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"Developing Bond Markets in Asia"

Study Group on the Asian Financial System
Center for Monetary Cooperation in Asia
Bank of Japan

1. Introduction

（Background）

The Center for Monetary Cooperation in Asia of the Bank of Japan organized a study group on the Asian Financial System, and held eleven meetings in total between May 2008 and June 2009. The members of the study group, as listed below, contributed their research and exchanged views on issues regarding the Asian financial system, in particular those related to developing bond markets in Asia. This report summarizes discussions at the meetings of the study group.[1]

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The bitter experience of the Asian crisis in 1997 provided strong impetus for initiatives to develop local currency bond markets in Asia, and this has become a central pillar of financial cooperation in the region. The Executives' Meeting of East Asia and Pacific Central Banks (EMEAP）launched the Asian Bond Fund（ABF）project, and the Asian Bond Market Initiative（ABMI）was introduced under the framework of ASEAN+3. More than ten years have passed since the Asian crisis and Asian economies are now threatened by contagion from the global financial crisis that originated in the U.S. and Europe. The study group found it beneficial and timely to make an assessment of the progress made so far in developing Asian bond markets.

In order to draw implications for future financial cooperation in the region, this report tries to make the assessment from two perspectives: How much have local currency denominated bond markets in Asia developed?; To what extent have the initially envisaged policy goals been achieved in terms of preventing another financial crisis and strengthening resiliency against shocks in times of crisis?

[1] The views and assessments contained in this report are not necessarily those of the Bank of Japan or the Center for Monetary Cooperation in Asia.

[2] The other members of the Secretariat are Kazunori KOIKE, Tai TERADA, Junko MIYAZAKI, Naoko YOSHIOKA and Michiko NAKAMURA.

The report does not hesitate to be provocative by raising issues and perspectives that have been overlooked or previously regarded as unimportant, including those needing further empirical study for verification.

As Asia consists of a variety of economies, it is important to note exactly which economies are being discussed. Among those economies severely affected by the Asian crisis, this report focuses on Korea, Thailand, Malaysia and Indonesia (hereinafter “the Asian four economies”), given the availability of data and the expertise of the study group members. Differences among these four economies in terms of the stage of economic development and the structure of their economic systems are still significant, especially between Korea and the rest. While acknowledging the difficulties of discussing the four economies together, the report tries to draw common implications to the extent possible.

（Structure of the report）

The study group began by revisiting the argument for promoting the development of local currency bond markets in Asia. In particular, members discussed a) the understanding of the causes of the crisis on which the argument was based, and b) the intended impact of the development of Asian bond markets (**Chapter 2 Revisiting the Argument for Developing Asian Bond Markets**). More specifically, the study group re-examined the prevailing argument that developing bond markets is effective in resolving the problems which caused the Asian crisis. These problems are a) over-reliance on capital flows for investment funding, b) the so-called double mismatch of currency and maturity, and c) a bank-centric financial system.

After the normative discussion summarized in Chapter 2, the study group assessed how local currency bond markets have actually developed since the Asian crisis, and how such market development has contributed to the intended policy goal of addressing the financial crisis (**Chapter 3 Developments in Asian Bond Markets**). The region’s recent experience in the global financial market provided much food for thought in this assessment. The intended policy goal of developing Asian bond markets has not been achieved satisfactorily in the Asian four economies because the overall development of corporate bond markets has been limited and there are no clear signs of a shift in corporate financing from bank lending to bond markets. On the other hand, recent events have indicated that resilience to volatile capital flows has been strengthened since the Asian crisis despite the region’s greater integration into the global financial market.

The study group also discussed the background to the limited progress in the development of corporate bond markets and in the shift from bank lending (**Chapter 4 Background to the Limited Development of Corporate Bond Markets**). In particular, the group focused on real economy aspects such as corporate investment demand and changes in industrial structure, to see if there was enough long-term financing need in the corporate sector. In the light of recent studies on corporate

financing in Asia, the study group members examined the possibility that the relatively large role of equity financing and internal funding, especially in the case of FDI-related companies, had something to do with the limited development of corporate bond markets and stagnant growth in bank lending.

From the above discussions, the study group drew a number of implications for financial cooperation in the region with regard to a) the importance of developing Asian bond markets beyond their role as a measure to address the financial crisis, and b) prospects for further development of corporate bond markets in the region (**Chapter 5 Implications for Regional Financial Cooperation**).

(Executive summary)

(1) In retrospect, the prevailing argument for developing local currency bond markets in Asia as a prescription for the Asian crisis is not necessarily solid. The argument has some logical weakness with regard to the envisaged impact of developing bond markets, and sometimes lacks sufficient empirical evidence on the causes of the crisis.

(2) Looking at the bond markets in Korea, Thailand, Malaysia and Indonesia since the Asian crisis, while public bond markets have expanded significantly, led by both government bond and central bank debt, the development of corporate bond markets has been limited. In the meantime, the share of local currency denominated bonds has risen.

(3) The limited development in corporate bond markets was a key factor hampering the achievement of the policy goal of developing bond markets as a prescription for the financial crisis. In particular, little progress has been made with regard to a) lessening over-reliance on capital flows, and b) a shift from a bank-centric finance system to a twin-engine system with corporate bond markets as an alternative financing channel.

(4) On the other hand, it appears that significant progress has been made since the Asian crisis in the management of the various risks associated with capital flows, including the double mismatch of currency and maturity. This progress was attributable to improved risk management capacity and better regulatory and supervisory frameworks, as well as better macroeconomic policy management, especially more flexible foreign exchange (FX) policy. Such improved risk management appears to have contributed to the limited impact of the recent global financial turmoil on the financial stability in the region.

(5) As for the reason for the limited development of corporate bond markets, real economy factors, especially limited long-term financing needs of large corporations with access to bond markets, might be more significant than financial impediments such as insufficient market infrastructure. This can be seen from the fact that bank lending to large

corporations has also been stagnant. In addition to stagnant growth in investment in the region and changing industrial structure, the relatively large role of equity financing and internal funding, especially in the case of FDI-related companies, might be significant in explaining the limited demand for corporate bonds and bank lending.

(6) The importance of developing local currency bond markets has been discussed with too much emphasis on its role as a prescription for the Asian crisis - an approach which has been critically examined in this report. Still, the importance of such markets remains in a broader sense as they contribute to more market-oriented interest rate formation, more efficient resource allocation, and the establishment of a transmission mechanism of monetary policy. In this regard, expansion of public bond markets is welcome, but the remaining challenge is to promote secondary markets by enhancing market liquidity and broadening the domestic investor base.

(7) Regional financial cooperation to promote the development of Asian bond markets has so far made progress in broadening the investor base globally and removing impediments in the market infrastructure. Should long-term financing needs in the corporate sector gradually materialize in the coming years, reflecting changes in economic and industrial structure, it is expected that regional financial cooperation will bear more fruit in the form of the development of corporate bond markets.

2. Revisiting the Argument for Developing Asian Bond Markets

When assessing the achievements of initiatives to develop Asian bond markets, it is important to revisit the policy goals intended at the time of the initiatives' introduction. The development of a bond market brings various benefits, both in financial and real economic terms. But the initiatives to develop local currency bond markets in Asia quickly gained attention after the Asian crisis as the centerpiece of regional cooperation, because they were introduced as a prescription for the financial crisis. Local currency bond markets were expected to contribute to avoiding the recurrence of crises, or to strengthening resilience to them if they did occur.

(1) Why develop bond markets in Asia?

There has been a variety of arguments about the significance of developing local currency bond markets as a prescription for financial crises. Interestingly, the range of benefits expected from developing bond markets seems to have grown over time. By revisiting the evolution of the various arguments, they can be categorized into the following three interrelated types.[3]

First, there is the argument that over-reliance on capital flows for investment funding can be corrected by developing local currency bond markets. This is based on the understanding that Asian economies became prone to crisis when there were shifts in capital flows, as they relied heavily on international capital flows to finance investments. In addition, there was the widely shared perception that a lack of appropriate investment assets in the region caused an ironic two-way capital flow: the abundant savings in Asia flowed out to financial markets in the U.S. and Europe, and came back to the region in the form of speculative funds. The argument implies that the development of local currency bond markets will enable savings in the region to be channeled directly to investment opportunities in the region. This idea has often been encapsulated in the phrase "better utilization of Asian savings for Asian investments."[4]

The second type of argument is that local currency bond markets can redress the double mismatch problem that was observed when overseas capital was used to fund domestic investment opportunities. As argued by Yoshitomi (1998) and Lane et al. (1999), short-term foreign currency funds from overseas, of which most were international bank loans, were used to fund long-term domestic investment projects. This double mismatch of currency and maturity is identified as one

[3] Recently, Ogawa (2007) compiled studies on the development of Asian bond markets in relation to the Asian currency crisis.

[4] ASEAN+3, "Chairman's Press Release on the Asian Bond Markets Initiative," August 7, 2003

of the causes of the Asian crisis.

The third type of argument claims that a local currency bond market will promote the transition of a financial system from a bank-centric system to a twin-engine system, in which both banks and capital markets play a significant role. It is argued that developed capital markets, especially the corporate bond market, will serve as a spare tire for financial intermediation should the banking system be impaired, and thereby improve resilience to crises. Some commentators also stress the importance of fostering transparency and accountability in corporate governance to prevent any future crisis. They blame the Asian crisis on the governance structure of the economy, often criticized as being crony capitalism in which conglomerate banks and often government officials were involved. Yoshitomi and Shirai (2006) conducted a study on methods to address the problem of asymmetric information regarding corporate financing by comparing information production between bank lending and the corporate bond market. They stressed the necessity of fostering a corporate bond market in East Asia, as they thought that information production and monitoring of corporations by banks in the region were not functioning sufficiently well for the following three reasons; 1) government intervention in financial resource allocation, 2) insufficient banking supervision and regulation, and 3) banks' capital structure being strongly influenced by family-run conglomerates.

In the rest of this chapter, the various arguments for the importance of developing Asian bond markets will be re-examined from two critical viewpoints; 1) did the lack of Asian bond markets cause the Asian crisis (understanding the causes of the crisis)?; and, 2) will development of local currency bond markets solve the problems that triggered the crisis (assessing policy impact)?

(2) Over-reliance on capital flows for investment funding

Is reliance on capital flows a problem?

Caution is needed when arguing that reliance on international capital flows for investment funding should be corrected to avoid another Asian crisis. Effective use of capital flows is important for efficient resource allocation and growth promotion. Limiting capital flows to ensure stability may sacrifice economic welfare. Furthermore, there is always the argument that the essential problem was not the reliance itself, but the inadequate risk management when utilizing capital flows which led, for example, to the double mismatch problem mentioned earlier.

Taking the above into consideration, the true goal of developing bond markets is to increase financial intermediation channels by creating new investment assets, so that the abundant domestic savings

can be invested more efficiently. In this case, the policy goal should be to create new investment opportunities for investors in the region, rather than to reduce reliance on international capital flows.

Caution is also needed when interpreting the phrase "better utilization of Asian savings for Asian investments." Even if capital flow originates from an investor in the Asian region, when the investor is a non-resident and the capital flow involves foreign exchange transactions, there is always the risk of exchange rate depreciation driven by capital flight. There is no obvious difference in behavior between foreign investors within Asia and those from outside the region. Possible arguments are: 1) diversification of investors, by having more investors in the region instead of relying too much on those from the U.S. and Europe, may stabilize capital flows; 2) intraregional investors may have the advantage of access to more accurate information on financial and economic developments in the region, and may be less likely to fall into the herding behavior of selling for groundless reasons; and 3) settlement risk may be smaller for intraregional capital flows with no or less time difference. However, we must wait for further empirical studies to verify the validity of these arguments.

The effectiveness of developing bond markets

In terms of intended policy impact, the development of a local currency bond market does not necessarily reduce reliance on capital flows for investment funding. Even if the corporate bond market were to develop, reliance on capital flows would remain unchanged as long as foreign investors are major investors in the market. If anything, a developed market would provide easier access to foreign investors, which may result in greater reliance on capital flows. An increase in local bond issuance may bring about more opportunities to match domestic savings with domestic investment opportunities. However, we must recognize that this effect will be netted out if lesser funds are channeled through domestic financial intermediation through the banking system. Hence, there are some doubts about whether developing bond markets will indeed reduce over-reliance on international capital flows.

(3) The double mismatch argument

Did a double mismatch situation exist?

Many commentators attribute the Asian crisis to inadequate risk management of international capital flows, more specifically the double mismatch problem, rather than to over-reliance on capital flows per se. However, there are few empirical studies that show in which sector, in what form, and to what extent the currency and duration mismatch existed. The study group reviewed a variety of papers and documents that call for the development of Asian bond markets, and found that most of

them used the expression “the so-called double mismatch” as a self-evident fact, without providing any empirical support. This lack of sufficient studies seems to stem from the lack of corporate microeconomic balance sheet data.

The facts show that during the Asian crisis, short-term foreign borrowing was the main source of funding, and that the crisis was brought about by difficulties in rolling over the debts. Looking in more detail, however, it is unclear whether the asset maturity had been long, and long enough to be considered as a mismatch. Some analyses show that corporations in Thailand, Indonesia, and Malaysia, did not finance that much of long term capital investment through bank borrowing.[5]

It is also known that, in Thailand, it was the non-bank private sector which borrowed short-term foreign funds, because the Thai central bank controlled banks’ net foreign currency position to be maintained at a certain proportion of their capital. Considering these facts and findings, there is a possibility that the double mismatch problem was less serious than widely believed, both in terms of currency and maturity, at least in the banking sector.

There is greater concern over the mismatch in the banking sector than in the corporate sector in terms of susceptibility to a financial crisis. The banking sector problem could impair not only financial system stability but also real economic activities through credit crunches and withdrawal of lending. As Western countries are experiencing today, any disruption in the banking sector that provides credit intermediary functions increases the likelihood of a crisis through the so-called negative feedback loop. This, however, does not mean that a mismatch in the non-financial sector is not a problem. During the Asian crisis, Thailand’s banking sector suffered severe damage because the country’s non-banking sector lost its repayment capacity due to the mismatch problem, and this stress spilled over to the banking sector in the form of a rise in credit cost. In light of this, it remains very important to contain double mismatch for crisis prevention.

Effectiveness of developing a bond market

Developing a local currency bond market may contribute to alleviating the double mismatch problem, but it cannot guarantee its solution. In theory, if corporations and banks directly finance funds from the local currency bond market, the mismatch problem can be solved. However, even in a well-developed environment for issuing corporate bonds and bank debentures, corporations and banks might still choose to borrow foreign funds or shorten the duration of bonds to minimize costs. It can be argued that domestic investment was financed by foreign borrowing before the Asian crisis, not because local currency funding was unavailable, but because foreign borrowing appeared less

[5] Mieno (2008, 2009)

costly under the quasi-fixed FX regime. Hence, the double mismatch problem is mainly attributable to the FX regime, which made private economic agents pay less attention to currency risk. This kind of problem cannot be solved by the development of bond markets.

In this context, while developing an environment that promotes corporate bond issuance might help reduce the double mismatch problem, a more fundamental solution would be to provide incentives to banks and corporations to adopt appropriate risk management measures in such an environment. More specifically, thorough regulation and supervision of banks is essential, as well as improvements to macroeconomic policy frameworks, so that economic entities will not be tempted to take inappropriate currency risks.

Furthermore, a shift in financing from short-term foreign borrowing to mid-term local currency bonds does not necessarily guarantee stability of funding. A deep and liquid bond market enables investors to take short-term profits at low cost. Therefore, in comparison to bank borrowing, a bond market is exposed to a greater risk of many investors herding and withdrawing at once. In this case, although banks and corporations may not face a sudden funding problem, there remains the risk of a crash in bond prices (a surge in interest rates), and the risk of difficulty in rolling over the bonds as they mature, owing to depletion in market liquidity.

(4) A bank-centric system

Did crony capitalism contribute to the crisis?

Further discussion is necessary on arguments that the bank-centric financial system in Asia was one of the causes of the Asian Crisis. First, we must review how dominant banks were in the financial system of these four economies before the crisis. This point will be discussed in detail in Chapter 4, in relation to the limited development of corporate bond markets. It is well known that corporate financing in East Asia owed much to 1) equity, including foreign direct investment, as well as 2) its own funds and internal capital markets, especially in the case of the export-oriented manufacturing businesses with foreign participation, which were the growth engine of the region. Considering these facts, the significance of banks in corporate financing should be re-examined, country by country and period by period.

Another point to be reviewed is the validity of the crony capitalism argument which owes much to the theoretical contribution of Claessens et al. (1998) and the World Bank (1998). Their argument is about the expropriation of minority shareholders (investors) by dominant shareholders (management). They argue that expropriation induces poor quality debt financing within business

groups, since it eliminates the creditor control and governance which are normally expected in debt finance. They also argue that corporate profitability is impaired as the dominant shareholders seek their own profits by abusing their power over the firms they control. They claim that, as a solution to these problems, active funding through capital markets such as equity markets is needed to restrain concentration of ownership and improve protection of investor and creditor rights.

There are empirical studies, however, that question the validity of arguments on crony capitalism.[6] With respect to legal and accounting systems, one study points out that many countries in East Asia are relatively advanced in protecting shareholders and creditors. This stands in sharp contrast to what is suggested by the crony capitalism argument, which portrays East Asian countries as traditionally lagging behind in establishing legal systems and assuring transparency of accounting systems. According to an international comparative study on the share of the top three shareholders, the average share for the nine East Asian countries was almost equal to the world average.[7] Among them, Hong Kong, Malaysia, Singapore, Thailand, Indonesia, and the Philippines had concentrated ownership structures close to the average for nations with the French civil law tradition, while Japan, Korea, and Taiwan had more dispersed ownership structures than the global average. This shows the difficulty of discussing Asia as a whole.

Furthermore, it is often pointed out that ownership and management are not separate in Asia, where family ownership is dominant, but this does not necessarily pose an obstacle to growth nor distort resource allocation. It may even help reduce agency costs by reducing the number of stakeholders. As a matter of fact, ownership and management are not separate in many successful corporations in Asia.

Although commonly characterized as crony capitalism, the situation differs from country to country, as the roles of governments, conglomerates, and banks are not the same across Asia, and such differences have not been sufficiently discussed. For example, in Korea, the two main agents of financial reform up to the mid-90s were the government, which not only regulated and supervised banks but also effectively held the power to allocate credit, and conglomerates, who enjoyed an oligopolistic position as recipients of directed credit.[8] In this case, the banks served as a tool of government financial control, rather than as a tool of crony capitalism. As a result, even after they were privatized and government control was gradually decreased, it has often been said that Korean

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[6] Critical arguments on crony capitalism introduced here are due largely to Fukuda (2006).

[7] La Porta, Lopez-De-Silanes, Shleifer, and Vishny (1998).

[8] Iijima (2007)

banks have a structural problem lacking a sense of autonomy.

Effectiveness of developing a bond market

There is not much room for objections to the argument that a developed bond market can provide an alternative debt financing channel to bank lending (the so-called spare tire), and will strengthen resilience against shocks at a time of crisis. In Korea, where the corporate bond market already had a certain presence before the Asian crisis, a large amount of corporate bonds was issued immediately after the crisis, supplementing the weakened bank lending function and partly absorbing the impact of the crisis.[9]

At the same time, as highlighted in the recent financial turmoil triggered by the subprime loan problem, the question remains for this twin-engine theory, as to whether there can be a situation where only one engine is left working; i.e., a banking system impaired but a capital market functioning without serious problems, or vice versa. For instance, Paul Tucker, the then executive director for Markets at the Bank of England, expressed his doubts about the twin-engine theory in a speech: “It rather overstates the independence of capital markets and banking, as recent developments graphically demonstrate.”[10]

In Asia, which has a long history of relatively large presence of banks, the development of corporate bond markets cannot be achieved without involving banks. In Thailand, development of the capital market has provided banks with profit-earning opportunities, as banks always top the list of dealers, underwriters, and registrars.[11] In this context, it may be difficult to establish a bond market that is independent from banks and serves as a sound debt financing channel when the banking system is impaired.

There are also a few points to note on the argument for developing bond markets to correct crony capitalism. First, even if bond issuance is increased, corporate governance will not be strengthened without enhanced disclosure by corporations during the process. In this context, whether the corporate bond offering is public or non-public is an important point in assessing its impact on corporate governance. Another important point is whether the corporate bonds are widely held by general investors or held in volume by large investors and banks.

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[9] Kim and Park (2002)

[10] Tucker (2007)

[11] Nakornthab (2007)

More importantly, as argued in Claessens et al. (1998), which provided a theoretical foundation for crony capitalism criticisms, the fundamental prescription to improve corporate governance is to reform the ownership structure such as through stock listing, rather than shifting corporations' dependence from banking borrowing to corporate bond issuance. However, such reforms are not making smooth progress. Teranishi, Fukuda, and Liu (2007) point out that the scale of public offerings by East Asian corporations is significantly smaller than that seen in advanced countries.[12]

In Thailand, discussions took place in 1998 to review the Public Limited Companies Act. By mid-1999, the reform was being pursued with great vigor, including directives setting out responsibilities of board members, strengthening oversight, standardizing financial statements, and overhauling the accounting system. However, the number of listed companies saw a declining trend as conglomerates tried to avoid the strengthened disclosure requirements. As a result, the securities market reform had to shift its main emphasis from disclosure to providing listing incentives such as subsidies and tax benefits. In 2001, the Public Limited Companies Act reform was aborted and the movement to reform conglomerates in Thailand has been watered down.

On the other hand, Korea is the most advanced of the four economies in terms of corporate listings. This comes from the historical background of the government urging conglomerates to issue securities as a measure to avoid concentration of controlling stake. After the Asian crisis, major corporations institutionalized their framework for external board members, and brought transparency into intra-group transactions within conglomerates by changing accounting and supervisory frameworks. These changes were made to promote market-friendly corporate finance and corporate governance. However, some analyses indicate that concentrated ownership of conglomerates persists even after the Asian crisis, and that the cross holding structure has remained largely unchanged.[13]

(5) Summary of discussion

By revisiting the arguments for developing Asian bond markets, the study group found that these arguments, hammered out shortly after the Asian crisis, were based on understandings of crisis-triggering factors that lacked empirical evidence and were not always logically sound about how the development of bond markets would solve the problems which caused the crisis. The following points are especially important for our empirical assessment of Asian bond markets in the following chapters.

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[12] Teranishi, Fukuda, and Liu (2007)

[13] Iijima (2007)

In coping with the problems that led to the Asian crisis, the emphasis should not be placed on reducing dependence on international capital flows. Efforts should be directed instead towards addressing 1) the limited investment opportunities or financial intermediary channels that resulted in dependence on international capital flows, and 2) ineffective risk management when utilizing international capital flows. As for the double mismatch problem, the study group noted that empirical research on maturity was not sufficient and it was not clear whether the maturity of assets was long enough to be regarded as problematic, at least in the banking sector.

A bank-centric financial system is apparently the consequence of the underdevelopment of capital markets. Still, in reviewing the adverse effects of bank-centric systems, the possibility should not be overlooked that the banks' role in providing a debt financing channel might have been overestimated. Additionally, there is room for further empirical studies about the crony capitalism argument, which identifies problematic corporate governance as the cause of the Asian Crisis.

The following three points summarize what one can (or cannot) expect from developing local bond markets as a prescription to the crisis. First, a local bond market provides domestic investment opportunities as well as financial intermediary channels, but does not necessarily reduce dependence on international capital flows. Second, developing a local bond market will establish an environment conducive to solving the double mismatch problem. However, it is more important to provide economic entities with incentives that promote appropriate risk management, such as by establishing suitable financial and exchange rate policies and more effective regulatory and supervisory frameworks. Third, the development of corporate bond markets has limited impact on the improvement of corporate governance. The most fundamental approach to improving corporate governance would be to reform the ownership structure through measures such as stock listing.

3. Developments in Asian Bond Markets

Based on the largely normative discussion in the previous chapter, this chapter will try to make a tentative assessment of how much bond markets have developed in the region and how such developments have contributed to addressing the problems that are said to have caused the Asian crisis. As we noted, the problems are a) over-reliance on capital flows for investment funding, b) double mismatch of currency and maturity, and c) a bank-centric financial system. The region's experience during the recent global financial turmoil emanating from the U.S. and Europe will provide us with useful information regarding resilience against volatile capital flows.

(1) Local currency bond markets after the Asian crisis

Public bond markets

The ratio of outstanding bonds to GDP has increased in Korea and Thailand, led by public bonds such as government bonds and central bank securities (Figure 1).[14] In Korea, the ratio increased from 88% in 2001, to 110% in 2007, of which public bonds made the greatest contribution (27%→49%), while the size of private bonds did not change (61%→62%).[15] In Thailand, the ratio increased from 11% in 1997, to 55% in 2007, where the contribution of public bonds (1%→39%) exceeded that of private bonds (9%→16%).

On the other hand, the size of the bond market in Malaysia has changed little since the crisis, and that of Indonesia has been on a declining trend following a temporary surge soon after the crisis. The Malaysian bond market was already large at 75% of GDP in 2000, and fluctuated around the 80% mark towards 2007. While public bonds increased (31%→46%), private bonds rather decreased (44%→39%).[16] The size of the Indonesian bond market jumped from 2% of GDP in 1997 to 37% in 2000, but gradually shrank to 16% in 2007. Public bonds are responsible for these changes in total market size, while the private bond market has remained very small at 1-2% of GDP.

The expansion of public bond markets in these economies was initially led mainly by a large issuance of government bonds against the backdrop of the deterioration in fiscal balances resulting from financial system restructuring and economic stimulus packages. In more recent years, however, central bank securities markets have been a driving force, with the exception of Malaysia. In Thailand, the size of the government bond market as a ratio to GDP has remained almost unchanged since 2002, while that of the central bank securities market increased sharply from 2.1% in 2002, to 16.8% in 2007. In Korea, the government bond market has been growing, but so has the central bank securities market, and the latter consistently exceeded the former in size until 2005. In Indonesia, although the size of the government bond market as a ratio to GDP declined gradually to

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[14] There are various sources for data on the outstanding amount of bond markets in Asia. They are not necessarily consistent with each other, and the definition of type of bonds is sometimes not clear. Unless otherwise specified, this report is based on data from AsianBondsOnline provided by the Asian Development Bank, complemented by data from other sources when necessary.

[15] For Korea, data before 2001 are currently not available on AsianBondsOnline. Based on different time series data that were previously available from AsianBondsOnline, the total size of the bond market increased sharply from 53% of GDP in 1997, to 93% in 2001. During this period, the increase in private bonds (42%→65%) outpaced that of public bonds (11%→27%).

[16] For Malaysia, data before 2000 are currently not available on AsianBondsOnline. Based on different time series data that were previously available from AsianBondsOnline, the total size of the bond market changed little between 1997 (78% of GDP) and 2000 (80%).

11.2% in 2007 after peaking at 31.1% in 2000, the total size of the bond market remained unchanged due to an expansion of the central bank securities market. Large amounts of central bank securities were issued during this period as central banks tried to sterilize foreign exchange intervention aimed at moderating currency appreciation due to strong capital inflows.

Private bond markets

The expansion of private bond markets,[17] such as corporate bond markets, has been limited in the Asian four economies. The size of the private debt market as a ratio to GDP gradually increased during 1997-2007 in Thailand (9.2%→16.3%), but remained very small at around 2-3% in Indonesia. Malaysian and Korean private bond markets were relatively large as a ratio to GDP before the Asian crisis, but remained stagnant after the crisis. The size of the private debt market in Malaysia was large at 44% in 2000, but it has been almost unchanged or has declined slightly since then. In Korea, private bonds had a dominant share in the bond market before the Asian crisis.[18] However, after increasing sharply to 61.2% of GDP to compensate for a drop in bank lending immediately after the Asian crisis, the size of the private bond market started to decline and fell below 50% of GDP in 2004-2005. The market has recovered in recent years, to 61.5% in 2007, due to an increase in issuance of bonds by financial institutions.

In Korea, the issuance of bonds by financial institutions such as banks has increased strikingly, while issuance by non-financial institutions has remained stagnant. Since 2001, the amount of outstanding bonds issued by non-financial institutions as a ratio to GDP has halved (50 % in 2001→24% in 2007), while that of financial institutions has nearly tripled (15% in 2001→39% in 2007). Banks financed lending through bond issuance amid fierce volume competition in lending to medium and small corporations and households, while growth in deposits remained stagnant.

On the other hand, there has been some increase in the share of bonds issued by financial institutions in the other three economies, though this increase has not been as sharp as in Korea. In Thailand, the share has been hovering around 20-30% since 2003.[19] In Malaysia, the share was high at

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[17] Hereinafter, unless otherwise specified, private bonds include bonds issued by state enterprises. In some countries, the size of outstanding bonds issued by state enterprises is significant.

[18] While the size of the government bond market remained small against the backdrop of a prudent fiscal policy, corporate bonds with bank guarantees enjoyed a significant share in the bond market. The yield of three-year corporate bonds played the role of benchmark interest rates.

[19] The description here is not consistent with the share of bonds issued by financial institutions shown in Figure 1, which is based on AsianBondsOnline (BIS base). As the share in Figure 1 is surprisingly small, below 5% in recent years, the report decided to use data from the Thai Bond Market Association Directory.

around 40-50% before the Asian crisis, but the outstanding volume has shrunk since then, while bond issuance by non-financial institutions has gradually increased. In Indonesia the total size of the corporate bond market is small, but the share of bonds issued by banks has been half to one third of the market.

As for currency denomination, the share of bonds denominated in foreign currencies has declined in all of the Asian four economies since the Asian crisis. In Korea, the share declined from 24% in 1997, to around 8-9% in the 2000s. In Thailand, the share declined from 53% in 1997, to 5% in 2007. In Malaysia, the share was 17% in 1997, and remained between 15-19% until falling to 12% in 2007. In Indonesia, the share fell sharply from 70% in 1997, and has remained less than 10% since 1999 until 2007 when it picked up slightly to 11%.

Although decomposing foreign currency denominated bonds into public and private is not possible, it is evident that the share of foreign currency denominated bonds has declined both in public and private bonds in economies with a large or relatively large share of private bonds, such as Korea (56% in 2007), Malaysia (46% in 2007) and Thailand (29% in 2007). On the other hand, in Indonesia where the share of private bonds is small at 10% in 2007, it is possible that the decline in the share of foreign currency denominated bonds is entirely due to public bonds.

In the following section, based on the above observations on the development of bond markets in the four Asian economies, the report tries to assess how such developments have or have not affected the three problems which might have caused the Asian crisis, namely, a) over-reliance on capital flows for investment funding, b) double mismatch of currency and maturity, and c) a bank-centric financial system.

(2) Has over-reliance on capital flows changed?

Have new investment opportunities emerged?

The argument that developing local currency bond markets will resolve the problem of over-reliance on capital flows cannot be assessed simply by looking at whether the reliance on capital flows has intensified or lessened. We should examine whether domestic savings have started to finance investment in the economy directly through bond markets as new investment opportunities, instead of flowing out overseas.

In this regard, it is difficult to argue that the development of bond markets in the region has achieved the intended goal of channeling abundant domestic savings into domestic investment opportunities,

given the limited expansion of private bond markets, especially corporate bond markets. The expansion of government bond markets can have the effect of mobilizing domestic savings to finance domestic investments, but this depends on the type of fiscal expenditures. For example, if bonds are issued to finance government action to restore stability of the financial system, it is difficult to regard this as a successful case of financing a domestic investment opportunity. Another example is the recent increase in central bank sterilization securities, which are intended to absorb liquidity associated with capital inflows so that the impact on the domestic financial system is neutralized. This is merely a response to rising capital inflows and does not imply any changes in how domestic savings are channeled into investment.

Based on the same criterion (i.e., how domestic savings are channeled into investment), how should we interpret the large increase in bonds issued by financial institutions in Korea? If banks are financing their lending by issuing bonds to domestic investors, the intended goal of developing bond markets appears to have been achieved. However, if the increase in the investment in financial institutions' bonds is offset by a decline in bank deposits, the overall impact on the reliance on capital flows is neutral. In fact, deposit growth in Korea has been stagnant in recent years, which might indicate such a possibility.

Further integration into global financial market

The Asian four economies became further integrated into the global financial market after the Asian crisis, as evidenced by a significant increase in gross capital inflows and outflows. Following the period of net capital outflows soon after the crisis, capital inflows to the Asian four economies started to expand from 2002-2004 (Figure 2). The notable feature of this massive capital inflow is that it took place while the current account surplus expanded, reflecting excess savings over investment (Figure 3). The capital inflow was recycled through the associated increase in private capital outflows as well as a significant build-up of foreign reserves.

While massive capital inflows took place, the banking sector's dependence on funding abroad did not intensify, except in Korea. That is why concern over corporate financing did not heighten in these economies when strong capital inflows stopped or reversed in the recent global financial turmoil (because there was no squeeze on banks' funding, and hence no major credit crunch). In the case of Korea, banks' reliance on wholesale borrowings was notably high at 40% of their balance sheets against the backdrop of fierce volume competition in lending and stagnant deposit growth. Korean banks' borrowings from abroad rose in volume and their terms were shortened to take advantage of changes in the shape of the US yield curve. This aroused market concern over the liquidity management of Korean banks when the shortage of dollar liquidity became serious in the

recent crisis.

All of the Asian four economies increased their reliance on capital flows in the form of portfolio investment. Looking at the balance of payments data, significant amounts of capital inflow were observed as a result of portfolio investment in equity and public bonds (Figure 2). In Indonesia, for example, despite impediments such as low market liquidity and withholding tax, the share of foreign investors among holders of government bonds and central bank securities increased against the background of high yields and hopes of an improvement in macroeconomic policy management. As a result, long-term interest rates in Indonesia have become more affected by external factors such as global credit market conditions. Although an increase in the share of foreign investors among holders of long-term bonds was not observed in other economies in Asia, it is said that foreign investors' exposure increased in an indirect way, including through derivatives transactions.[20] As mentioned earlier, the share of local currency denominated bonds has increased in Asia, and some foreign investors took FX risk anticipating gains from the appreciation of local currencies. This is a change in the investment style from that which prevailed before the Asian crisis in which foreign currency denominated loans were the main instrument.

Despite the reliance on capital flows in the form of portfolio investment, the negative impact of the recent global financial turmoil was limited because the capital inflows were not closely linked to the domestic financial intermediation process. However, an increase in the volatility of capital flows did give a significant shock to the Asian four economies through price falls in stock and bond markets as well as the associated currency depreciation. In Korea, the impact was particularly large as portfolio investment had continued to flow in for quite a lengthy period. Nevertheless, corporate financing did not face serious difficulty because the stability of the banking system was maintained, and the development of the corporate bond market was limited, with foreign investors facing limited exposure.

(3) Double mismatch resolved?

In addition to the over-reliance on capital flows, inappropriate risk management in the use of capital flows was a more crucial cause of vulnerability in the form of the double-mismatch that led to the Asian crisis. Risk management with regard to capital flows appears to have improved markedly since the Asian crisis. Indeed, despite the fact that integration into the global financial market has progressed, as evidenced by an increase in both capital inflows and outflows, concerns are seldom voiced in Asia about the possibility of another Asian crisis, in spite of the major disruptions in capital

[20] McCauley（2008）

flows amid the recent global financial turmoil.

Starting with capital flows through banks, the outstanding amount of international claims on the Asian four economies by the BIS reporting banks declined temporarily after the Asian crisis, but started to recover thereafter, and its pace has accelerated in recent years. As of 2007, the outstanding amount of international claims is below the level recorded at the time of the Asian crisis in Thailand, and almost the same in Indonesia (Figure 4-1). In Korea and Malaysia, although the amount in 2007 was far above the level at the time of the crisis, it does not seem to be a matter of concern given the much larger scale of economic and financial activities in the two economies.

Looking at the international claims by sector, it is noteworthy that claims on the banking sector have increased sharply in Korea (Figure 4-2). In Malaysia and Indonesia, increases in total international claims have been led by those on the non-bank private sector and the public sector. International claims with maturity of up to and including one year have a dominant share in the three economies other than Thailand (Figure 5). They are particularly dominant in Korea, which clearly bears witness to the liquidity management problems of banks. According to the Korean authorities, banks are not exposed to a mismatch in currency due to better risk management through ALM matching. In other words, Korean banks may have simply transferred the FX risk to their customer borrowers by aggressively extending foreign currency loans.

Apart from the international claims, local currency claims on local residents held by BIS reporting banks, which were almost negligible before the Asian crisis, have increased in all the Asian four economies (Figure 4-1). In recent years, the outstanding amount of this type of claim has already exceeded that of international claims in Thailand and Malaysia. The amount is almost half of the international claims in Korea, and 20% in Indonesia. Such developments reflect the fact that BIS reporting banks are extending local networks to penetrate into retail banking markets by acquiring local banks or opening local bases. This can be assessed positively as an effort to lessen the currency mismatch problem.

On capital flows through bond markets, the rising share of local currency denominated bonds should be regarded as an improvement in terms of FX risk management. If such improvement is mainly led by government bonds and central bank securities, it has limited significance in achieving the intended policy goal of resolving the currency mismatch problems of banks and the corporate sector. However, although detailed data are not available, it is safe to say that the share of local currency bonds has increased somewhat for private bonds, at least in Korea, Malaysia and Thailand.

How should we assess the sharp increase in bonds issuance by financial institutions in countries like Korea in the context of resolving the double mismatch problem? In terms of liquidity management, the most stable source of funding for lending is deposits. The significance of this point was underlined by the vulnerability of highly-indebted Korean banks in the recent global financial turmoil. About 40% of Korean banks' liability was borrowings. Still, amongst the various types of borrowings, bond issuance is more resilient than short-term borrowing in the inter-bank money markets.

Although the aggregate data, as described above, tell us little about the extent of mismatched positions held by individual entities, they indicate that the double mismatch problem has generally been lessened. In addition, considering that the Asian four economies managed to avoid serious turmoil during the recent volatile capital flows, it appears that risk management in the use of capital flows has been improving.

At the same time, however, the increase in the share of local currency denominated bonds has made only a limited contribution to such improvement in risk management, partly due to the limited expansion of corporate bond markets. The main contribution came from improved risk management in the use of capital flows, which was achieved through better bank regulation and supervision by the authorities. In addition, in the area of monetary and foreign exchange rate policy, economic entities lost incentives to take excessive FX risk as price stability has become the policy anchor while foreign exchange rates have gained more flexibility.

(4) Has the bank-centric financial system changed?

Has the shift to capital markets progressed?

Growth in the outstanding amount of corporate debt in the Asian four economies has continued to stagnate. In this regard, it is difficult to expect significant progress in terms of the intended policy goal of shifting financial flows from bank lending to corporate bond markets. Such slow progress in the shift can be confirmed using some fractional information from the flow of funds statistics for Korea, Malaysia and Thailand, but not for Indonesia (Figure 6).

The flow of funds statistics for Korea are the best in quality among these three economies, and the composition of corporate debt by instruments is available on a stock basis. The share of corporate bonds and CPs was about 30% in 2002, and stayed within the 25-30% range thereafter. On the other hand, as of 2002, the share of lending by financial institutions was about 70%, and that of banks was 55%. The shares gradually rose thereafter to 74% for lending by financial institutions,

and 66% for bank lending.[21]

The flow of funds statistics in Malaysia is available only in fractional information from the central bank's annual reports and time series data, and are not consistent before and after 2004. Looking at changes in the composition of funding in the economy as a whole, including corporations, households and the government, the share of bank lending declined from 43% in 1997, to 35% in 2007, while that of bond issuance rose from 5% to 12%.[22] The rising share of bond issuance reflects the increasing issuance of government bonds. Based on rough estimates for the composition of funding by the corporate sector, no significant change was observed in the shares of corporate bond issuance and bank lending between 2004 and 2007.

The flow of funds statistics in Thailand only allows us to analyze the composition of corporate financing on a flow basis. According to the limited data, lending by financial institutions after the Asian crisis continued to decline on a net basis until 2003, and started to increase thereafter. Commercial bills, which are effectively short-term lending by financial institutions, continued to decline on a net basis until 2002, and started to increase thereafter. On the other hand, financing by bonds has continued to increase on a net basis since 2001, although its size is still limited.

While the shift from bank lending to corporate bond markets has made little progress, it should be noted that the presence of bank lending in the economy has itself declined, with the exception of Korea. Looking at the size of various types of financial flows as a ratio to GDP,[23] domestic debt securities have increased their presence, led by public debts, while the size of private domestic credit declined by half in Thailand and Indonesia, and by one third in Malaysia（Figure 7）. Private domestic credit increased as a ratio to GDP only in Korea.

Korea is unique in that the size of bank lending has increased since the Asian crisis. In Korea, financial sector reform has aimed at separating banks and large business groups. As a result, a kind of credit market segmentation has emerged in which large corporations, especially those in the "chaebol" business groups, resorted to capital markets, while banks focused on the market for

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[21] In the flow of funds statistics for Korea, time series data based on 1966 SNA are available for the period up to 2005, while those based on 1993 SNA are available only for the period after 2002 and are not linked to the old time series. Looking at the time series data based on 1966 SNA, the share of lending by financial institutions has changed relatively little, while that of bonds has gradually declined after peaking in 1998.

[22] Bank Negara Malaysia（2007）

[23] Based on CGFS（2009）. The size of domestic debt securities as a ratio to GDP is not necessarily consistent with that based on the data from AsianBondsOnline.

households and small and medium-sized corporations. Bank lending has increased as a result of fierce volume competition. On the other hand, the size of the corporate bond market has remained stagnant, except for a temporary surge soon after the Asian crisis to compensate for a decline in bank lending. This is because large corporations that qualified to issue corporate bonds, those with credit rating A-equivalent or above, have enjoyed a cash rich period in recent years and have also made efforts to consolidate their balance sheets.

Given such market segmentation, it is not clear whether we can consider the Korean financial system to be a twin-engine system. In the recent financial turmoil, it was not possible to check if the corporate bond market was functioning as a "spare tire" because the damage to the financial system of the Asian four economies was limited and the financial intermediation process was not interrupted. Although a large amount of corporate bond issuance was observed in Korea in early 2009, it was not a shift from bank lending, but simply additional liquidity funding by large corporations with good performance which have relied on the corporate bond market for years.

Despite its significant size, the Korean corporate bond market is still a market for large excellent companies and is not mature enough to fulfill its role for smaller corporations without support from the public sector. This can be explained by the history of the Korean corporate bond market in which most bonds were guaranteed by banks. Since the Asian crisis, the authorities have made efforts to establish a corporate bond market without bank guarantees, but with limited success so far. Soon after the Asian crisis, there was a temporary increase in the issuance of corporate bonds without guarantee when the corporate sector sought funding against the backdrop of a more cautious lending attitude by banks. Investors rushed to beneficiary certificates of investment trust companies which invested in non-guaranteed corporate bonds. After the temporary boom, however, investors became more cautious about the risks involved in investment in corporate bonds when a large business group, Daewoo, collapsed and redemption of corporate bonds issued during the boom time was concentrated in a short period. The corporate bond market had to resort to government guarantees as well as price-keeping operations by the Bond Market Stabilization Fund, to which financial institutions and insurance companies subscribed.

(5) Brief summary of this chapter

When assessing the achievement of the originally intended policy impact of the development of Asian bond markets, the most important fact is that the development of corporate bond markets, the cornerstone of the initiatives, has been limited, while public bond markets have expanded significantly. As a result, amongst the various intended policy goals to address the financial crisis,

there has been no marked achievement in terms of a shift from a bank-centric financial system to a system with a corporate bond market as an alternative financial intermediary channel. With regard to the policy goal of lessening the over-reliance on international capital flows, we should make an assessment from the viewpoint of whether new investment opportunities have been created so that domestic savings can be invested domestically. While the expansion of public bond markets might have made certain achievements in this regard, the limited development of corporate bond markets again shows that little progress has been made in channeling private domestic savings into domestic investment opportunities. In the meantime, the Asian four economies have been further integrated into the global financial markets since the Asian crisis through an increase in their capital inflows and outflows.

On the other hand, it appears that significant progress has been made since the Asian crisis in the management of the various risks associated with the use of capital flows, including the double mismatch of currency and maturity. This progress is attributable to improved risk management capacity and better regulatory and supervisory frameworks, as well as better macroeconomic policy management, especially more flexible FX policy. Such improved risk management appears to have contributed to the limited impact of the recent global financial turmoil on the financial stability of the region.

4. Background to the Limited Development of Corporate Bond Markets

In assessing the extent to which the development of local currency bond markets after the Asian crisis has contributed to reducing the vulnerabilities underlying the crisis, the study group found limited bond issuance by the corporate sector to be a major and key obstacle to achieving the intended policy goals. In this chapter, we discuss why corporate bond issuance in the Asian four economies has shown limited growth in spite of the efforts of the authorities, backed by regional cooperation initiatives.

In what follows, we first show that against the backdrop of stagnant corporate funding needs reflecting subdued aggregate investment and changes in industrial structure since the Asian crisis, bank lending to the corporate sector has also remained sluggish. We then argue that the large role played by other funding sources, such as equity financing, including FDI, and internal funding, explains the limited appetite for issuing corporate bonds, especially in the case of corporations with foreign capital participation.

(1) Changes in economic structure

Stagnant investment growth in a macroeconomic context

Stagnant aggregate investment growth can be cited as one of the reasons for limited bond issuance. Looking at the size of investment as a proportion of GDP, none of the Asian four economies has returned to its peak recorded prior to the Asian crisis (Figure 3). Malaysia in particular is experiencing a noticeable delay in recovery as its investment-GDP ratio, which surpassed 40% before the crisis, dropped to 20%, and has leveled off ever since. Korea's ratio, which hovered around the 40% level before the crisis, dropped to 25%, and in recent years has remained around the 30% mark. Thailand's ratio fell steeply from above 40% to 20%, and gradually recovered to 30% in 2006. Indonesia's ratio also dropped steeply from above 30% to the 10% level, then recovered dramatically, and has recently remained around 25%.

Most studies explain the limited investment growth in Asia (except for China) by real economy factors. For example, IMF (2006) argues that this phenomenon cannot be fully explained by a reaction to the excesses during the Asian crisis (collapse of real estate markets, corporate balance sheet adjustments), and points to the possibility that corporate investment behavior became cautious in response to higher risk brought on by volatility in exports and production. On the other hand, only a few studies have pointed to funding constraints imposed by financial system instability.

Stagnant aggregate investment growth has constrained the growth of overall funding needs, including through corporate bonds. Bank Negara Malaysia (2007) attributes the decline in funding as a proportion of GDP, as well as the relocation of bank lending from corporations to households, to a shift in the source of aggregate demand, from an investment-led economy in the 1990s, to a consumption-led economy in the 2000s.[24]

Changes in industry structure

Some argue that the stagnant investment growth is caused by changes in the underlying industry structure. Bank Negara Malaysia (2007) points out that the construction industry used to be one of the driving forces of economic growth before the Asian crisis, with long-term demand for funds. Since the crisis, other business sectors have assumed the leading role, such as the manufacturing industry, dominated by foreign corporations who rely on internal capital markets for their funding, and the service sector, with small funding needs as their businesses are not capital intensive.

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[24] According to an analysis on corporate bonds issuance in Malaysia by Ibrahim and Wong (2006), most of the corporate bonds were issued to reorganize debt after the Asian crisis during 2000-2003. However, since 2004, corporate bonds have been issued to finance new investment projects.

Shimizu (2009) studied the change in the total amount of corporate bonds issued by industry for Korea, Thailand, and Malaysia. In recent years, the main issuers belong to non-manufacturing industries, such as finance and infrastructure (telecommunications, construction, energy, and transportation). Meanwhile, manufacturing industry's share has been on a declining trend since the crisis, in Korea (from 72% in 1997, to 23% in 2007) and in Malaysia (from 25% in 1997, to 4% in 2007). Issuance of corporate bonds by the manufacturing sector in Thailand was extremely limited even before the crisis, as most were small and medium-sized corporations with great difficulty accessing the corporate bond market.

The study group compiled data available from Thomson Reuters to assess the total amount of corporate bonds issued by industry for Thailand, Malaysia and Indonesia.[25] It is clear that the non-manufacturing and finance sectors are the major issuers (Figure 8). The total amount of issuance by the manufacturing sector in both Malaysia and Indonesia has declined since the crisis, and now represents only a limited share. The manufacturing sector in Thailand has been issuing corporate bonds consistently at a certain scale in recent years, though this is largely attributed to issuance by a government-owned oil corporation and a manufacturing conglomerate (Siam Cement). It is fair to say that issuance by the manufacturing sector is generally at a low level.

To obtain a concrete image of the issuers, the study group used the same data from Thomson Reuters to examine the share of top ten business sectors in the amount of newly issued corporate bonds, for Thailand, Malaysia, and Indonesia. First of all, the share of finance-related businesses is noticeable (Figure 9). Between 2004 and 2008, the banking industry or non-bank financial institutions (credit agencies except banks) ranked in the top three in all three economies. The share of banking industry and non-bank financial institutions was 26% for Thailand, 43% for Malaysia, and 35% for Indonesia. The non-manufacturing businesses that ranked in the top ten in Thailand were real estate, transportation by air, and communications. In Malaysia, utilities (electric, gas and sanitary services), water transportation, and real estate made it into the top ten, while in Indonesia it was communications, utilities, real estate, and water transportation.

In Thailand and Malaysia, there are signs of an increase in corporate bond issuance by the infrastructure and service sectors. Mieno (2008, 2009) offers the following three explanations. First, the nature of the demand for capital, i.e., large scale investments and long-term funds, suits the securities market. Second, parts of the service sector that have developed rapidly in recent years, such as telecommunications, are faced with risks related to non-divisible investment. Such risks

[25] Analysis on Korea is precluded owing to insufficient data coverage.

tend to divide investor views, and a securities market that can summarize views of a variety of investors provides a suitable funding source. Third, these sectors are subject to tight regulation in terms of foreign ownership, and have little opportunity for foreign direct investment.

(2) Have banks played a dominant role?

When examining the limited growth of corporate bond issuance, it is important to consider not only the sluggish growth in total amount of funding (which reflects macroeconomic developments), but also corporations' choice of funding sources, such as bank lending and issuance of corporate bonds. As discussed in the previous chapter however, bank lending to corporations has also been showing sluggish growth. Therefore, it seems inappropriate to attribute the limited development of corporate bond markets to a delayed shift from bank lending.

In Thailand, Malaysia, and Indonesia, bank lending to the private sector has been sluggish mainly due to stagnant growth in lending to the corporate sector. On the other hand, lending to households has been steadily expanding (Figure 10). In Korea, bank lending to households and small and medium-sized enterprises has increased, but loans to major corporations have been declining gradually.

As a result, the share of bank lending to households in total bank lending has expanded steadily from 10-30% at the end of 1996, to around 50% at the end of 2005 in Korea, Malaysia, and Indonesia. Although the share remains at around 20% in Thailand, in recent years, bank lending to corporations has shown limited growth, while that to households has been increasing at a rate of more than 20% per year.

Since it seems difficult to explain the decrease in bank lending to corporations entirely by banks' reluctance to lend as they addressed the problem of non-performing loans, we also need to consider the lack of demand for funding from the corporations themselves. Banks in these four economies shifted their management objective from restructuring to enhancing profitability around 2001, although the pace of change has differed. And as evidenced by the increase in bank lending to small and medium-sized companies, banks' lending attitude towards the corporate sector did become more positive.

In the Asian four economies, the banking sectors have faced a slump in funding needs since the Asian crisis. But to what extent did bank lending provide funds to corporations before the Asian crisis in the first place? Looking back on the recovery process after the Asian crisis, it took

considerable time for Indonesia, Malaysia, and Thailand to restructure their banking systems, and they had limited success in developing corporate bond markets, but economic recovery quickly gained momentum. This fact suggests that the delay in recovering the financial intermediary function of the banking system was not such a serious constraint on recovery after the crisis. Furthermore, this also suggests that banks might not have played an indispensable role in financing economic growth even before the crisis. Recent data on bank lending by sector show that lending to the manufacturing sector, the driving force of growth in these economies, has been on a declining trend since the beginning of this century (Figure 11).

(3) Internal capital markets and equity finance

The limited corporate bond issuance and stagnant bank lending to large corporations both result not only from sluggish growth in total funding, originating from changes in macroeconomic structure and industry composition, but also from corporations' dependence on equity finance, including foreign direct investment and internal capital markets.

East Asian corporations raise a relatively large proportion of their funds through equity, including direct equity investments. This unique feature has been increasingly acknowledged by researchers in recent years. For example, Teranishi, Fukuda, and Liu (2007) found the following from their empirical analysis using corporations' microeconomic data as of 2002: 1) compared to advanced economies, corporate funding in East Asian economies, such as Thailand, Malaysia, and Indonesia, has a smaller share of debt, especially long-term debt, and a larger share of equities; and 2) corporations of advanced economies tend to raise external funds through long-term borrowing from banks, while in East Asia, corporations raise external funds through equities as well as short-term debt from banks and other corporations.

Teranishi, Fukuda, and Liu argue that the large share of equity in East Asia can be attributed to the fact that "openness" of East Asian corporations is significantly lower than that in advanced economies. East Asian corporations rely more on their own funds, as well as the funds of acquaintances and relatives who invest heavily in the form of private equity, resulting in a high share of equities. Korea is the exception, where equity share is small while debt share is relevantly large. This is explained by the fact that many Korean corporations are more "open", as the government has historically promoted public offerings of shares in order to restrain the centralization of economic power in conglomerates.

According to a study by Mieno (2009) on the capital structure of major Thai corporations, capital

accounts are as much as 45% of the balance sheet for both listed and non-listed corporations. Bank borrowing by listed corporations accounts for 22%, and a mere 18% for non-listed corporations. The share of capital accounts for Malaysian corporations is 53% for listed corporations, and 46% for non-listed corporations. Bank borrowing is 14% for listed corporations, and 15% for non-listed corporations.

Market capitalization of equities as a proportion of GDP expanded in all the Asian four economies after the Asian crisis (Figure 7), although the extent of expansion differed among the economies. The size of the Korean equity market expanded about 15 times from 1997 to 2007. This expansion cannot be explained only by the increase in equity prices, as their average only increased by five times. The same applies to Thailand, where the equity market expanded by five times but the average equity price merely doubled. By contrast, the equity markets in Malaysia and Indonesia have shrunk, taking into account the increase in equity prices. The markets expanded by 1.9 times, and 4 times for Malaysia and Indonesia, respectively, and the average equity price increased by 2.4 times and by 7 times, respectively.

As shown above, a large share of equity financing does not necessarily mean that funding from the public through the market is active. Among the top 1,100 corporations in Thailand, only 257 are publicly listed – a mere 20%. In recent years, active acquisition has become more evident in Asia, targeting mainly non-listed corporations. Non-listed corporations have become a target for the following reasons: 1) profit can be earned from listing, 2) the scope for promotion of corporate governance tends to be larger for non-listed firms, and 3) non-listed corporations can be bought at bargain price.

Given the significance to the economy of corporations with foreign capital participation, their funding behavior has a great impact on the funding patterns of the economy as a whole. Mieno (2009) analyzed the funding behavior of corporations in Thailand and Malaysia, and points out that the higher the share of foreign ownership, the lower the tendency for corporations to rely on bank lending. They tend to seek internal funding from their parent corporations. Mieno also points out that the higher the share of foreign ownership, the greater the tendency for corporations to rely on their own funds, such as retained earnings.

Among the major 1,100 listed and non-listed corporations in Thailand, about half have foreign ownership participation. Most of the FDI-related corporations are non-listed, and show little appetite for listing. In Malaysia, among the top 1,200 corporations, more than 70% are listed, and about 90% of the listed corporations do not have foreign capital participation. On the other hand,

about half of the non-listed corporations receive foreign capital, and in most cases the share of foreign ownership of these corporations exceeds 10%, while there are many cases where the share exceeds 95%.

Mieno (2008) argues that, in South East Asian countries, including Thailand and Malaysia, foreign capital played a complementary role in terms of funding for local corporations with limited access to commercial bank lending. This role might have been even more significant than its role in technology transfer. The funding channel provided by foreign corporations gained greater importance as a source of funding to local corporations from the mid-1980s, as foreign capital made its way into the region. In this process, the discontinuity of the funding channel between the financial sector and the manufacturing sector became more pronounced.

These are the reasons why the leading sectors in the economic development of the Asian four economies have chosen equity financing over bank lending. Teranishi, Fukuda, and Liu argue that, when East Asian developing economies were mainly driven by the manufacturing sector, focusing on the assembly process in foreign corporations' global production networks, the many small corporations, including small-service providers with small funding needs, played an important role. After exhausting retained earnings, these small corporations may have preferred funding through private equity to external borrowing, as predicted by the pecking order theory.

5. Implications for Regional Financial Cooperation

In this report, the study group revisited from a normative point of view the arguments for developing local bond markets as a prescription for the Asian crisis, including the basic understanding of what caused the crisis and the policy effects that may be derived from developing local bond markets. The study group then looked into the data on local bond markets in the four Asian economies, and found that the intended goals have not been satisfactorily achieved as there have been noticeable delays in the development of corporate bond markets. Nevertheless, this does not deny the significance of developing Asian bond markets.

(1) The significance of developing bond markets

Although the intended policy goal of developing local bond markets as a prescription to crises has not been fully achieved, the expansion of local bond markets centered on public bonds is of great

significance in a broader sense.[26]

Among the variety of benefits accompanying the development of bond markets, some cannot be obtained without the development of corporate bond markets. However, if markets develop for public bonds, such as government bonds and central bank securities, the important goal of enhancing interest rate formation function via the market can be achieved. The establishment of a risk-free interest rate term structure will enhance more efficient economic resource allocation. Another benefit of the developing bond market is the establishment of a transmission mechanism of monetary policy beginning with the adjustment of short-term interest rates by central banks. A risk-free interest rate term structure is essential to provide a pricing benchmark for the development of corporate bond markets. Furthermore, an enhanced market-oriented interest rate formation is an essential factor when the market seeks a foreign exchange rate level that is consistent with fundamentals.

The market-oriented interest rate formation function cannot be enhanced solely by expanding issuance: the key is further development of the secondary market. The data on the turnover ratio of government bonds (annual turnover/outstanding issue) listed on AsianBondsOnline show that there is much room for improvement. The ratios of the Asian four economies, namely Indonesia (0.36), Korea (0.53), Malaysia (0.58) and Thailand (0.76), were significantly smaller than that of developed economies such as Japan (1.97), even in 2007, before the consequences of the current crisis became obvious.

Several reasons have been suggested for the shortage of market liquidity in Asia, including the limited variety of investors, insufficient market infrastructure, low market transparency and the lack of timely information on issuers of bonds.[27] As for market infrastructure, it is pointed out that the development of interest rate derivatives transactions has been limited compared to foreign exchange related derivatives transactions.[28] With regard to the variety of investors, the secondary market relies heavily on foreign investors who play the role of market makers providing market liquidity in the secondary market. The current turmoil in international financial markets has shown how

[26] For example, Herring and Chatusripitak (2000) analyzed the merits of developing a bond market as well the adverse effects of an underdeveloped bond market. Okuda (2006) also considers the role and possibility of corporate bond markets at the different economic development stages of developing economies, first by defining the differences between banks and securities markets, and then by examining the necessity of securities markets from the standpoints of corporations, financial institutions and households.

[27] Gyntelberg, Ma and Remolona (2006)

[28] CGFS (2009)

vulnerable Asian capital markets are to over-dependence on foreign investors as market makers. The decline in risk-taking by foreign investors brought liquidity problems to Asian capital markets, which in turn developed into price fluctuations and amplified market disorder. Resilience to financial crises would be strengthened if there were more sophisticated domestic investors who consider the situation where a disruption in capital flows depresses market conditions below fundamentals as a buying opportunity, and are ready to take risks.

Developing corporate bond markets in Asia may also have positive implications for the global current account imbalance and the associated easing of the global financial environment. Caballero et al. (2006) argue that in emerging economies growth of investable assets cannot keep pace with the high rate of growth in savings, and that this contributed to the substantial accumulation of current account surpluses in emerging markets after the Asian crisis, as well as the outflow of capital to advanced countries. Based on this argument, expanding corporate bond markets in Asia will be important for global financial and economic stability as well.

(2) Prospects for the development of corporate bond markets

As discussed in this report, it is highly likely that the underdevelopment of corporate bond markets is due to the limited needs of corporations to issue bonds. On the other hand, the initiatives to develop an Asian bond market as one of the key pillars of regional cooperation have, by and large, focused on broadening the range of investors and removing market infrastructure impediments without first asking whether a need for bond issuance actually exists.

The Asian Bond Fund (ABF) was launched to invest some of the foreign reserve assets held by EMEAP member central banks and monetary authorities in an investment trust made up of a collection of bonds issued by sovereign and quasi-sovereign issuers in EMEAP economies. The US dollar-denominated ABF1 was launched in 2003, and the local currency-denominated ABF2 in 2005. The launch of these funds has helped Asian bonds gain more recognition from investors, and encouraged EMEAP members to solve problems inherent to the market through the process of setting up the funds.[29] Since 2003, the Asian Bond Market Initiative (ABMI), established under the ASEAN+3 framework, has also been working on market issues, such as developing new collateralized debt obligations, providing credit guarantee mechanisms, facilitating foreign exchange transactions, addressing settlement issues, and strengthening credit rating institutions.

Looking at the way forward, the need to issue corporate bonds may increase, reflecting changes in

[29] EMEAP Working Group on Financial Markets (2006)

economic and industrial structure, and indeed, we have already seen that bond issuance by the telecommunications and infrastructure sectors has increased in recent years. With such an increase in the bond financing needs of the corporate sector, the authorities' efforts to improve the financial environment for issuance and to promote Asian bonds to investors are expected to bear fruit in the form of increased bond issuance. Also, the development of public bond markets has strengthened the markets' capacity to determine risk-free interest rates, which in turn facilitates the pricing of corporate bonds.

Despite the limited success so far in expanding the corporate bond markets, the authorities involved in regional financial cooperation should continue making steady efforts to promote local currency debt markets until long-term financing needs gradually materialize in the coming years.

* * *

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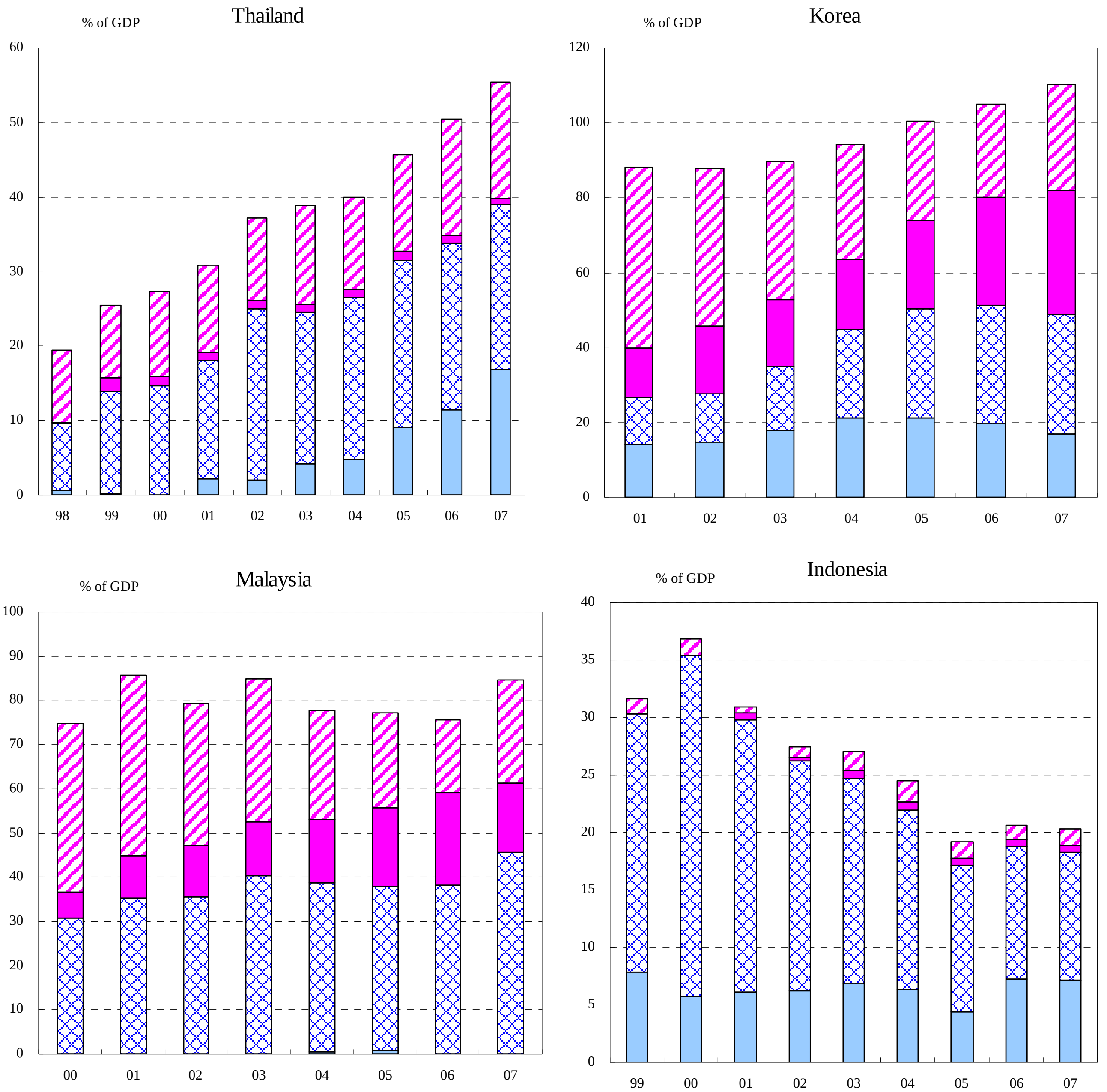
List of Figures

(Figure 1)

Size of Local Currency Bond Market



(Note) Data of central bank bonds are available up to 2005.

Central Bank   Other Public Entities   Financial Institutions   Other Corporations

(Note 1) Based on Government Bond and Corporate Bond data from ADB AsianBondsOnline (ABO), the former is subdivided into Central Bank Bond (data for each central bank) and Other Public Bond, and the latter is subdivided into Financial Institutions Bond (Thailand and Malaysia: ABO <BIS base> data; Korea: Bank of Korea data; Indonesia: Bank Indonesia data) and Other Corporate Bond.

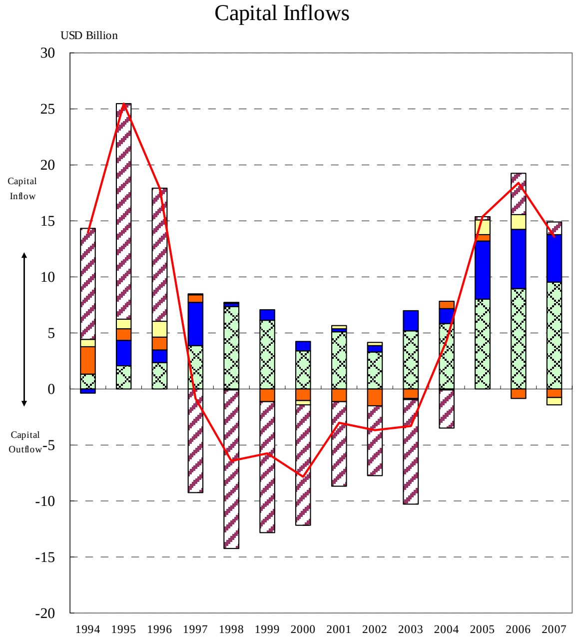
(Note 2) ABO Corporate Bond includes bonds issued by government and public enterprises.

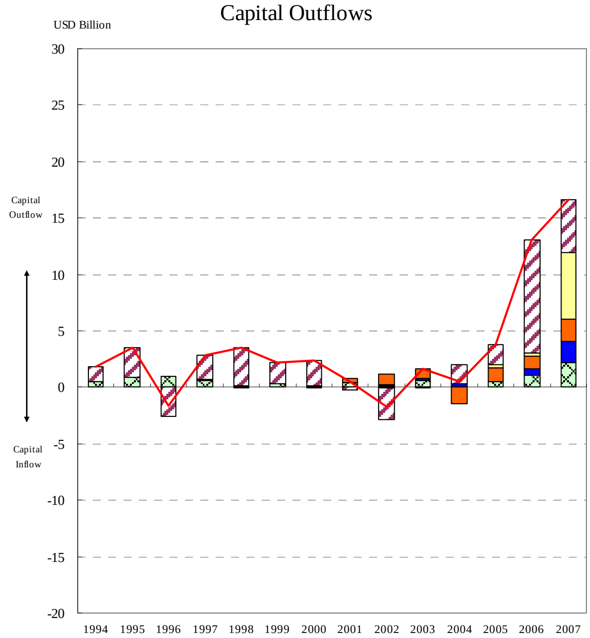
Sources: ADB AsianBondsOnline, Bank of Thailand, Bank of Korea, Bank Negara Malaysia, Bank Indonesia.

(Figure 2)

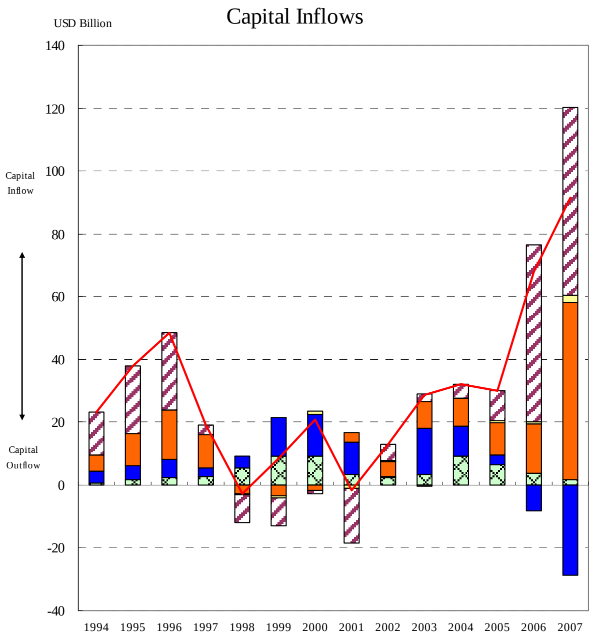
Capital Inflows and Outflows (Thailand and Korea)

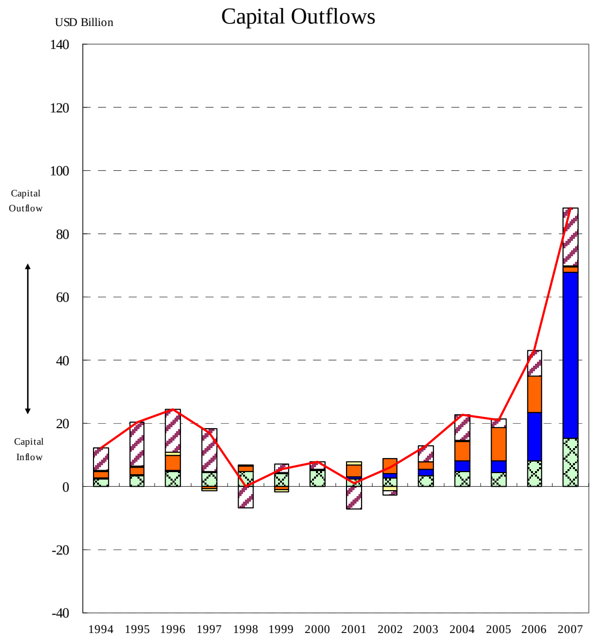
Thailand





Korea





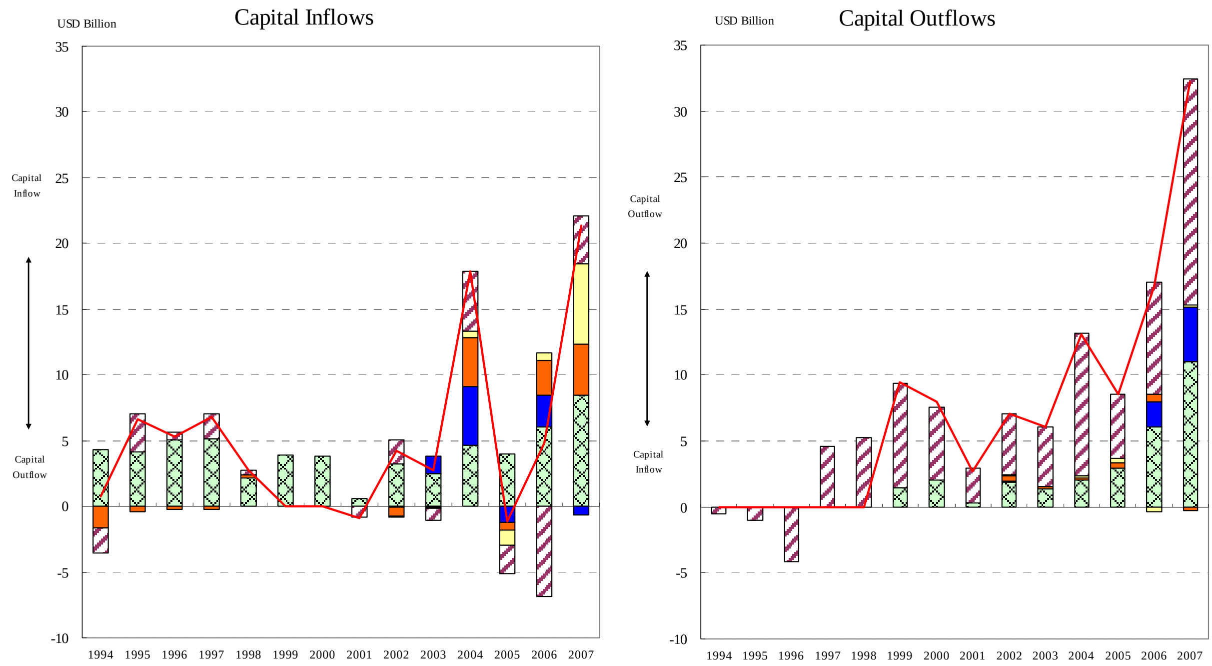
Direct Investment | Portfolio Equity Investment | Portfolio Bond Investment
Portfolio Money Market Instruments | Other Investment | Total Flows

Source: IMF, Balance of Payments Statistics.

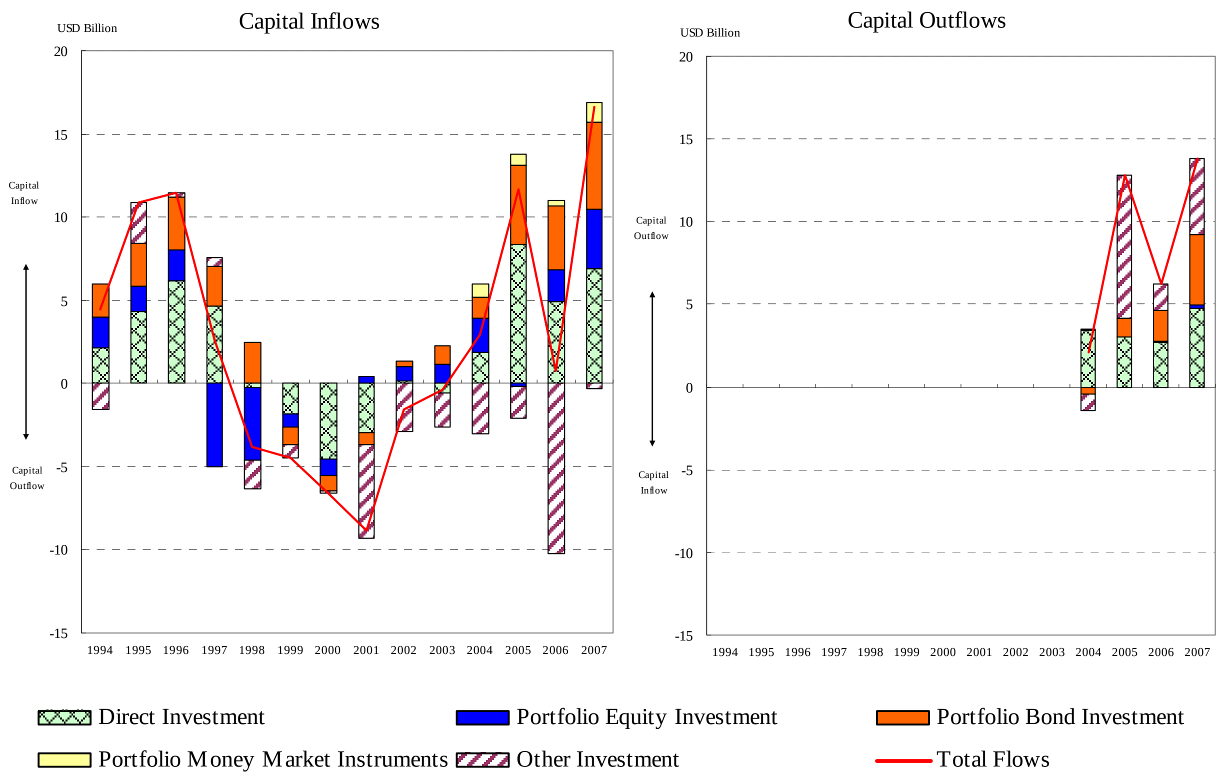
(Figure 2)

Capital Inflows and Outflows (Malaysia and Indonesia)

Malaysia



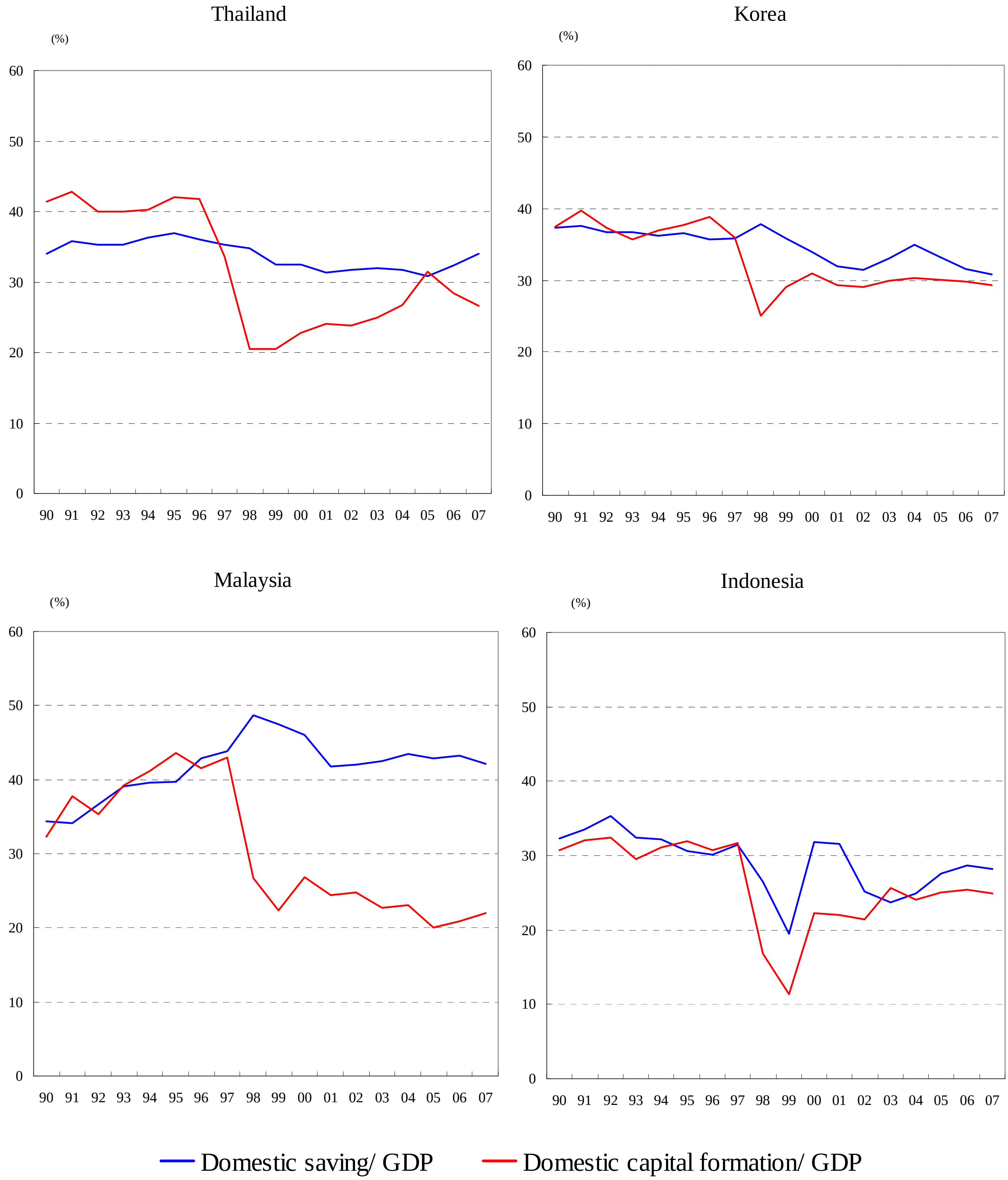
Indonesia



Source: IMF, Balance of Payments Statistics.

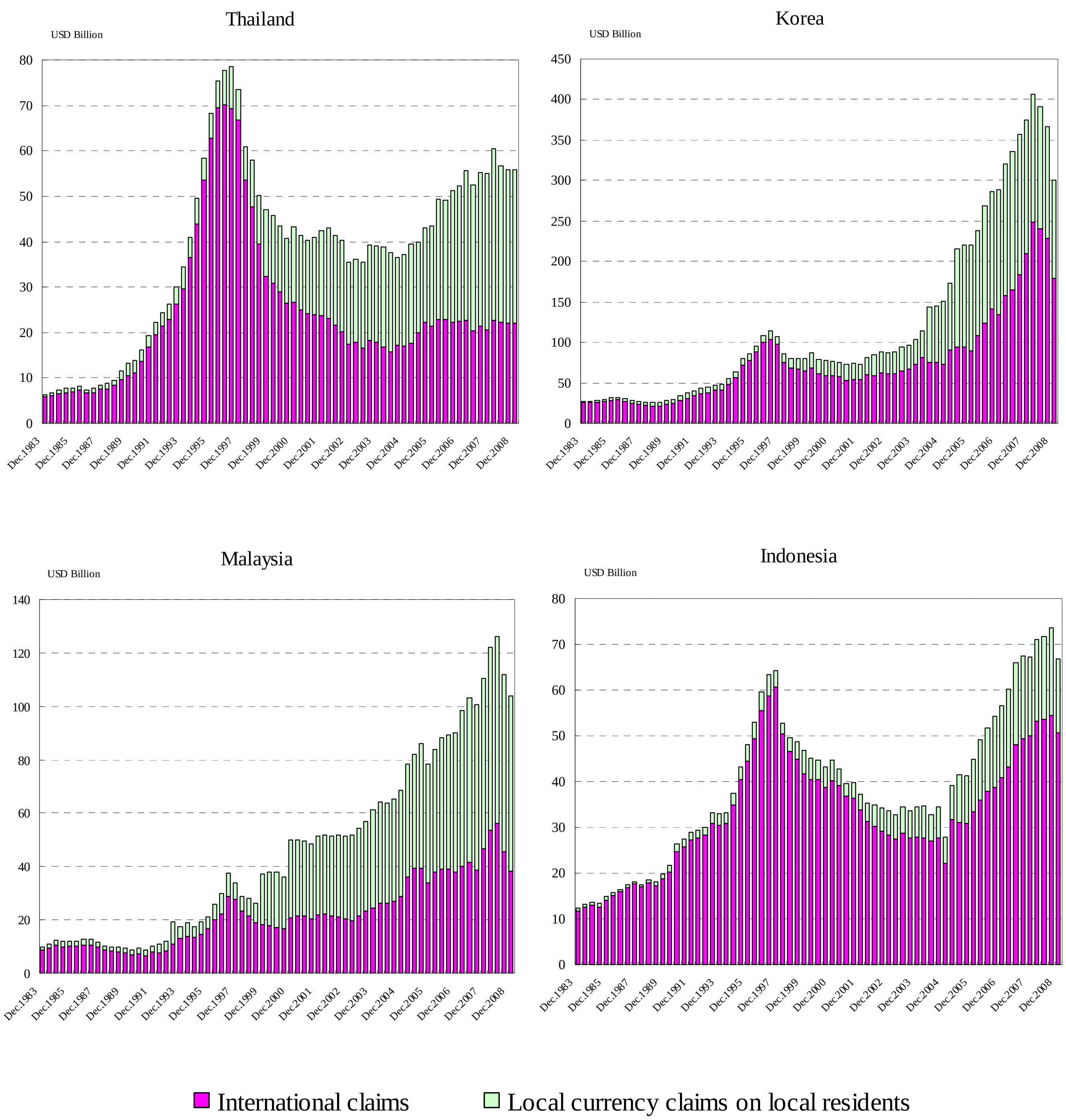
(Figure 3)

I-S Balance



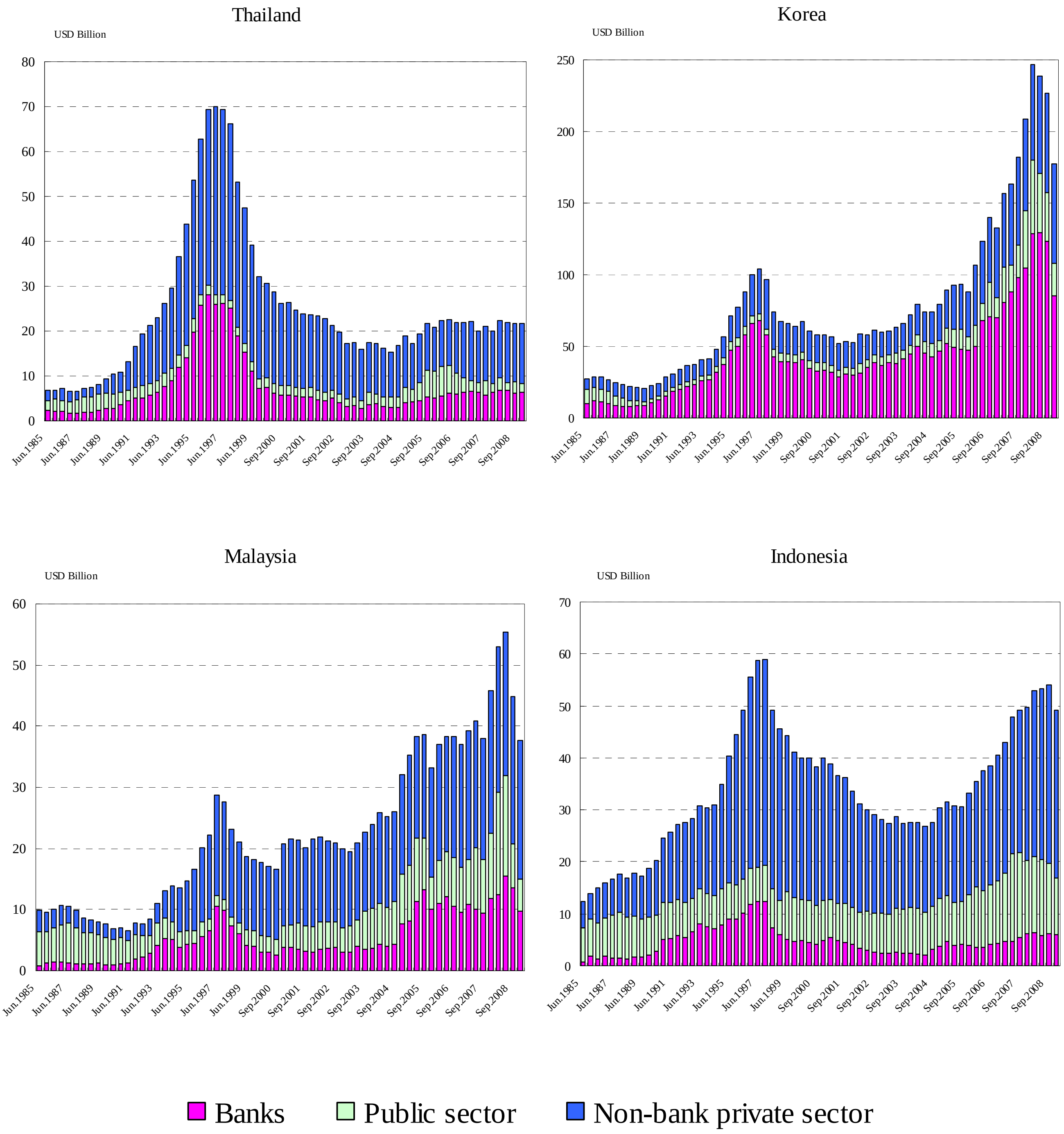
Source: ADB SDBS.

BIS Consolidated Banking Statistics
International Claims and Local Currency Claims on Local Residents



(Note) Data are half-yearly base from 1983 to 1999, and quarterly base from 2000 to 2008.
Source: BIS Consolidated Banking Statistics released in April 2009.

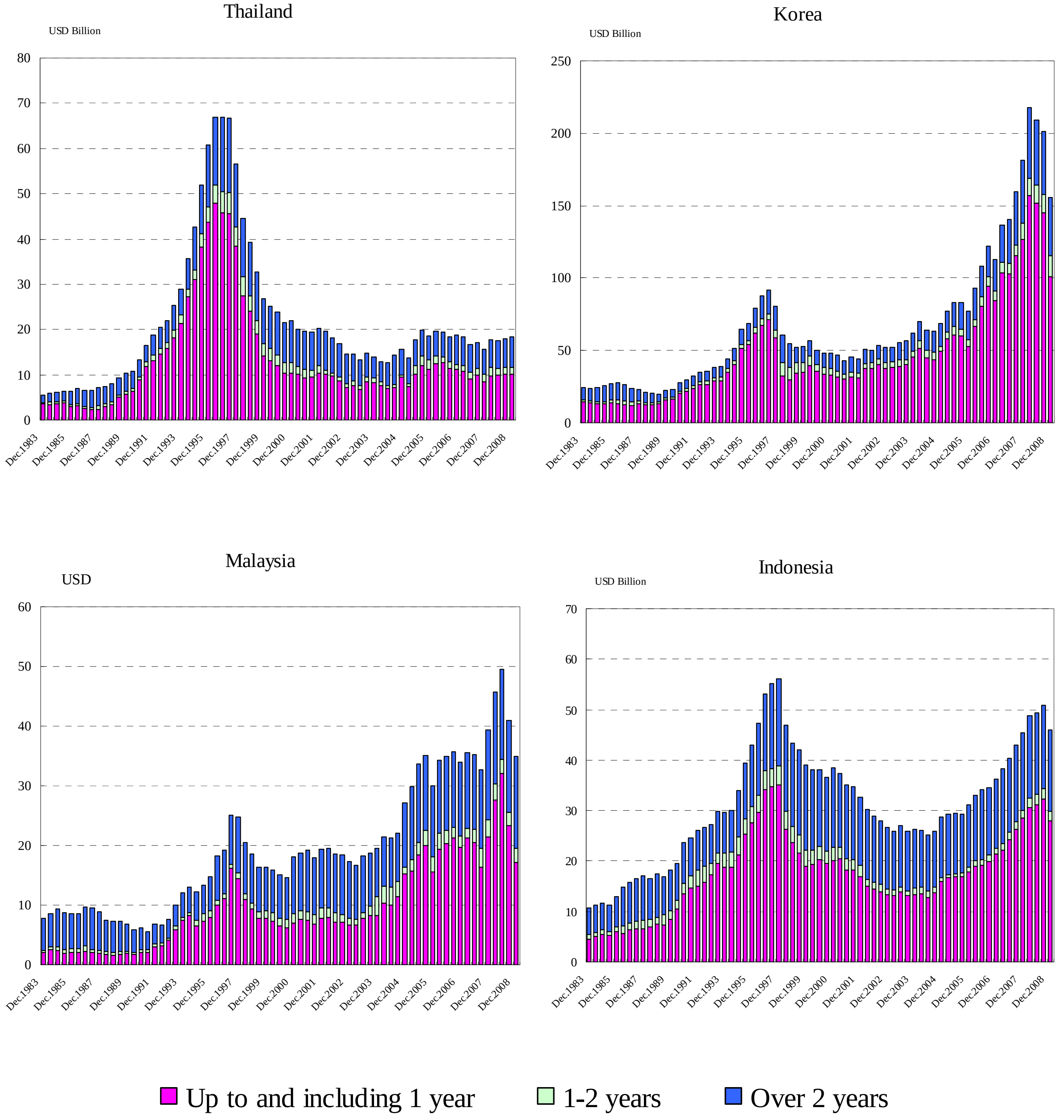
BIS Consolidated Banking Statistics
International Claims by Sector



(Note) Data are half-yearly base from 1985 to 1999, and quarterly base from 2000 to 2008.
Source: BIS Consolidated Banking Statistics released in April 2009.

(Figure 5)

BIS Consolidated Banking Statistics
International Claims by Maturity

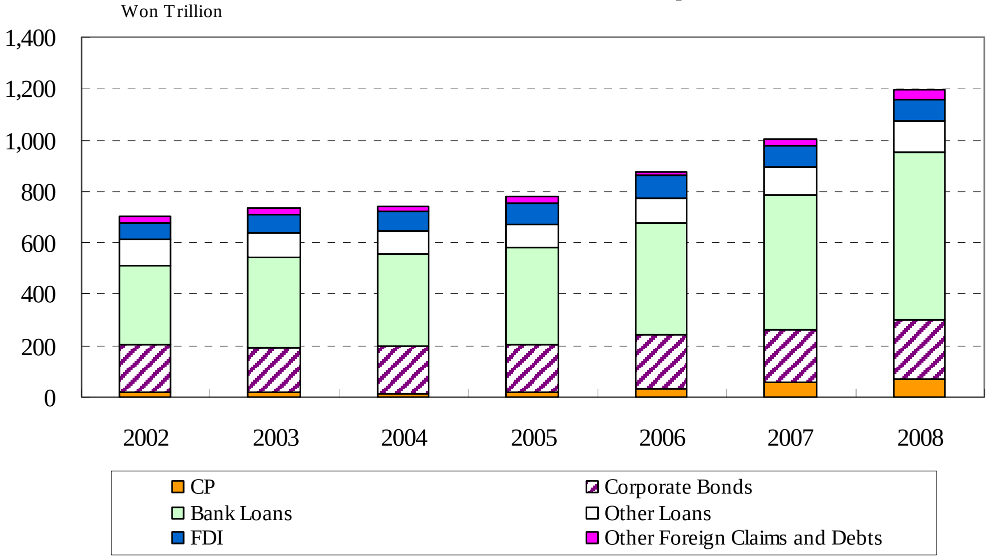


(Note) Data are half-yearly base from 1983 to 1999, and quarterly base from 2000 to 2008.
Source: BIS Consolidated Banking Statistics released in April 2009.

Flow of Funds

Korea

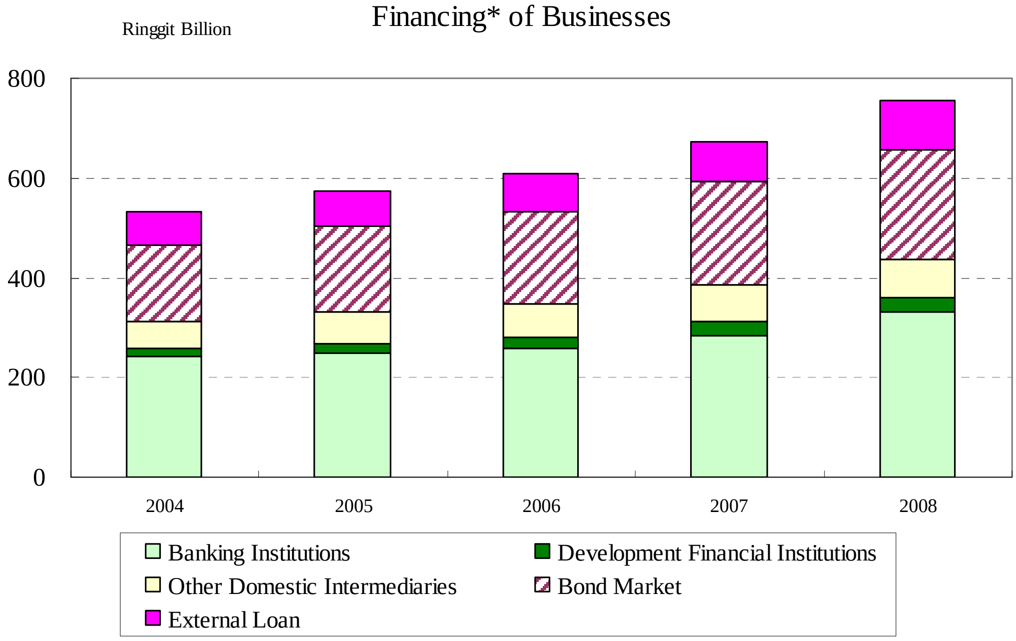
Financial Liabilities* of Non-Financial Corporations



(Note) Liabilities other than shares, trade credits, and others. Outstanding amount at the end of year.
Source: Bank of Korea

Malaysia

Financing* of Businesses

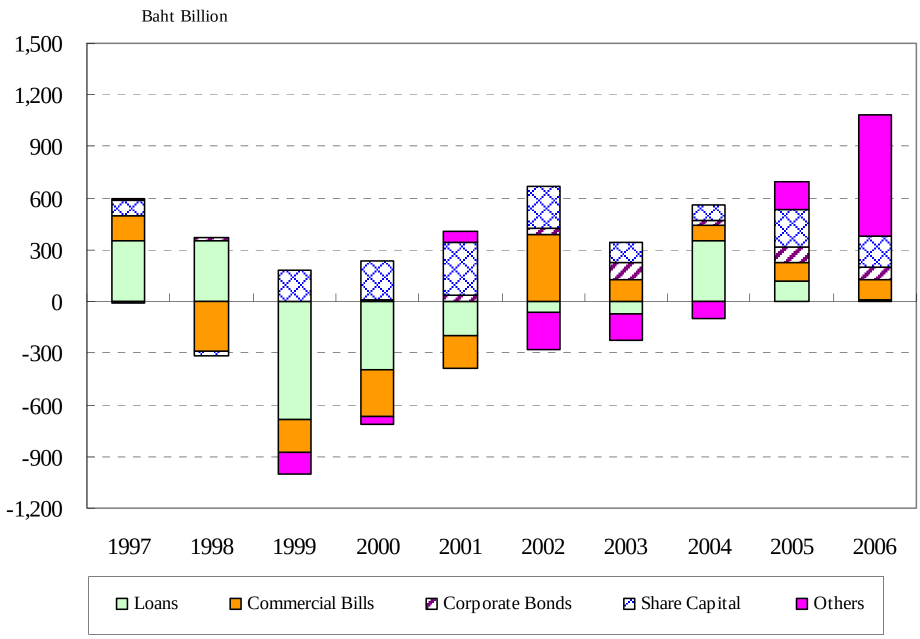


(Note) Excluding equity and FDI. Estimated from data of outstanding amount at the end of 2006 and data of annual net increase/decrease from 2004 to 2008.
Source: Bank Negara Malaysia, Annual Report 2006-2008.

(Figure 6)

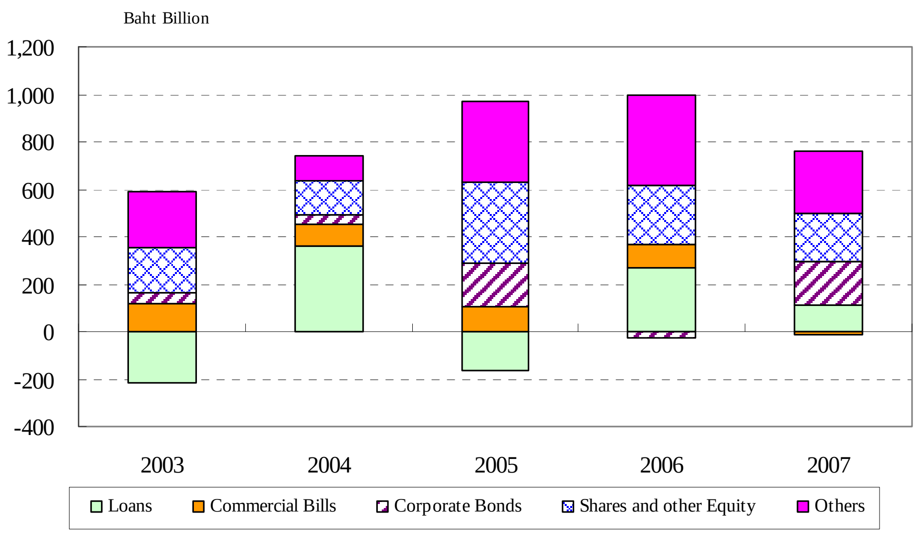
Thailand

Flow of Funds (Incorporated Businesses)



(Note) There is discontinuity between Latest Data 2003-2007 and Historical Data up to 2006.
Sources: NESDB website, Flow of Funds Accoutns, Historical Data.

Flow of Funds (Non-Financial Corporations)



(Note) There is discontinuity between Latest Data 2003-2007 and Historical Data up to 2006.
Sources: NESDB website, Flow of Funds Accoutns, Latest Data 2003- 2007.

(Figure 7)

Size of Private Domestic Credit

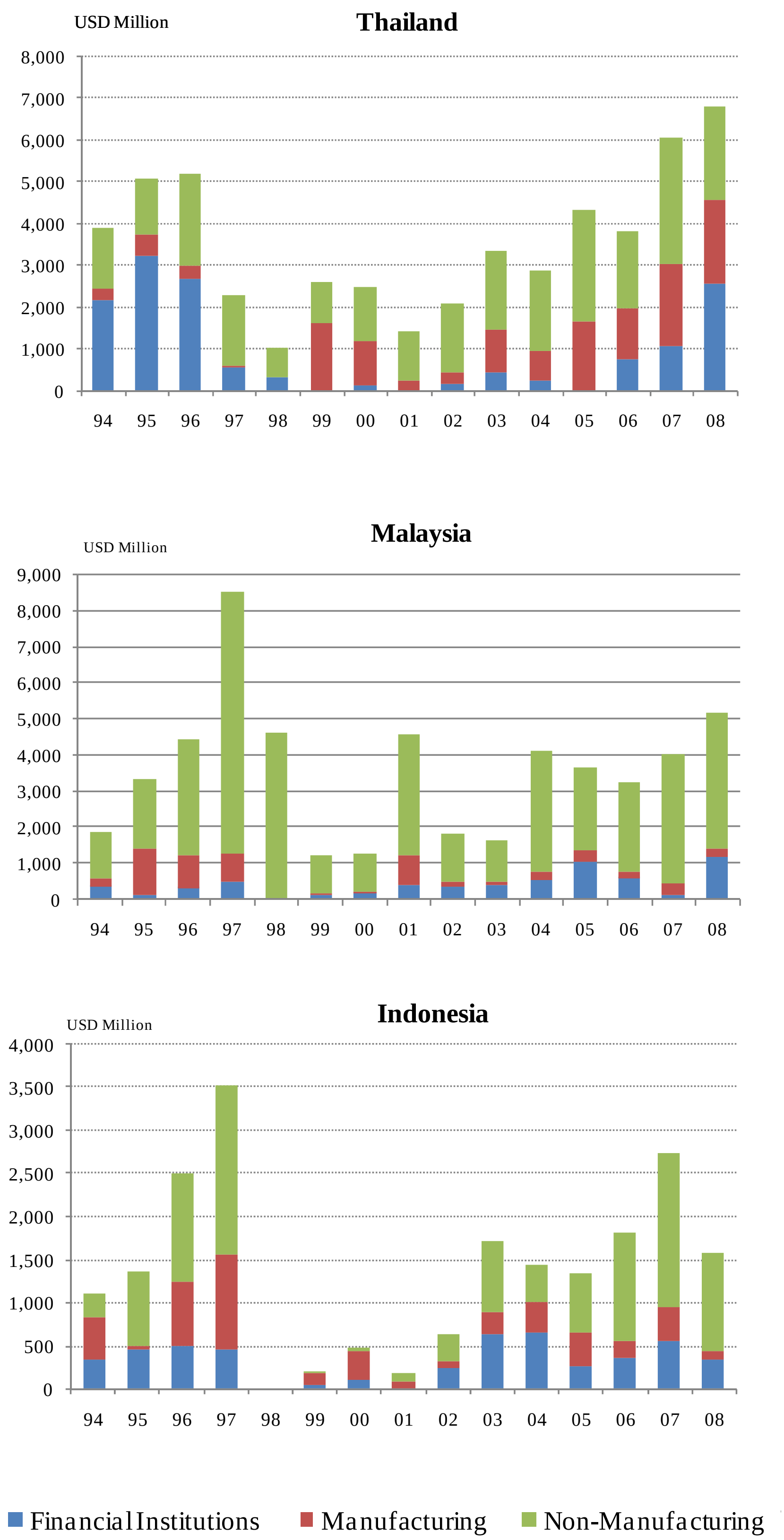
% of GDP

		1997	2007
Korea	Stock market capitalisation	8	117
	Domestic debt securities	29	117
	Private domestic credit	63	109
Thailand	Stock market capitalisation	15	80
	Domestic debt securities	7	53
	Private domestic credit	166	84
Malaysia	Stock market capitalisation	92	174
	Domestic debt securities	56	83
	Private domestic credit	158	105
Indonesia	Stock market capitalisation	12	49
	Domestic debt securities	2	21
	Private domestic credit	61	25

Source: Committee on the Global Financial System (2009), "Capital flows and emerging market economies," CGFS Publications No.33.

(Figure 8)

Issuance of Corporate Bonds



Source: Thomson Reuters.

(Figure 9)

Issuance of Corporate Bonds: Top ten industries

Thailand

1999 - 2003

		Issued Amount (USD million)	Weight	Cumulative Weight
1	OIL & GAS EXTRACTION	1,953	16.3%	16.3%
2	REAL ESTATE	1,370	11.4%	27.8%
3	MFR FOOD & KINDRED PRODUCTS	1,241	10.4%	38.1%
4	BANKING	1,071	8.9%	47.1%
5	CREDIT AGENCIES EXCEPT BANKS	1,044	8.7%	55.8%
6	MFR CHEMICALS & ALLIED PRODUCTS	926	7.7%	63.5%
7	COMMUNICATIONS	790	6.6%	70.1%
8	HEAVY CONSTRUCTION CONTRACTORS	523	4.4%	74.5%
9	AUTO REPAIR, SERVICES & GARAGES	439	3.7%	78.2%
10	SECURITIES, COMMODITY BROKERS, SERVICES	424	3.5%	81.7%
Total		11,968	100.0%	

2004 - 2008

		Issued Amount (USD million)	Weight	Cumulative Weight
1	BANKING	5,107	21.4%	21.4%
2	OIL & GAS EXTRACTION	3,962	16.6%	37.9%
3	MFR STONE CLAY & GLASS PRODUCTS	3,632	15.2%	53.1%
4	MFR CHEMICALS & ALLIED PRODUCTS	1,361	5.7%	58.8%
5	REAL ESTATE	1,262	5.3%	64.1%
6	MFR FOOD & KINDRED PRODUCTS	1,256	5.3%	69.4%
7	TRANSPORTATION BY AIR	1,188	5.0%	74.3%
8	CREDIT AGENCIES EXCEPT BANKS	1,040	4.3%	78.7%
9	MFR PETROLEUM REFINING & RELATED IND	890	3.7%	82.4%
10	COMMUNICATIONS	763	3.2%	85.6%
Total		23,902	100.0%	

Malaysia

1999 - 2003

		Issued Amount (USD million)	Weight	Cumulative Weight
1	ELECTRIC, GAS & SANITARY SERVICES	2,628	24.8%	24.8%
2	BANKING	1,551	14.6%	39.4%
3	HOLDING, INVESTMENT COMPANIES	1,075	10.1%	49.5%
4	CREDIT AGENCIES EXCEPT BANKS	904	8.5%	58.0%
5	COMMUNICATIONS	846	8.0%	66.0%
6	REAL ESTATE	844	8.0%	74.0%
7	PRIMARY METAL INDUSTRIES	488	4.6%	78.6%
8	SECURITIES, COMMODITY BROKERS, SERVICES	442	4.2%	82.7%
9	MFR MANUFACTURING INDUSTRIES	282	2.7%	85.4%
10	WATER TRANSPORTATION	244	2.3%	87.7%
Total		10,608	100.0%	

2004 - 2008

		Issued Amount (USD million)	Weight	Cumulative Weight
1	CREDIT AGENCIES EXCEPT BANKS	4,902	24.1%	24.1%
2	BANKING	3,804	18.7%	42.8%
3	ELECTRIC, GAS & SANITARY SERVICES	2,535	12.5%	55.2%
4	WATER TRANSPORTATION	1,563	7.7%	62.9%
5	REAL ESTATE	1,193	5.9%	68.8%
6	SECURITIES, COMMODITY BROKERS, SERVICES	1,043	5.1%	73.9%
7	COMMUNICATIONS	784	3.9%	77.8%
8	ENGINEERING, MANAGEMENT SERVICES	727	3.6%	81.4%
9	HEAVY CONSTRUCTION CONTRACTORS	485	2.4%	83.7%
10	HOLDING, INVESTMENT COMPANIES	419	2.1%	85.8%
Total		20,345	100.0%	

Indonesia

1999 - 2003

		Issued Amount (USD million)	Weight	Cumulative Weight
1	BANKING	1,020	32.0%	32.0%
2	COMMUNICATIONS	717	22.5%	54.5%
3	MFR FOOD & KINDRED PRODUCTS	308	9.7%	64.2%
4	MFR TOBACCO PRODUCTS	205	6.4%	70.6%
5	METAL MINING	195	6.1%	76.7%
6	MFR CHEMICALS & ALLIED PRODUCTS	180	5.6%	82.3%
7	REAL ESTATE	107	3.3%	85.7%
8	MFR MANUFACTURING INDUSTRIES	75	2.4%	88.0%
9	CREDIT AGENCIES EXCEPT BANKS	71	2.2%	90.2%
10	WATER TRANSPORTATION	67	2.1%	92.3%
Total		3,188	100.0%	

2004 - 2008

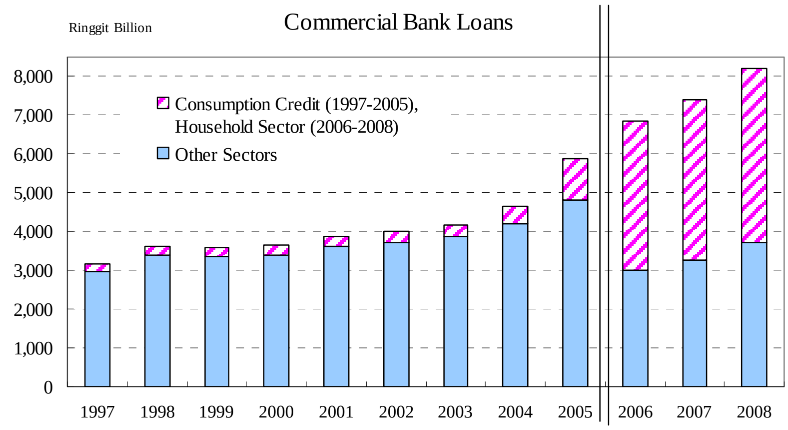
		Issued Amount (USD million)	Weight	Cumulative Weight
1	BANKING	2,202	24.7%	24.7%
2	COMMUNICATIONS	1,293	14.5%	39.2%
3	CREDIT AGENCIES EXCEPT BANKS	887	10.0%	49.2%
4	MFR FOOD & KINDRED PRODUCTS	785	8.8%	58.0%
5	ELECTRIC, GAS & SANITARY SERVICES	524	5.9%	63.9%
6	REAL ESTATE	502	5.6%	69.5%
7	BITUMINOUS & LIGNITE MINING	396	4.4%	73.9%
8	WATER TRANSPORTATION	371	4.2%	78.1%
9	MFR RUBBER & PLASTIC PRODUCTS	341	3.8%	81.9%
10	OIL & GAS EXTRACTION	222	2.5%	84.4%
Total		8,910	100.0%	

Sources: Thomson Reuters, Dun and Bradstreet TSR, “Standard Industrial Classification Codes.”

Bank Credits by Sector

Malaysia

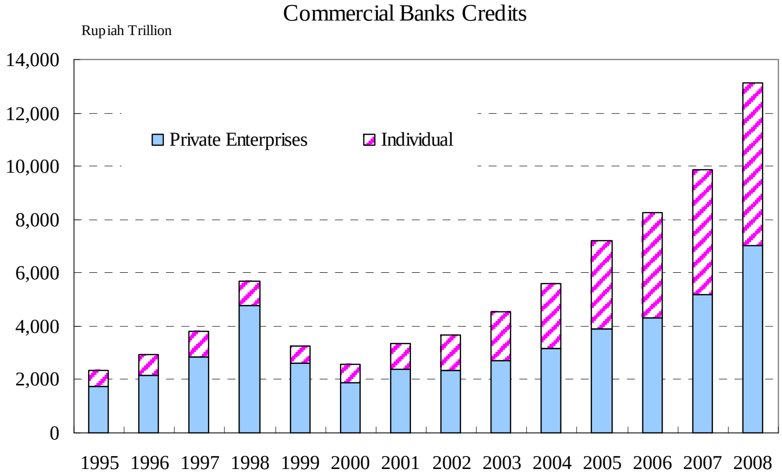
Commercial Bank Loans



(Note) There is discontinuity between data of 2005 and 2006 due to the revision of data series.

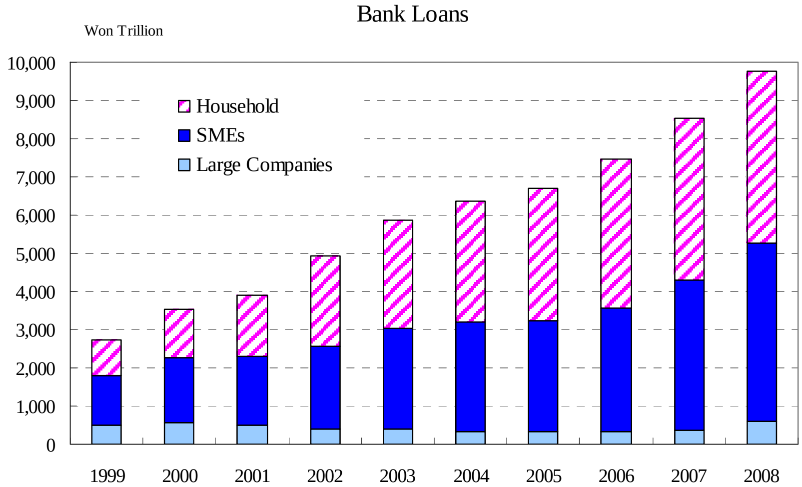
Indonesia

Commercial Banks Credits

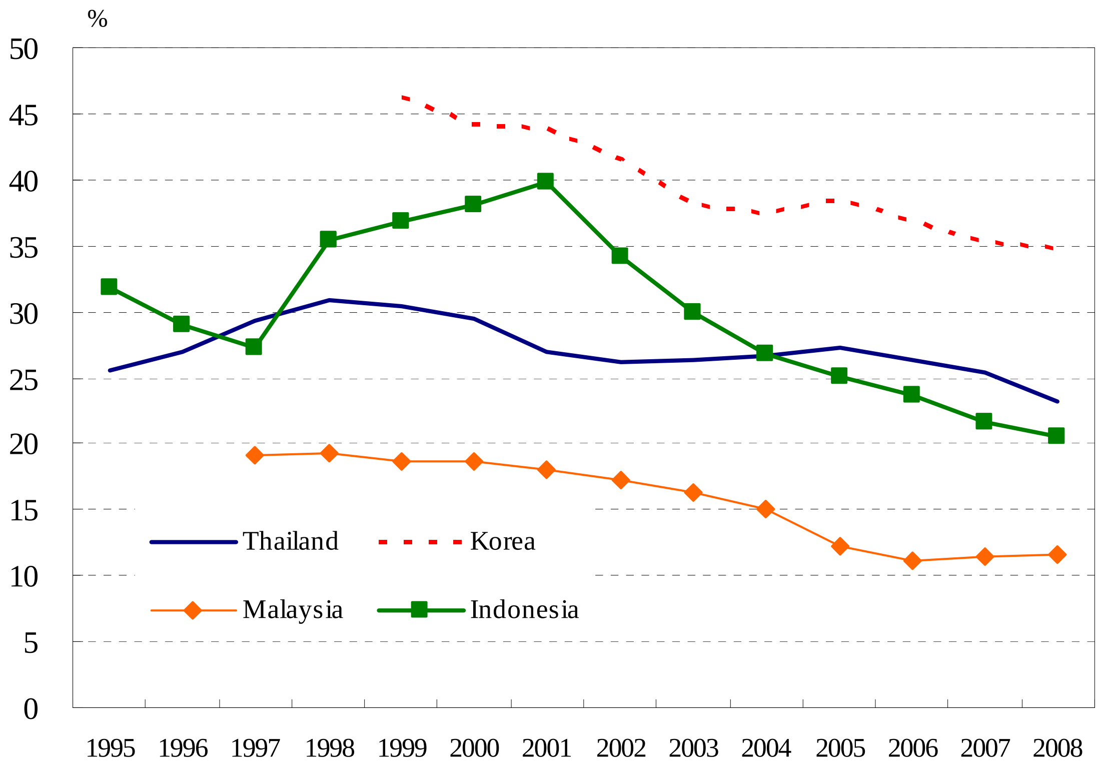


Korea

Bank Loans



Weight of Manufacturing in Bank Credits



(Note) There is discontinuity between data of 2003 and 2004 for Thailand, and data of 2005 and 2006 for Indonesia.

Sources: CEIC, Bank of Thailand, Bank of Korea, Bank Negara Malaysia, Bank Indonesia.