Development of the Asian Bond Markets

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I. Introduction

Since late 2002, development of the Asian bond markets has become one of the most frequently discussed policy issues in the Asian region. For example, during the 9th APEC Finance Ministers Meetings in September 2002, it was agreed that a regional bond market would be developed through securitization and credit guarantee. ASEAN+3 also started intensive discussions on the Asian Bond Market Initiative from December 2002 aiming at developing regional bond markets, and established six working groups to study various aspects of regional bond markets including, securitization, regional credit guarantee agencies, regional credit rating agencies, regional clearing and settlement systems, and so on. EMEAP (Executive Meetings of East Asia and Pacific Central Banks) has also launched Asian Bond Fund (ABF) with contributions from the foreign reserves of each member countries.

The voluntary and collaborative actions among Asian nations to develop regional bond markets through various fora started from the clear recognition that one of the crucial causes of the Asian crisis was underdevelopment of capital market, thereby heavy dependence on inefficient banking systems to finance domestic investment. Asia's distinctly bank-dominated financial systems had actually proved effective in promoting rapid economic growth in that they could efficiently mobilize and allocate financial resources to the corporate sector. Unfortunately, these systems caused the corporate sector to become over-reliant on short-term bank borrowing, making it very vulnerable to external shock.

Maturity mismatch is generally inherent in the banking sector as commercial banks accept short-term deposits and lend the proceeds out long-term. Nevertheless, the massive volume of unhedged short-term capital inflows before the financial crisis, largely in the form of inter-bank loans, served to shorten the maturities of bank liabilities, thereby exacerbating the maturity mismatch. The currency mismatch also became more serious as massive capital inflows of foreign currency were converted into domestic currency in order to finance the boom in domestic investment in the 1990s. This double mismatch of maturities and currency led to a rapid deterioration in the balance sheets of domestic financial institutions, eventually leading to the collapse. The development of bond markets is one of the most important policy goals in the region in that they would be instrumental towards preventing another financial crisis by redressing this double mismatch problem.

Interest in the development of bond markets has recently been on the rise throughout Asia as the need to recycle the vast amounts of accumulated capital directly back into the region has increased. Since the financial crisis, Asian countries have accumulated substantial foreign exchange reserves, reflecting a surge in exports and high personal savings. However, the bulk of these reserves have been invested in the developed markets, including the U.S. and Europe, and only later recycled back to the region in the form of risky assets, such as equities and foreign direct investment. The two most significant structural impediments to funneling Asian savings back into the region are the currency risks inherent in cross-border flows of capital and the quality gap between the low credit ratings of issuers and the minimum credit requirements of investors.

Recognizing the need to develop sound and liquid bond markets to prevent another capital account crisis, countries in the region have stepped up their efforts to develop and strengthen bond markets. However, no serious progress has been made yet. Bond markets are not yet able to intermediate between the high savings and huge investment demands of Asian countries.

Many useful tasks and initiatives have already been proposed to develop the bond markets in the region. Among others, in November 2002, Korea proposed the Initiative on Capital Market Development at the third Meeting of the ASEAN+3 Study Group. In response to this proposal, member countries agreed to undertake joint research this year and to submit a policy matrix to the AFMM+3. Korea, Japan, and Thailand recently prepared very interesting and meaningful proposals concerning the development of domestic and regional bond markets. One interesting common feature of these proposals is the active use of securitization and credit guarantees. This reflects the fact that one of the most serious hindrances to the development of the bond markets in the region is the credit quality gap between the generally low credit ratings of issuers and the minimum credit quality requirements of investors.

It has strongly been suggested by numerous experts that the credit quality gap could be narrowed very effectively by means of securitization coupled with credit guarantees. Securitization enables borrowers to issue asset-backed securities with a higher credit rating than would apply otherwise. When combined with credit enhancement and guarantee arrangements, these securities can become investment grade quality according to the international credit rating agencies, thereby becoming acceptable to investment managers. Securitization would also enable smaller, unknown corporate entities to access the bond markets and to reduce their reliance on short-term commercial bank finance. Based on our experience in bond market development, we propose an initiative to promote the development of Asian bond markets using securitization and credit guarantee, and to establish a regional credit guarantee facility.

The next section of this paper reviews the nature and characteristics of the Asian financial crisis and analyzes the pattern of capital flows in East Asia since the financial crisis. Related to these issues, we also explain why progress in the development of the bond markets in Asia has been so lacking. Section 3 proposes diverse schemes and measures to efficiently circulate the huge volume of Asian savings directly in the region. These mechanisms are characterized by utilizing securitization and credit guarantees. Section 5 concludes the paper and discusses some policy implications.

Ⅱ. Background of the Asian Bond Market Initiatives

1. Causes of the Asian Financial Crisis: Double Mismatch Problem

There has been intensive and extensive discussion on the nature and causes of the 1997 Asian financial crisis. Two models have been primarily employed to explain it: the first generation model and the second generation model.1 The first generation model attributes the main cause of the speculative attacks to the inconsistency between maintaining a fixed exchange rate regime and improving the internal economic fundamentals. This model essentially explains the current account problem. The second generation model suggests that the crisis was self-fulfilling. According to this model, the economy can collapse due to a sudden shift in market expectations and investor confidence.

In the aftermath of the Asian crisis, the widely accepted view was that it was an example envisioned in the second-generation model. However, it was later pointed out that neither of the two models sufficiently analyzed the Asian financial crisis. Yoshitomi and Ohno (1999), for example, pointed to the problems of the financial sector with its balance sheet effects, the sharp reversal in capital flows, sharp decline in absorption, and the free fall of the exchange rate in the framework of two crises. Kaminsky and Reinhart (1999) assert that the first and second generation models do not sufficiently address the correlation of the banking and currency problems despite the fact that many countries experienced both difficulties in the past.

Of the many factors cited as causes of the economic breakdown, some were common to most of the crisis-hit countries, whereas others were country-specific. However, the most notable characteristic of the Asian economic meltdown was the fact that it was a capital account crisis, distinct from a conventional current account crisis that is often caused by weak macroeconomic fundamentals. What preceded the financial crisis was a massive volume of short-term capital inflows attracted by large interest rate differentials between local currency and dollar rates under good macroeconomic performances. This was followed by the sudden reversal of these flows triggered by a cyclical domestic downturn and change in market perceptions. Such large swings in capital accounts amounting to 15-20 per cent of GDP among the crisis-hit economies in the space of less than one year led to an international liquidity crisis and a domestic banking crisis as the balance sheets of financial institutions and corporations rapidly deteriorated. This, in turn, was caused by the serious maturity and currency mismatches, the so-called double mismatch problem, more or less inherent in the banking sector, which constitutes the backbone of the financial markets of emerging economies.

Many experts claimed that the heavy-dependence on poorly functioning banking systems was the root cause of the economic crisis and that the affected countries should develop deep and liquid capital markets, especially bond markets, to prevent the recurrence of another economic failure in the region. In addition, a well-developed and sound bond market can efficiently mobilize and allocate savings, manage risks, improve corporate behavior, and facilitate government policies, all of which is conducive to sustained economic growth and maintaining financial soundness in an increasingly open and risky economic environment.

2. Persistent Double Mismatch Problem after Financial Crisis: Features of the Capital Flows in East Asia

There are two notable features of the pattern and direction of capital flows in the region since the crisis. First, East Asia has become a very large net capital exporter since the crisis, supported by huge current account surpluses. Before the crisis in the 1990s, most of the countries except Japan recorded heavy current account deficits nearly every year except 1993. In 1996, the total East Asian current account deficit excluding Japan exceeded $36 billion. It was immediately after the crisis that the total current account in these countries swung to a huge surplus. In 1998, for example, the current account in East Asian countries excluding Japan was $125 billion. It has since been steadily narrowing, but by 2001, it was still a substantial $40 billion. Including Japan, East Asia's total current account surplus was $244 billion in 1998, declining to about $130 billion by 2001. The accumulated current account surplus including Japan from 1997 to 2001 was a tremendous $930 billion. During the same period, Japan recorded its biggest current account surplus ever of $537 billion, while China recorded a surplus of $127 billion, Singapore $39 billion, Korea $77 billion, and other East Asian countries $20 billion or more. Such a major shift in the current account was primarily due to the steep devaluations of exchange rates, sudden reductions in domestic imports, and increases in exports, all ramifications of the fallout of the collapse. East Asia's current account surplus contributed significantly to the quick recovery of the economies in the region, and most turned from being capital importers to capital exporters.

<Table 1> Current Accounts in East Asia

(US$ billion)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
China	13.27	6.40	-11.61	6.91	1.62	7.24	36.96	31.47	21.12	20.52	17.40
Indonesia	-4.26	-2.78	-2.11	-2.79	-6.43	-7.66	-4.89	4.10	5.78	7.99	6.90
Korea	-8.32	-3.94	0.99	-3.87	-8.51	-23.01	-8.17	40.36	24.48	12.24	8.62
Malaysia	-4.18	-2.17	-2.99	-4.52	-8.64	-4.46	-5.94	9.53	12.61	8.41	.
Philippines	-1.03	-1.00	-3.02	-2.95	-1.98	-3.95	-4.35	1.55	7.91	8.46	4.50
Singapore	4.88	5.91	4.21	11.40	14.90	12.57	18.12	19.71	16.53	15.92	17.88
Thailand	-7.57	-6.30	-6.36	-8.09	-13.55	-14.69	-3.02	14.24	12.43	9.31	6.23
Hong Kong	5.68	5.37	9.87	3.13	-3.34	-2.13	-4.99	4.43	12.04	9.11	11.74
(Subtotal)	-1.53	1.49	-11.02	-0.78	-25.93	-36.09	23.72	125.39	112.9	91.96	40.35
Japan	68.20	112.57	131.64	130.26	111.04	65.79	96.81	118.75	114.60	119.66	87.80
Total	66.67	114.06	120.62	129.48	85.11	29.7	120.53	244.14	227.5	211.62	128.15

Source: World Bank OECD

The second feature relating to the capital flows in East Asia is the rapid increase in foreign exchange reserves, stemming mostly from the turnaround in the current account. Korea's foreign exchange reserves in early December of 1997 were merely $3.9 billion, but they soared to $131.6 billion by the end of June 2003. China's foreign exchange reserves also showed a notable increase, jumping from $142 billion in 1997 to $346.5 billion by June 2003. Japan's foreign exchange reserves in 1997 were $219 billion and $545.6 billion by June 2003. The foreign exchange reserves of most East Asian developing countries, though generally smaller, also generally rose. The total foreign exchange reserves in all of East Asia including Japan today account for more than 50% of the total foreign exchange reserves in the world.

This huge increase in foreign reserves is the result of the widespread realization in East Asia that insufficient foreign currency liquidity could lead to another crisis. In addition, because of their export-oriented economic systems, they have had to counteract foreign exchange depreciation due to the increase in net capital inflows after the crisis. Their policy goal has naturally been to increase their foreign exchange reserves.

<Table 2> Ratio of Asia's Foreign Reserves to World Foreign Reserves

(US$ billion)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total Reserves in Asia (A)	240.0	246.7	315.4	412.2	520.7	617.9	649.3	701.9	837.5	957.0	1061.1
Total Reserves in World (B)	889.3	894.2	994.1	1142.8	1361.8	1537.7	1602.1	1651.2	1975.8	2105.8	2201.1
(A/B, %)	27.0	27.6	31.7	36.1	38.2	40.2	40.5	42.5	42.4	45.5	48.2

Source: IMF, IFS

The third new feature of the capital flows in East Asia is that the East Asian countries are exporting "safe" capital while importing "risky" capital. In other words, East Asia has shown a clear tendency to export risky assets and import safe assets2

Foreign direct investment into East Asia has been the largest and most consistent form of inflows of risky capital. However, the bulk of FDI capital inflows has been directed to specific countries, especially China, and this tendency has become more pronounced since 1997/1998. Portfolio equity investment has also flowed into East Asia, although the flows have varied depending on sentiment in the global and local stock markets. Equity inflows into the region amounted to only $4 billion in 1997, but they totaled $77 billion in 1999, $59 billion in 2000, and $11.1 billion in 2001.

In the other direction, East Asia as a whole has shown a high inclination to invest in low-risk securities and interbank deposits, and to repay bank debts. This can be explained to some extent by the burgeoning foreign exchange reserves, which are usually invested in safe, liquid assets and have been accumulated as a result of the huge current account surpluses. The preference for safe assets has been even greater because of the relative lack in expertise in risk assessment and management coupled with the more risk-averse behavior of institutional investors in East Asia since the Asian crisis.

The bulk of overseas portfolio investment by East Asian countries has also been directed mainly into assets that are safe and highly liquid, such as U.S. Treasuries, U.S. agency debt, and European and Japanese sovereign debts.

<Table 3> Asian Countries' Holdings of U.S. Treasuries and Foreign Reserves

(US$ billion)

	1999	2000	2001	2002
Japan	**320.0**	**317.7**	**319.6**	**361.9**
Foreign reserves	**288.1**	**361.6**	**402.0**	**460.5**
% of total reserves	**111.1**	**87.9**	**79.5**	**78.6**
China	**51.8**	**60.3**	**78.6**	**96.8**
Foreign reserves	**154.7**	**165.6**	**212.2**	**274.6**
% of total reserves	**33.5**	**36.4**	**37.0**	**35.2**
South Korea	**26.1**	**29.6**	**32.8**	**42.8**
Foreign reserves	**74.1**	**96.2**	**102.8**	**118.3**
% of total reserves	**35.2**	**30.8**	**31.9**	**36.2**
Taiwan	**29.3**	**33.4**	**35.3**	**34.7**
Foreign reserves	**106.2**	**106.7**	**122.2**	**159.1**
% of total reserves	**27.6**	**31.3**	**28.9**	**21.8**
Singapore	**30.7**	**27.9**	**20.0**	**18.1**
Foreign reserves	**77.1**	**80.4**	**75.6**	**80.4**
% of total reserves	**39.8**	**34.7**	**26.5**	**22.5**
Thailand	**10.7**	**13.8**	**15.7**	**17.5**
Foreign reserves	**34.8**	**32.46.57**	**33.0**	**37.7**
% of total reserves	**30.8**	**42.3**	**47.6**	**N.A.**

Note: 2002 figures are as of as Nov. 30, others are as of Dec. 31.

Source: U.S. Treasury Department

China and Korea have channeled more than 98% of their total financial asset investment in the United States into U.S. bonds. The corresponding figures for Thailand and Indonesia are 97% and 90%, respectively. Investment by financially advanced East Asian countries in the U.S. bond market is not as high; only 47% of Singapore's investment in U.S. financial assets is in U.S. bonds, with Japan at 61% and Hong Kong at 73%.

3. Factors Hindering Smooth Recycling of Asian Capital through Bond Markets

Before we can discuss specific measures for circulating Asian capital directly into the region, we must first ask why the bond markets have remained underdeveloped in Asia. We may cite factors on both the demand side and supply side, and also problems with the infrastructures in East Asia.

1) Limited Supply of Bonds: Low Credit Ratings of Bond Issuers

One of the most important factors hindering bond market development in the region is the limited supply of quality bonds. Most bond-issuing firms in East Asia have poor credit ratings, and there is only a limited number of large, reputable firms. As is well known, the credit ratings of many East Asian countries have been below investment grade, which on the whole is discouraging to international investors. Japan's overseas capital investment is mostly concentrated in bonds. Because of the low credit ratings of major East Asian countries, Japan's options for portfolio investment in East Asia are necessarily limited.3 With East Asia's underdeveloped bond markets and low liquidity, it is difficult to expect foreign investment in East Asian bonds. This is, not surprisingly, discouraging capital movements in the region.

One of the reasons for the low credit ratings is the high political risk of East Asian countries such as Indonesia. This makes the corporate bonds of companies located in such countries risky assets. Political risk suggests risk of returns on investment brought on by sovereign acts. For example, there is no limit on the repatriation of investment proceeds by foreign investors, but a change in government, war, shortage of foreign exchange, and embargo are possibilities that can pose limits in the future.

2) Limited Demand for Bonds: Underdeveloped Institutional Investor Base

Most East Asian institutional investors are small-sized and underdeveloped, and they are not diversified, reflecting low per capita incomes and low levels of asset accumulation. Pension, mutual fund, and insurance companies' assets constitute a small portion of the overall financial market in Asian countries. Although the number of institutional investors in emerging economies, such as Korea and Thailand, is increasing, most East Asian countries, particularly China, are still far from financial institutionalization. There are several reasons for this. First, financial intermediation in most East Asian countries is handled almost entirely by banks. The extensive branch networks of banks is tapping the high domestic savings and hindering the development of institutional investors. Second, the corporate governance structures in East Asia are not conducive to the development of institutional investors. With the family-controlled conglomerates dominating corporate governance, corporations generally seek to increase capital by retaining profits or taking out bank loans rather than go to the capital market. Third, diversification of assets under management by institutional investors is precluded by the absence of a long-term capital market and lack of long-term investment products. Fourth, government regulation or restrictions on pension funds or investment criteria of insurance companies are hampering the development of the institutional investor base.

3) Capital Controls and Regulation

For the most part, governments cannot completely restrain the entire flow of cross-border capital by means of capital controls, but controls can raise the cost of capital flows to such a degree that specific types of capital flows are suppressed. Of the numerous types of controls that may be employed, it is not unusual for a government to impose restrictions on the entry of foreign financial institutions into the domestic financial market or to cap foreign equity ownership in domestic financial institutions. These restrictions can reduce the level of competition in the domestic financial market and guarantee profits to domestic financial institutions. Although such restrictions have been eliminated in advanced economies, many East Asian countries still impose limits on foreign financial institutions. Capital flows in East Asia before the 1990s were mainly only financial financing and bank loans, largely because of capital controls and regulation.

Japan, Korea, Hong Kong, and Singapore do not impose restrictions on capital flows, whereas China, Malaysia, Indonesia, the Philippines, and Thailand still do in many ways. There are some notable features of the capital flow controls that these countries impose. First, there are more restrictions on capital outflows than on capital inflows. This is a reflection of the concerns on the part of some countries in light of their experience during the 1997 East Asian currency crisis. Second, some countries impose heavier controls on foreign investments in bonds than on stocks. In China, foreign investment in stocks is allowed only in B-type stocks, while foreign investment in bonds is prohibited. In Korea, the restrictions on foreign investment in the stock market are less severe than in the bond market.

In addition to capital controls, many countries in East Asia impose other kinds of regulations that effectively hinder the development of the bond markets. For example, some countries regulate interest rates on government and corporate bonds and require institutional investors to hold large volumes of bonds for prudential reasons. They may also impose stamp duties or taxes on bond transactions, or require time consuming and complicated processes for bond issuance.

4) Inadequate Infrastructures

Many countries in East Asia have inadequate infrastructures and expertise for information gathering, credit rating, clearing and settlements, trading, accounting, auditing, and disclosure, etc. For this reason, investors cannot readily obtain information and manage the risks of bonds and market conditions, thereby impeding the development of the bond markets. Perhaps not surprisingly, the risk-averse behavior of East Asian investors, a result of the 1997 Asian crisis, is also discouraging capital movements within the East Asian region.

Ⅲ. Features and Rationale for our Proposal to Develop Asian Bond Markets

1. Features and Characteristics of our Proposal

As aforementioned, it is now widely accepted that the underdevelopment of the bond markets in the East Asian region and the excessive dependence on bank-intermediated financing and foreign short-term financing were some of the major causes of the Asian financial crisis of 1997/1998. There is also a clear consensus among the policymakers and economic leaders of the region that developing the bond markets is a key priority to prevent the recurrence of a financial crisis and to sustain economic growth. Our proposal is based on the belief that well-functioning bond markets could promote stable capital flows within the region by efficiently channeling the enormous savings of Asian countries into productive projects in the region and provide the kind of long-term financing that is necessary to further the economic development of the region.

To develop the regional bond markets that can efficiently recycle Asian savings back into the region, we propose a two-tiered process that would mobilize the savings of capital-abundant countries to developing countries within the region. Our initiative entails the use of securitization and credit guarantees. It specifically addresses the credit and currency risks, which are the most serious impediments to the smooth recycling of savings within the Asian region. Securitization and improvement of credit ratings would do a great deal to address the credit risk, particularly in the underdeveloped markets, as it enables the issuance of higher-credit securities. Investors prefers such securities over collateralized assets. Furthermore, to address the currency risk problem faced by the issuers, we emphasize local currency-denominated financing methods. And considering that the Asian bond markets are denominated in the U.S. dollars, are small in size, and not very well developed, we believe that development of local currency-denominated schemes would make more sense. It should be noted that convertible currency-denominated financing can also be directly applied through the methods of this proposal.

We propose a dual system of securitization and credit guarantees. One system - the first tier system - would be employed in the financing country, and the other - the second tier system - would be used in the capital abundant country. The rationale for the dual system scheme lies in the great differences in the ABS systems of Asian countries with regard to the legal, institutional, tax, accounting, financial systems, etc. Taking into account these differences, we need to harmonize the securitization at the first-tier level in each country. In addition, credit enhancement and credit guarantee is provided by local credit guarantee institutions or government agencies. By requiring each country to provide credit guarantee at the first-tier level, we can mitigate or prevent moral hazard in capital importing countries.

Through our proposal, we also intend to accomplish two additional tasks: to promote financing of small- and medium-sized enterprises (SME) and governments of developing countries, and to provide financing to resolve non-performing loans (NPL) and develop the infrastructure in the region. The securitization and credit guarantee method that we propose has been widely and extensively implemented in Korea for various purposes since the financial crisis of 1997. In the next section, we show, as an example, how Korea used Collateralized Bond Obligations (CBOs) to provide SME financing and securitization and credit guarantees to mitigate the various risks and imbalances present in an unstable financial market. Korea's experience with CBOs is also a valuable account of the role of the government in creating a well-functioning securitization scheme.

2. Lesson from the Korean Experience: Resolving Credit Crunch Problem after Crisis with Securitization and Credit Guarantees

The 1997 financial crisis was, obviously, such a serious shock that the Korean government immediately started to implement bold and sweeping financial reforms in its aftermath. At the initial stage, most were focused on the banking sector, and this led to a serious credit crunch problem in the financial markets. Banks became very conservative in their operations and were reluctant to extend loans to the corporate sector because the government began to evaluate the soundness of banks based on their BIS ratios. What is more, depositors tended to move en masse to Investment Trust Companies (ITCs) and away from banks as they were not sure which banks could survive and which could not. This led to a massive outflow of funds from the banking sector into the ITCs. Corporate bonds were issued in large volumes to meet the companies' financing demands and became the major source of corporate funding.

This virtuous cycle in the flow of funds came to an end with the collapse of Daewoo group, one of Korea's largest conglomerates, in the middle of 1999. This led to a huge flight to quality in the corporate bond market and other financial markets, resulting in a severe imbalance between the supply and demand for corporate bonds. There were several reasons for this.

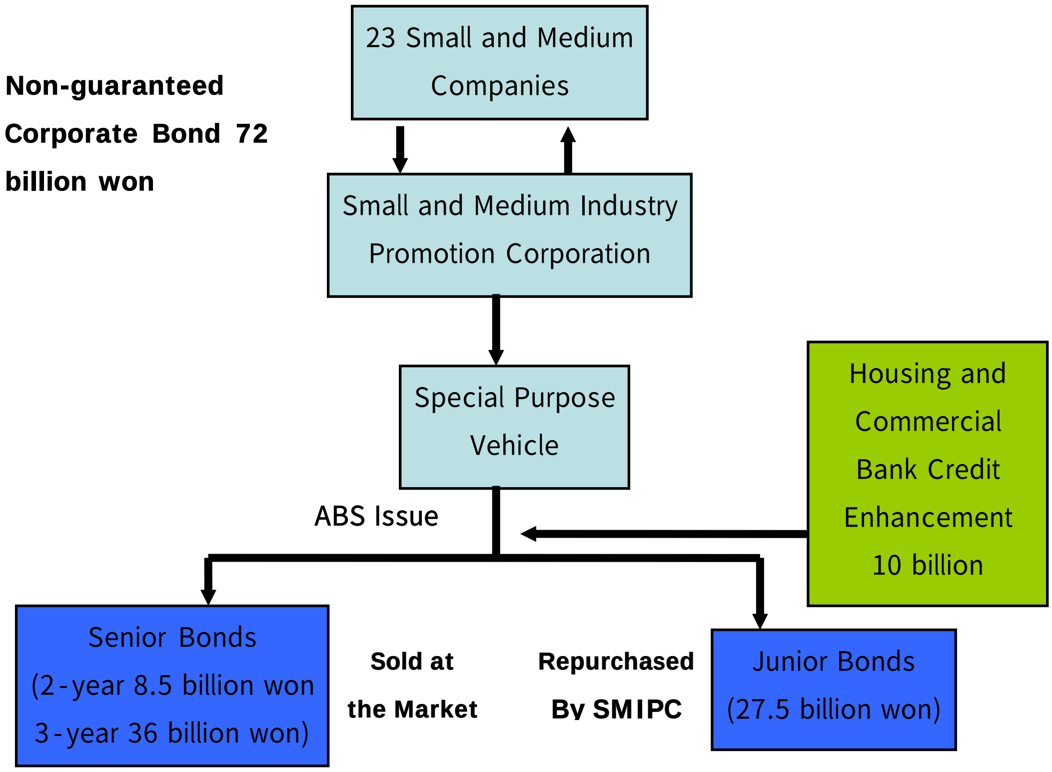
First, those who invested in bonds issued by Daewoo suffered losses, and these investors rushed to ITCs to redeem their funds. To meet the huge volume of redemptions, the ITCs had to sell the bonds held by the funds. However, it was naturally difficult for them to find investors who wanted to buy corporate bonds because of the on-going flight-to-quality. Those investors who put their money into ITCs were primarily interested in safe funds composed of investment-grade bonds. As a result, the ITCs could purchase only government bonds and corporate bonds with high credit ratings.

Second, the asset management rules of institutional investors, such as pension funds and insurance companies, prohibited investment in bonds with credit ratings below A-. Such rules were introduced before the currency crisis, when most companies had no difficulty obtaining credit ratings of A- or above. After the Daewoo crisis, however, the credit rating agencies tightened their credit rating assessments and downgraded most companies' credit ratings, leaving only a handful of companies with ratings of A- or above. The imbalance between supply and demand in the bond market exacerbated the financial difficulties of ITCs and corporations. In particular, as large volumes of corporate bonds issued in late 1998 came due in 2000, the companies that issued them found that they were generally not able to roll this debt over. Moreover, banks undergoing restructuring were reluctant to make loans to the corporate sector. This gave rise to concern that many companies that needed to roll over maturing debt may go bankrupt.

The Collateralized Bond Obligation (CBO) was introduced and widely utilized to resolve these serious imbalances between the demand and supply in the bond market. Generally, CBOs are used to repackage high-yield, non-investment grade bonds into investment-grade bonds with high enough ratings to generate cash flows for the assets holders and to enjoy excess spreads. In Korea, ITCs with a CBO structure could collateralize the non-investment grade bonds to issue senior bonds with credit ratings of A- or above. In mid-2000, a primary CBO scheme was adopted to help companies with low credit ratings raise funds amidst a serious credit crunch in the corporate bond market. Because the flight to quality was so pervasive in the bond market, senior bonds issued by the securitization scheme became highly popular. However, placing the subordinate bonds was difficult since hedge funds were not allowed in Korea and speculative demand for high yield bonds was low.

In response to the severe credit crunch in the corporate bond market, the government intervened and took the initiatives to place subordinate bonds. It used three methods to place them. The first method was to have a government agency be the originator for securitization and purchase the unsold subordinate bonds. For example, <Figure 1> shows the structure of the primary CBO, which was originated by the Small and Medium Industry Promotion Corporation (SMIPC). A primary CBO is a modified form of a secondary or traditional CBO. In contrast to secondary CBOs, which provide liquidity for asset holders, one of the distinguishing features of primary CBOs lies in facilitating new issuance of corporate bonds to help raise finances for corporations. The CBO scheme, collateralizing corporate bonds issued by 23 small and medium-sized companies, created two tranches of senior bonds worth 44.5 billion won and subordinate bonds worth 27.5 billion won. The senior tranche of bonds could be sold to investors in the market because the credit rating on them was raised through the guarantee of the Housing and Commercial Bank and the Commercial Bank of Korea. On the other hand, the subordinate bonds had to be purchased by the SMIPC. If there were investors or funds specializing in high-risk bonds, junior bonds could have been placed in the market. However, since a high yield bond market did not exist in Korea, the originator had to repurchase the high-risk subordinate bonds. Nevertheless, the SMIPC was able to provide 72 billion won to small and medium-sized companies while spending only 27.5 billion won, thanks to the CBO scheme.

< Figure 1> Structure of the CBO Scheme by SMIPC



The second method was to provide credit enhancement through public agencies such as the Korea Credit Guarantee Fund or the Korea Technology Credit Guarantee Fund. Through credit enhancement, the government was able to reduce the share of subordinate bonds to five percent of total asset-backed securities issued. The third method was to set up subordinate bond funds that have to invest more than one half of their total assets in subordinate bonds issued by the CBO scheme. In compensation for the high credit risk, the funds enjoyed tax exemptions on returns on investment and were given a preferential treatment in the allocation of IPOs in the very active KOSDAQ market.

Although the issuance of CBOs by government intervention entailed some negative side-effects, it is believed that the CBO scheme was effective towards mitigating the severe credit crunch after the Daewoo crisis. Furthermore, the use of CBOs in Korea has served as a prime example of how securitization, combined with credit guarantees, can help reduce the various risks present in a market and improve the efficiency of the market system.

3. Overview of ABS Market in East Asia

Before weighing the merits of our proposal, it may be helpful to first examine the overall asset backed securities marketw in East Asia and particularly the development of that in Korea. Although their history is short and they are still relatively small, the asset-backed securities markets of East Asian countries have been growing at a fast pace. They now account for a significant part of the East Asian financial market.

In Korea, the ABS market was virtually nonexistent until 1997; now it is the second biggest in the region, trailing behind only the Japanese ABS market. The Korean ABS market benefited enormously from the financial restructuring after the 1997 financial crisis. Korea had decided to employ securitization as the major tool to liquidate the non-performing loans held by the financial sector. The Asset Securitization Act of 1998 laid the institutional foundation for securitization, and the Korea Asset Management Corporation played a key role in liquidating the non-performing loans through securitization. Huge volumes of CBOs (collateralized bond obligations) and CLOs (collateralized loan obligations) were issued in Korea starting in 1999 to rectify what was a dire situation after the collapse of Daewoo. There was a massive accumulatiopn of NPLs, and the Daewoo debacle sparked a general flight to quality, leading to difficulties in redeeming corporate bonds. Only when the liquidation of the non-performing loans was completed and the flight-to-quality eased did securitization of credit card receivables become a growth factor for the Korean ABS market from 2001.

Excluding Korea, Hong Kong, and Singapore, the ABS markets of Malaysia, Thailand, and other East Asian countries are not very large. In fact, many institutional restrictions remain in place and impede the growth of the ABS markets in East Asia. The major institutional factors that affect the ABS market are the legal framework, accounting and tax systems, underdevelopment of credit rating agencies, currency swaps, and credit guarantee facilities.

The development of an ABS market requires a legal framework that facilitates true sale transactions for securitization. The common law systems of Hong Kong, Singapore, and Malaysia already acknowledge trusts and are adequate. Hong Kong and Singapore have the most advanced financial markets in East Asia, and they also have the institutional frameworks and conditions needed for developing ABS markets. The growth of the ABS markets in these two economies depends on the demand for securitization. Malaysia has regulatory problems related to securitization that are not yet resolved, such as the capital gains tax levied on real estate owned under special purpose vehicles and a bankruptcy law that does not guarantee exemption of special purpose vehicles from the bankruptcy of the original asset owner. The development of the ABS market in Malaysia has, naturally, been hampered, despite the high potential demand for securitization.

Korea and Thailand, whose legal systems are based on civil law, either have underdeveloped trusts or deny trusts, so they need unique securitization laws that are suited for their situations. As aforementioned, Korea adopted the Asset Securitization Act to resolve problems arising from non-performing loans. This Act provides comprehensive legal and regulatory foundations; encompassing the legal issues related to securitization, tax, accounting, and management and is considered a crucial factor behind the rapid development of the Korean ABS market since the late 1990s. In contrast, Thailand also enacted an ABS law in 1997, but the law did not clearly address the uncertainties in issues like assessment of collateralized assets, legal status of special purpose vehicles, taxes, and foreclosures, thus hindering the development of the Thai ABS market. It must be noted that the establishment and harmonization of legal, accounting, and loan collection systems among participating countries is necessary for the first tier securitization as explained in this proposal.

Ⅳ. Schemes to Facilitate Recycling of Asian Savings in the Region

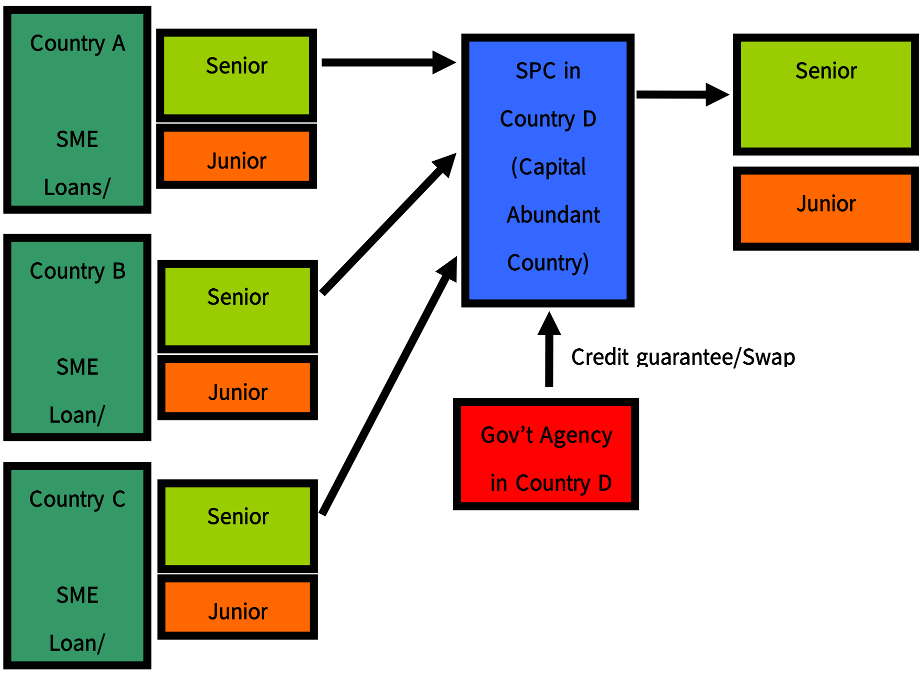
Taking into consideration the various methods employed by Korea in narrowing the credit quality gap and facilitating SME financing soon after the financial crisis, we make the following four proposals for establishing a sound, efficient bond market and promoting recycling of Asian savings back into the region.

1. SME Financing

As illustrated in <Figure 2>, our first proposal focuses on promoting the developing countries' SME financing in local currencies by mobilizing savings from capital-abundant countries. The proposal entails implementing a two-tier securitization process, one in borrowing countries and the other in capital-abundant countries. A two-tier process is necessary because of the differences in the financial and legal system among the participating countries in the region.

As a first step, government financial institutions or agencies in the capital importing countries would securitize loans or bonds issued by SMEs in local currencies. Then, in a capital abundant country, a Special Purpose Company (SPC) would be established to securitize the underlying assets, which are composed of the senior tranches from the capital importing countries. The junior tranches, on the other hand, are assumed by the local institutions in the capital importing countries, which select the firms eligible for securitization. Some senior tranches may be sold to local investors, but the remainder is transferred to an SPC in capital abundant countries. Additionally, senior tranches are backed by credit guarantees either of local credit guarantee agencies or government institutions in the capital abundant countries. A well-known government agency in an investor country, such as Korea Credit Guarantee Fund (KCGF) or Japan Bank for International Cooperation (JBIC), would be qualified to provide guarantees for senior tranches.

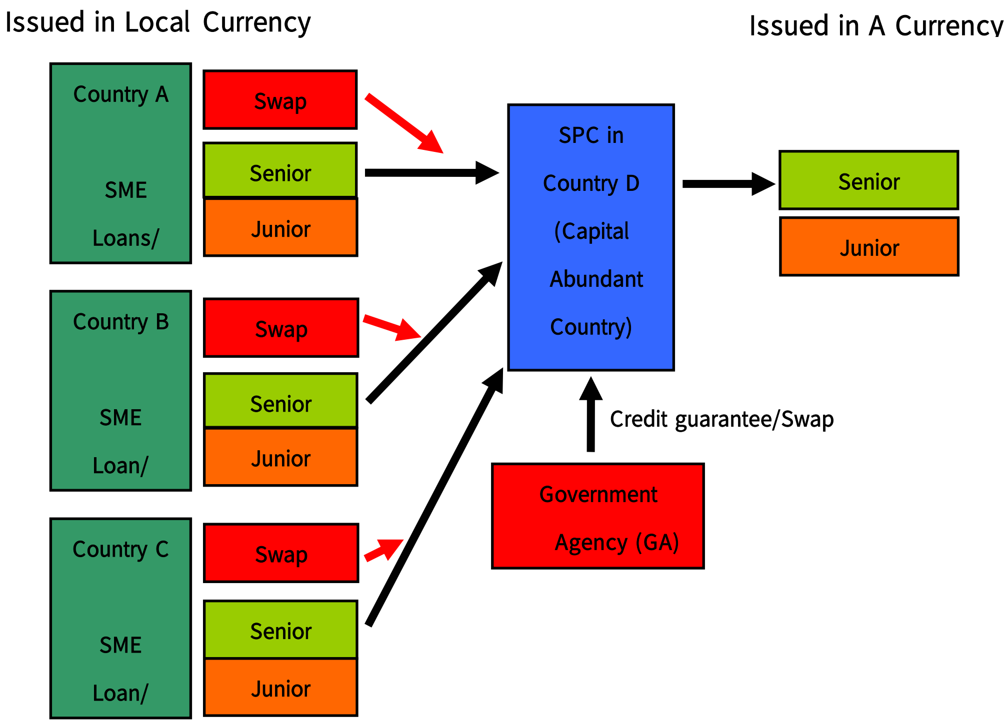
<Figure 2> SME Financing without Currency Swaps



It should be noted that cooperation among participating institutions is critical for the smooth functioning of this system. The coupon rates of both underlying assets and asset backed securities, fees for underwriting and credit guarantee, and the portion of senior tranches compared to respective junior tranches are notable examples of many areas where cooperation among participating institutions is critical. Furthermore, because this proposal allows for the adoption of securitization with proper risk sharing, moral hazard is expected to be minimal.

A slight modification of the first proposal is illustrated by <Figure 3>. This modified proposal is nearly the same as <Figure 2>. The only difference is that it calls for providing currency swaps to investors who are not willing to assume currency risk. A government agency (GA) or other proper institution in country "A" would provide the SPC with currency swaps and then hedge the currency risk using back-to-back swaps with swap dealers. This would be done through the currency swap market, if it exists in the developing country in question, or with the central bank of the developing country if there is no swap market.

<Figure 3> SME Financing with Currency Swaps

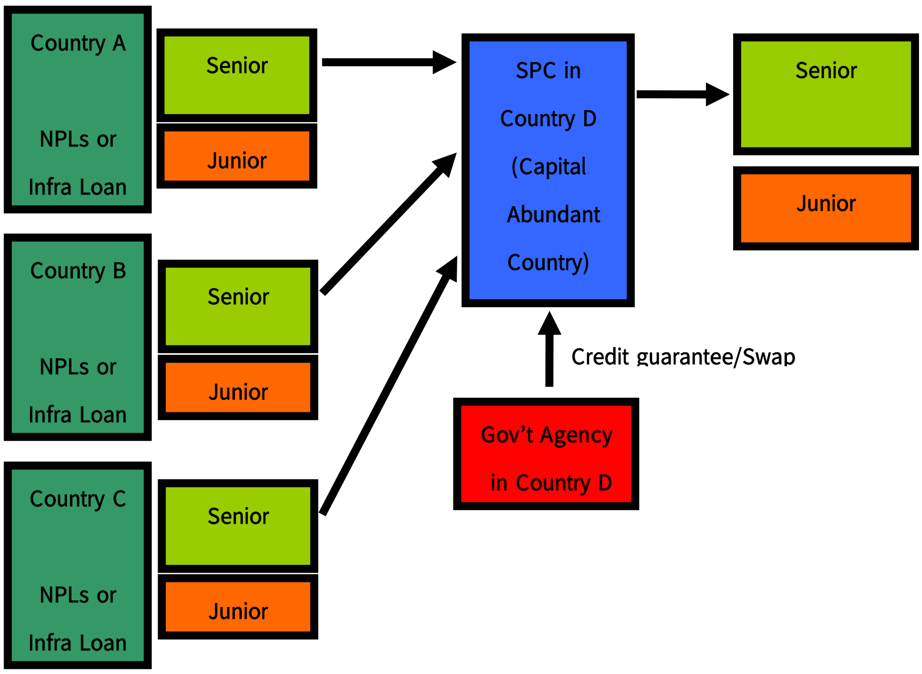


2. Disposing Non-performing Loans (NPLs)

Our second proposal is focused on liquidating the NPLs held by the financial institutions in the region by mobilizing savings from capital-abundant countries through securitization. As shown in <Figure 4>, Asian countries are saddled with huge burdens of NPLs, varying from 10% of the GDP (Korea, Indonesia, and the Philippines) to as much as nearly 50% of GDP (China) in 2001. As we experienced in many countries, the financial markets of Asia cannot be normalized or developed without disposing of their huge volumes of NPLs. Therefore, to decrease and dispose of NPLs is one of the prime goals in many Asian countries.

We believe that Asian countries can efficiently dispose of NPLs, either on their own or by collaborating and pooling their NPLs. The dual securitization scheme we propose for NPL disposal is similar to that for SME financing, except that the underlying assets are NPLs or infrastructure loans instead of SME loans or bonds.

<Figure 4> NPL Disposal and Infrastructure Financing

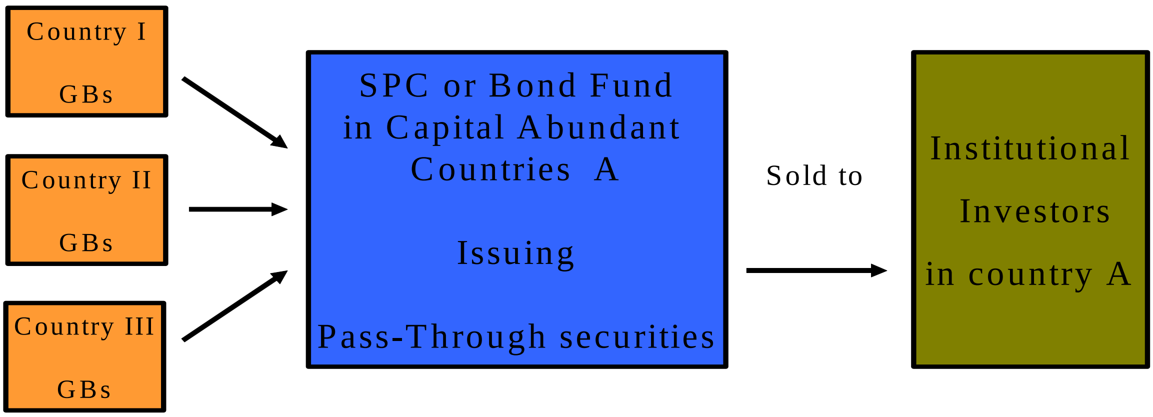


3. Government Financing

Our third proposal is focused on promoting government financing in developing countries by encouraging investors in capital abundant countries to invest in government bonds issued by capital importing countries. The process is illustrated in <Figure 5>. First, capital importing countries A, B, and C issue government bonds denominated in local currencies and transfer them to an SPC in capital abundant country D. Then, the SPC or a bond fund in capital abundant country D repackages the underlying assets composed of each country's government bonds. Finally, the

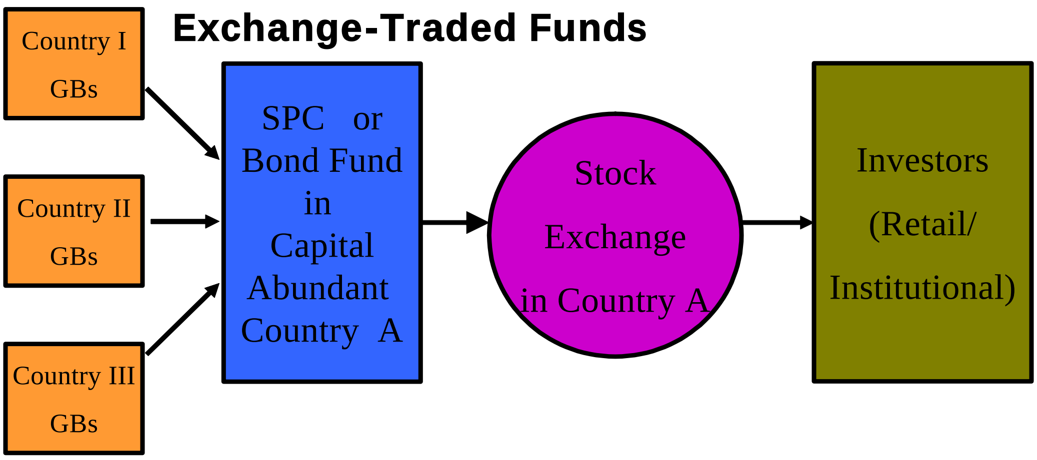
SPC would issue currency-basket-linked pass-through securities denominated in the capital abundant country's currency and sell them to investors.

<Figure 5> Government Financing



The third proposal can be modified slightly by listing the pass-through securities on stock exchanges, in effect turning them into Exchange-Traded Funds (ETFs). The pass-through securities, which are denominated in capital abundant country D's currency, can then be redeemed with the underlying assets. A well-known government agency in the capital abundant country (such as the Korea Credit Guarantee Fund (KCGF) or Japan Bank for International Cooperation (JBIC)) can then provide swap arrangements to the SPC. The agency can hedge currency risks using back-to-back swaps with the local swap dealers, central banks, or government agencies in capital importing countries. An ETF scheme would improve liquidity as well as broaden the investor base.

<Figure 6> Government Financing through Exchange Traded Funds

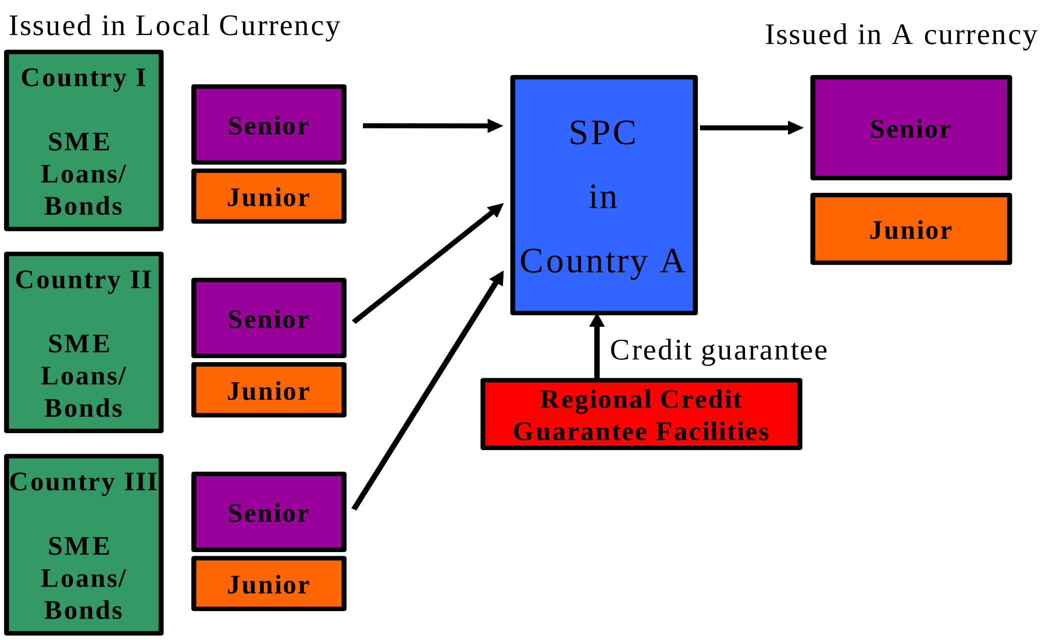


4. Establishment of Regional Credit Guarantee Facility

Our final proposal explores ways to establish a multilateral agency that can enhance the efficiency of securitization in the Asian bond markets by providing credit guarantees. This agency would serve multi-functional purposes, such as providing guarantees and swap arrangements, structuring securitization deals, and acting as a market maker in the region.

Notwithstanding the need to clarify the specifications of a regional credit guarantee facility, there should be sufficient paid-in capital that the facility could qualify for a high rating of AAA, or AA at the minimum. The facility would play a critical role in fostering the development of regional bond markets. Governments, government agencies of member countries and international financial institutions may voluntarily subscribe to a share of the facility. The business should cover both the developed and developing countries in the region, and the facility should be managed professionally by staff with experience in the credit guarantee business.

<Figure 7> Securitization with Guarantees by Regional Credit Guarantee Facilities



here is one good example of a multilateral agency that had been established for the purposes of facilitating development of the bond markets in the region. Asian

Securitization & Infrastructure Assurance (Pte) Ltd. (ASIA Ltd.) was the first and only regional credit guarantee agency established in Asia (Singapore) with more than a commercial objective; to facilitate the development of fixed income markets in Asia. ASIA Ltd. was established in 1995, and its shareholders included CapMAC Asia Ltd., Apmac Investment Pte Ltd., the Asian Development Bank (ADB), Employees Provident Fund of Malaysia, American International Assurance Co. Ltd., Kookmin Bank, Netherlands Development Finance Co., and DEG Deutsche Investitions und Entwicklungsgesellschaft mbH. ASIA Ltd. began with total paid-in capital of $150 million. It intended to set up local agencies in the second phase of development to cater to local currency-denominated bonds, while the Singapore main office would handle non-local currency (notably US$) denominated bonds. However, the Asian financial crisis led to a downgrading of its claim-paying ability rating in 1998, and currently it is in a run-off mode.

In retrospect, the business mode of the company had many structural problems which made it vulnerable to outside shocks. First, at the time ASIA Ltd was building its book of business in 1996-97, its risk management practices seemed prudent based on the assumption that the country risk among Asian countries was not highly correlated. However, the reality turned out to be completely different, i.e. the crisis swept through most East Asian countries to varying degrees. Second, the company prohibited the provision of any direct guarantee policies to non-Asian economies and certain developed Asian economies (Japan and Australia). The Asian Development Bank (an equity owner of the venture) had insisted on this restriction, but it not only significantly reduced the potential business available to the company, it also exacerbated the correlation risk and concentration problem among the Asian countries. Third, in relation to the second problem, there were too few business deals for the company since it could only serve developing countries. This, coupled with the fact that the company could not closely monitor the local market conditions in each developing country, meant that the company was forced to become involved in overly risky businesses. There should have been some closer collaboration with local financial institutions and guarantee agencies. Fourth, the initial capital was inadequate to absorb the great risks inherent in the provision of guarantees to developing Asian countries. What made the situation worse, additional callable capital was not injected by participating shareholders during the periods of high stress, contrary to the original agreement. Fifth, the company was exposed to big currency risks because it dealt with only US dollar-denominated bonds. Finally, the company's initial credit rating, single A, was too low to do the business.

By the end of 1999, the company's $934 million credit insurance portfolios consisted mostly of sovereign, asset-backed, infrastructure and financial institution debt obligations throughout Asia. In terms of geographical distribution, as of the end of 1999, 24% of ASIA Ltd.'s guarantees and assumed reinsurance were outstanding to South Korea, 11.4% to Malaysia, 10.3% to Indonesia, 9.1% to Hong Kong, and 20.9% to OECD countries (except South Korea). As of the end of March 2000, ASIA Ltd. had outstanding guarantees totaling US$924 million.

ASIA Ltd. applied zero-loss underwriting standards for its operations with a concentration of business in the credit rating range of BBB+ to BBB-. Rating requirements for ASIA Ltd. were such that a maximum of 25% of a guaranteed portfolio in non-investment grade bonds still kept an A rating. After the onset of the financial crisis and particularly the credit downgrades of Indonesia and Korea, the claims paying ability of ASIA Ltd. was downgraded by Standard and Poor's from A to BB in January of 1998. At this time, the agency had to stop writing new business.

Following the downgrade of its claims paying ability, ASIA Ltd. sought to raise additional claims paying resources to restore its investment grade rating to A. The shareholders were, however, unable to agree on the terms of a recapitalization plan due to dissension over broadening the geographical coverage of ASIA Ltd. In April 1999, ASIA Ltd. contracted out its day-to-day operations, including surveillance of its credit insurance portfolios, to an affiliate of MBIA, and it is now effectively under the management of MBIA Singapore Pte Ltd. Inclusive of the Reinsurance Treaty with ERC Frankona Ruckversicherungs Aktiengesellschaft of $100 million, ASIA Ltd. now has total claims paying resources of approximately $250 million.

With the mandate to facilitate the development of fixed income markets in the less developed parts of Asia, Asia Ltd has shown in retrospective examination that its concentration of business in the non-developed parts of Asia was one of the main causes of its difficulties. Underpricing of the emerging risk in Asia, coupled with the pressure from shareholders to solicit large volumes of business to boost the RoC, were the other reasons that led to underestimation of the risks the company had taken on before the financial crisis. Although the downgrade of its own claims paying ability in the beginning of 1998 has since prevented Asia Ltd. from undertaking new business, some consider the fact that the company has only recently recorded one claim payment ($0.5 million out of $2.5 billion gross par outstanding of bonds guaranteed initially) as proof that the model was in fact a success. Some analysts believe that the company could still serve a useful purpose in Asia if it had survived the financial crisis by capital enhancement.

In light of the experiences of ASIA Ltd., our proposal for credit guarantee facilities is to establish them initially as "public" but "commercially viable" entities. First of all, as pointed out earlier, securitization permits the issuance of senior bonds with credit ratings acceptable to investors by using the senior/subordinate tranches. However, the success of securitization depends on how subordinate bonds are disposed. The volume or price of subordinate bonds has the most important effect on the volume and cost of funds created through securitization. East Asian countries have an average credit rating of BBB. Because a substantial portion of East Asia's overseas assets are held as foreign exchange reserves, senior bonds with ratings of AAA are necessary to boost the regional savings to be invested in the region. Clearly, an effective means of narrowing the credit quality gap must be found.

Credit guarantees are beneficial to issuers in that they offer an alternative form of access to funds at higher investment grades. Credit guarantees provide structuring expertise, along with ease and certainty of execution and confidentiality during periods of stress. Due to reduced borrowing costs and increased marketability that they would bring, the investor base could be expanded. Credit guarantees also offer price protection, increase secondary market liquidity through disciplined risk management, and ensure rigorous surveillance and remedial management. Credit guarantees eliminate credit losses, downgrade risks and "headline" risk while enhancing secondary market liquidity. We recommend that the regional credit guarantee facility have target its credit rating in the range of AA to AAA. We also recommend that the credit guarantee facilities have $500 million to $5 billion in paid-in-capital, a part of which could be in local currencies, with a leverage ratio range of 20:1 ~ 40:1. The facilities will be established both in the developed and developing countries of the region, offering multiple services including credit guarantees, swap transactions, ABS arrangements, market making, etc. The facilities will be professionally managed by experienced staff, alongside the institution of proper risk management.

Our proposal on the development of a regional credit guarantee facility would involve a stronger commitment of capital injection from participating countries during stress periods. Moral hazard problems should be mitigated by instituting a proper ownership structure, and each country's exposure to such problems should be limited through structuring and reinsurance. Cross-border risks should also be limited through an emphasis on local currency business.

We believe the credit guarantors' role in the capital markets is to first make timely payments of interest and principal in an unconditional, irrevocable, and immediate manner. They have the right but not the obligation to accelerate payment to the beneficiary. Guaranteed transactions carry the ratings of the financial guarantors; in effect, the guarantors 'rent' their high ratings to the transactions. The guarantors also sell their strong credit and structuring, surveillance, and remediation skills.

Finally, in summary, the major considerations in setting up a credit guarantee company are: the business purpose, rating and investor acceptance, rating and investor acceptance, capital and shareholders, management & staff skills, target market & market attractiveness, product definition, regulations and licensing, and risk management.

Ⅴ. Conclusion

Development of the bond markets has been one of the most important policy goals in the region since the financial crisis. This reflects a clear recognition that the Asian crisis was partly a result of the unbalanced financial structures of Asian countries, which are dominated by the banking sector. Corporate over-reliance on short-term bank borrowing for long-term investment coupled with huge unhedged short-term capital inflows led to a serious double mismatch problem, namely maturity and currency mismatches. In addition, the completely changed pattern of capital flows in the East Asian region after the crisis provided momentum to develop the Asian bond markets.

Based on this recognition, many efforts have been made to develop the Asian bond markets throughout various fora such as APEC and ASEAN+3. Recently, a number of countries have put forward a couple of interesting and constructive proposals. These countries include Japan, Korea, Thailand, and Hong Kong, among others.

In this paper, we present a several different, viable schemes to facilitate the recycling of the huge savings in East Asia directly back into the region. We suggest utilizing securitization and credit guarantees to narrow the credit quality gap between the low credit ratings of issuers and the minimum credit quality requirements of investors. Korea's experience proved that securitization and credit guarantees could be an effective method to narrow the credit quality gap and significantly further the development of the bond markets. In order to apply these schemes in the real financial markets, however, they need to be mapped out in greater detail and require close collaboration among countries, agencies, and companies.

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The Asian Development Bank (ADB)-Bond has a maturity date of 1/24/2030 and offers a coupon of 1.8750%. The payment of the coupon will take place 2,0 times per biannual on the 24.07.. At the current price of 109.28 USD this equals a annual yield of 0.88%. The Asian Development Bank (ADB)-Bond was issued on the 1/24/2020 with a volume of 2 B. USD. Ã— Added To Watchlist. Ã—. Asian bond markets are growing rapidly as Asian borrowers switch away from short term bank loans towards longer term debt financing. Although Asia also includes countries of the Middle East, some CIS countries and the vast majority of the land mass of Russia and Turkey, in financial markets it is often only East Asia and South Asia that are included in the term.