunan dan Infrastruktur Malaysia Berhad, Bank Industri dan Teknologi Malaysia Berhad, Sabah Development Bank, Borneo Development Corporation (Sabah), Borneo Development Corporation (Sarawak)

Indonesia	State Development Bank (BAPINDO) ^(d)	–	Regional development banks, five state banks
Philippines	Development Bank of the Philippines	2.7 Billion \$ (4.7)	Land Bank of the Philippines, Al-Amanah Islamic Investment Bank of Philippines
Thailand	Industrial Finance Corporation of Thailand (IFCT)	4.8 Billion \$ (2.6)	Bank for Agriculture & Agricultural Cooperatives (BAAB) Export-Import Bank of Thailand, Government Housing Bank (GHB), Government Saving Bank (GSB)

Notes:

- (a) Re-established as a result of a merger between JDB and Hokkaido Development Corporation
 (b) The bank, formerly Bank of Communications, was privatized on September 1999.
 (c) Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank
 (d) BAPINDO was merged into a new state owned commercial bank on December 1998.

Source: Financial Statement or Annual Report available at the website of each bank, Central Bank Statistics available at the website of each central bank, China Banking Annual, Bank of Korea, Economic Statistics Yearly

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