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Regionalized Bond Markets: Are the Region's Markets Ready?*

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Regionalized Bond Markets: Are the Region's Markets Ready?

I. Introduction

As Radelet and Sachs (1998) identify, the primary cause of the Asian financial crisis was the abrupt reversal of private capital flows to Asia. The collective amount of reversal was estimated between \$105-\$110 billion for the five crisis-affected economies (Indonesia, Korea, Malaysia, Philippines, and Thailand) between 1996 and 1997. This amount was approximately 10% of the pre-crisis combined GDP, but the real question is “was the reversal too large for the collaborated Asian economies to cushion its impact on their currency and equity markets?”

After two decades of high economic growth, the region's economies were not exactly in poverty. Total foreign exchange reserves accumulated by the above five countries plus five leading economies in the region (China, Hong Kong, Japan, Singapore, and Taiwan) amounted to \$693 billion at the end of 1996, which was more than six times the amount of reversal in capital flows. A large portion of these reserves was invested in U.S. dollar- and European-currency-denominated assets *in the absence of well-developed regional long-term bond markets*. Unfortunately, these investments were recycled back to the region in the form of short-term dollar-denominated debt directly or indirectly (through local banks) *in the absence of well-functioning domestic bond markets*. When monetary authorities in the region tried to control both exchange rates and domestic interest rates while their economies were open for free flow of

capital, local currencies became vulnerable to speculative attacks.¹ Necessary funds were available in the form of foreign exchange reserves, but the region was lacking a system of utilizing these funds for a country experiencing a capital account crisis. If only 15% of these reserves had been allocated toward the capital account crisis, the Asian financial crisis could have resulted in a temporary liquidity crisis without suffering from the International Monetary Fund-led economic recession in the region and without suffering from the currency value of the five crisis-affected countries devaluing by an average of 40% over the two-year period, 1997-1998.²

Although the results were unsuccessful in Thailand because the market's perception of weakness further intensified pressure on the Thai baht, a series of bilateral "repurchase" agreements occurred prior to the crisis in the region between participating central banks.³ Similar bilateral arrangements also existed in Europe, but they were not effective in defending the British pound during the EMS crisis in 1992.⁴ At the recent Asian Development Bank Annual Meeting, finance ministers of 13 countries in the region, which includes the Association of South-East Asian Nations (ASEAN) members plus China, Japan, and Korea, agreed to establish a regional financing arrangement to supplement the existing

¹ Refer to Wyplosz (1998).

² See Tobin (1998) on his view of the IMF-led economic recession in Indonesia, Korea, and Thailand.

³ Refer to "Swapping Notes" in *The Economist* (May 13, 2000, 76-77).

⁴ Bilateral swap arrangements in Europe represented a critically important component of Europe's exchange-rate mechanism. Refer to Restell, "Asia's Mini-IMF", *Asian Wall Street Journal* (May 10, 2000).

bilateral agreements through the “Chiang Mai Initiative.” Conjectured to be a variation of a stand-by loan facility, this Initiative involves an expanded ASEAN swap arrangement with additional foreign exchange reserves of \$540 billion currently available from China, Japan, and Korea. Its effectiveness, however, depends on operational mechanisms of swap arrangements yet to be defined by the ASEAN Secretariat under the mandate from the 13 finance ministers.⁵

The magnitude of the reversal in private capital flows was less than 5% of pre-crisis combined domestic savings of \$2.3 trillion in the above ten economies. In addition, the total amount of short-term overseas borrowing by the five crisis-affected countries in mid-1997 was \$175 billion. However, this amount was just about one-half of combined domestic savings in the five countries. Had these savings been channeled into corporate financing without relying on short-term financing from abroad, shareholders of the five crisis-affected countries would not have suffered from a total loss of \$410 billion in their equity markets during the same two-year period.

In hindsight, a valuable lesson was learned from the recent Asian financial crisis. Had the domestic as well as regional bond markets, especially both government and corporate bond markets, been fully developed in the region, the consequences of the crisis in 1997-1998 would have been much less severe.

⁵ A critical question is how this regional swap arrangement works vis-à-vis the International Monetary Fund’s Contingent Credit Line (CCL) that provides a precautionary line of credit against contagion for crisis prevention. As usual, the CCL would come with the conditions for the Fund-dictated economic policies, commitment fees, interest charges, etc., while the swap may come with no conditions attached. Therefore, one may argue that this regional arrangement jeopardizes the global role of the Fund with the assumption that non-binding, friendly regional economic monitoring of beneficiary economies may replace stricter monitoring role of the Fund. The controversy surrounding the Chiang Mai Initiative is beyond the scope of this paper.

Most lending to the private sector in the Asian region continued in the form of short-term bank credit, while only minimal efforts occurred in the region's economies to develop the long-term fixed-income securities markets before the crisis arose. In the selected Asian economies at the end of 1997, bank loans amounted to approximately 95 percent of their combined GDPs, while capital market borrowing through long-term bonds amounted to a mere 12 percent.⁶

Rhee (2000b, pp. 110-112) identifies the following three types of lost benefits resulting from the undeveloped fixed-income securities markets. First, the role of long-term contractual savings institutions (pension and provident funds, insurance companies, and open- and closed-end investment companies) in savings mobilization becomes marginalized. Second, asset securitization cannot be sustained because trading of securitized assets would be facilitated. Third, a valuable monitoring function of corporate debt over reckless managers who tend to waste *free cash flow* defined as cash flow in excess of that required to fund all projects with positive net present values.⁷ In addition, domestic savings as well as foreign exchange reserves in the region could have remained in Asia, mitigating the severity of the financial crisis caused by the reversal of

⁶ These figures are computed based on five selected Asian economies, including: China, Indonesia, Korea, Malaysia, Philippines, and Thailand.

⁷ Jensen (1986) is the first one who recognized this unique role of corporate debt by proposing the "debt-monitoring" hypothesis. His hypothesis states that "conflicts of interest between shareholders and managers become severe when the corporation generates substantial free cash flow. The problem is how to motivate managers to disgorge the cash rather than investing it at below the cost of capital....The creation of debt enables the managers to bond their promise to pay out future cash flows." Thus, an adequate level of corporate leverage provides discipline to management through the fixed-income securities market and shareholders gain positive benefits from financial leverage since debt reduces the free cash flow available to management. Jensen's debt-monitoring hypothesis was elaborated by Harris and Raviv (1990) and Stulz (1990) and empirically tested by Maloney, McCormick, and Mitchell (1993).

capital inflows. Hence, the Asian financial crisis underscores a strong need for regionalized issuance and trade of government and high-quality corporate bonds in the region.

The remainder of the paper is organized as follows: In Section II, we review capital market reform measures undertaken by the region's economies during and subsequent to the Asian financial crisis. In Section III, we discuss what should transpire in Asia to promote regionalized bond trading, while discussing the readiness of domestic bond markets for cross-border trading in the region. The last section concludes and presents overall summaries.

II. Recent Capital Market Reform Measures in the Region

In recent years, three major studies were undertaken by Organization for Economic Co-Operation and Development (1992), World Bank (1995), and Asian Development Bank (2000) to study the development of fixed-income securities markets in the region. All three studies determine that the elimination of the following four institutional impediments will further the development of fixed-income securities markets:

- a. Lack of Benchmark Interest Rates: Due to the underdeveloped government-issued securities markets, the majority of Asian economies are lacking benchmark risk-free interest rates.
- b. Restricted Demand: The restricted demand for corporate bonds may be attributed to the insignificant role of contractual savings institutions (mutual funds, pension funds, and insurance companies) and to a narrow investor base.

- c. Limited Supply of Quality Bond Issues: The limited supply of quality debt instruments is due to: (i) poor credit standing of issuing corporations; (ii) statutory restrictions on the issuance of fixed-income securities; (iii) repressive regulations; and (iv) availability of lower-cost bank financing.
- d. Inadequate Market Infrastructure: Unlike equity markets, market infrastructures in both primary and secondary bond markets were deemed inadequate. As a result, corporate bond markets suffered from the problem of illiquidity and extreme volatility. Additionally, hedging instruments for long- and short-term interest-rate risks have yet to be developed to facilitate risk management of institutional investors.

With the banking sector in distress during and subsequent to the crisis, Asian companies became less dependent on bank loans for funding and turned increasingly to capital market financing, making capital market reforms an urgent policy agenda for Asian economies. Policy makers in these economies recognized that an active market in government-issued securities must precede the development in a corporate bond market. At the same time, many Asian economies began to accept fiscal deficits as a necessary change to finance bank restructuring and expansionary fiscal policy to cope with economic recession. Naturally, many Asian countries, therefore, assigned the highest priority to the development of government and corporate bond markets.

A. *Benchmark Yield Curve*

In the absence of benchmark interest rates measured by risk-free Treasury bills/notes/bonds, efficient price discovery of all remaining fixed-income

securities cannot be adequately performed. With an impaired price discovery process, marking-to-market becomes impossible and portfolio performance must be assessed based on book value of assets, eliminating any incentive for trading, which in part explains low liquidity in the secondary market.

In a concerted effort to develop the government bond market, Korea introduced a plethora of reform measures, including: (i) consolidation of government-issued securities into Treasury bonds to improve the frequency and issue size; (ii) creation of the primary dealer system; and (iii) elimination of arbitrary cut-off in determining winning bids in competitive auctions of government securities. Singapore has also been concentrating on the improvement of benchmark yield curve by extending maturities up to 10 years and by allowing the re-opening of off-the-run issues to smooth out the benchmark yield curve. Malaysia, Thailand, and Taiwan implemented similar efforts.

The most remarkable success case is the Hong Kong Monetary Authority's (HKMA's) Exchange Fund Note (EFN) program which began in 1993. EFNs initially started with relatively short-term maturities of two and three years, but the longer maturities of seven and ten years were introduced later. The success of the EFN program may be attributed to three primary reasons: (i) the HKMA provides a central bank discount window for EFNs; (ii) the HKMA utilizes EFNs as a monetary policy instrument to adjust interbank liquidity;⁸ and (iii) the issue cycle is regularly scheduled. In other Asian economies, the government's effort in creating a benchmark yield curve has been mixed. In September 1997,

⁸ Under the classic version of the currency board, neither monetary policy nor central banks is needed. However, the Hong Kong currency board is not exactly the classic version.

the Malaysian government introduced Khazanah bonds, which are 3-year, zero-coupon bonds that are not qualified as eligible liquid assets for financial institutions.⁹ Because the BNM discount window is inactive and Khazanah bonds are ineligible for discounting purposes, Pardy (1998) questions the possibility of Khazanah bonds serving as benchmark instruments. In addition, a report prepared by Arab-Malaysian Merchant Bank (2000) suggests that the Khazanah bonds program is unsatisfactory due to their small issue size and investor preference for the Malaysian government securities.

In the past, long-term private debt securities in the Philippines and Indonesia were priced in reference to short-term Treasury bills (Philippines) or central bank short-term notes (locally known in Indonesia as Sertifikat Bank Indonesia, SBIs).¹⁰ This problem has been resolved in the Philippines with the issuance of Treasury notes/bonds with maturities up to 10 years, while Indonesia must address the issue of creating benchmark yield curve. Government bonds issued in Indonesia during the crisis period were limited to bank recapitalization bonds, approximately one-half issued to the Bank Indonesia and the other half to commercial banks. Therefore, they cannot be used for benchmarking purposes.

B. Increase in Demand for Fixed-Income Securities

The limited demand for fixed-income securities in the Asian economies should be attributed to the captive nature of the primary markets in the presence of distorted interest rates, which are distorted by administered interest rates.

⁹ Khazanah Nasional Bhd. is an investment arm of the Malaysian government. It is wholly owned by the Ministry of Finance.

¹⁰ Refer to Saladana (2000) and Rowter (2000).

One example is noted from China. To minimize competitive pressure on Treasury issues, the Chinese government stipulates that yields on state-owned-enterprise (SOE)-issued bonds can not exceed those on Treasury bills and they can not exceed 1.4 times those on bank deposit rates.¹¹

Even after interest rates were deregulated, the primary market yields of government bonds are manipulated during the auction process, causing a substantial gap between primary market and secondary market yields for government-issued securities. As a result, some Asian governments continue to rely on financial institutions and non-bank financial institutions (especially pension/provident funds) as captive demanders for government bonds in the primary markets. The captive nature of primary market activities is evidenced even in Singapore where the current status of market development is far ahead of other economies in the region. For example, the Central Provident Fund (CPF) held approximately two-thirds of Singapore government securities (SGSs) by the end of 1999. The SGSs placed with CPF are considered non-tradable and bypass the primary dealer network to avoid any adverse effect on primary market yields. Similar arrangements are observed with Malaysia's Employee Provident Fund investing over 50% of its investible funds in Malaysian government securities (MGSs). Insurance companies in Malaysia are also required to invest at least 25% of their funds in low risk assets that are mostly MGSs or government guaranteed bonds. Artificial demand for government-issued securities under such regulatory requirements tend to distort the yield curve. In Thailand,

¹¹ Refer to Nam, Park, and Kim (2000).

supervisory authorities over provident funds were transferred from MOF to SEC in March 2000. By integrating the oversight of collective investment funds management into SEC, a uniform standard for funds management can be created since provident funds managers will need the private funds management SEC's licenses.¹²

Once institutional investors purchase the bonds, they cannot sell the bonds unless they are willing to take large capital losses. Thus, distorted yields on the primary market and captive demanders unwilling to trade their securities are the main reasons for extreme illiquidity in the secondary market.

Also observed in the region are some positive developments toward expanding the investor base for fixed-income securities. First, the Philippines introduced a small denomination Treasury bonds (SDTs) program for individual investors. The intention of having SDTs listed on the Philippine Stock Exchange is to provide liquidity support for individual investors. Second, the EFNs have been listed on the Stock Exchange of Hong Kong since August 1999 to accommodate retail investors' demand for risk-free securities. The listing of EFNs on the organized exchange is an important experiment of involving individual investors in the traditionally institution-dominated market, which will be observed carefully to assess how it evolves. Third, Hong Kong is launching a Mandatory Provident Fund in December 2000 intended to increase the demand for local long-term fixed-income securities by approximately 1% of GDP per year consecutively for six years. Fourth, effective March 2000 in Korea, bank trust accounts have been allowed to sell employee retirement trusts, which is a first

¹² Refer to Trairatvorakul (2000).

step toward the corporate pension system.¹³ In the past, individual investors were not eligible to make direct purchase on the primary market in Korea, but they are qualified to participate in non-competitive auctions effective September 1999. Now, a total of 20% of each primary issue is reserved for individual investors. In contrast, the current tax system in Singapore discriminates against individual investors. While a concessionary tax rate of 10% on interest income was granted to local corporations in 1998, no such incentives are available to individual investors.

C. Limited Supply of Quality Bond Issues

In the past, Singapore's statutory boards never issued their bonds since government budget or commercial bank loans were readily accessible. With the change of this policy in the fourth quarter of 1998, a number of government agencies (Housing Development Board, Land Transportation Authority, Jurong Town Corporation) began to issue long-term bonds. The total issuance of such bonds amounted to S\$2.3 billion; however, this amount will increase as 44 government agencies exist in Singapore.¹⁴ Singapore's government agencies are also encouraged to seek rating of their bonds to be issued.

The Malaysian government recently proposed the establishment of a financial guarantee insurer (FGI) to facilitate the issuance of corporate bonds. The FGI will provide the issuer with a guarantee facility to enhance the rating of

¹³ Corporate pension funds are at an embryonic stage in Korea. Corporations maintain corporate pension funds, but they are not separate accounts devoted for the purpose of investment. Rather, these funds are at the discretion of the employers as to how they are managed. Refer to Korea Securities Research Institute (2000).

¹⁴ Refer to Tan (2000).

the issues. For private sector corporations facing economic recession, FGI is a sensible option to explore.

Thailand's state-owned enterprises became major suppliers of high-quality bonds (almost 90% of their bonds are issued under the government's guarantee), accounting for slightly over one-third of public sector bonds. However, the secondary market activities are limited because those bonds guaranteed by the government are eligible for reserve requirements.

As part of banking sector restructuring, Malaysia established two government-owned corporations, Danamodal Nasional Bhd. to facilitate restructuring of financial institutions and Pengurusan Danaharta Nasional Bhd. to acquire non-performing assets from financial institutions. Both companies issued five-year bonds of M\$11 billion (Danamoidal) and M\$10.3 billion (Danaharta), respectively. However, their impact on the primary market was minimal since these bonds were mostly assumed by financial institutions like Indonesia's recapitalization bonds. Their impact on secondary market activities remained insignificant because they are eligible for reserve requirements.

D. Market Infrastructure

A remarkable progress has been made by the region's economies in recent years to either newly create or reinforce existing infrastructures in the primary and secondary markets.

Competitive Auction System: Korea and Thailand adopted competitive auction systems based on multiple-price auction methods and introduced the primary dealer system. When compared with other economies in the region,

Malaysia and Singapore maintain long histories of auction systems in the primary market since the late 1980s. In order to maintain these auction systems, they have to study the feasibility of: (i) reducing the amount of direct placing with CPF and EPF; and (ii) allowing foreign banks and financial institutions to participate in public auctions as primary dealers. To improve the efficiency of tendering and to reduce any delays, electronic bidding system has been introduced in Malaysia, Philippines, and Korea.

Bond Rating Agencies: For the first time, Taiwan introduced a bond-rating agency, Taiwan Rating Corporation, in 1997. All non-guaranteed bonds must obtain credit rating for issuance and financial institutions providing guarantee service must be rated. To promote competition among credit rating businesses, Indonesia, Malaysia, and Thailand allowed the establishment of second rating agencies. While Hong Kong and Singapore do not have local bond rating agencies, foreign agencies are permitted market entry with minimal entry barriers.

Clearing & Settlement: This is one area whereby most of the region's bond markets demonstrated significant progress. Hong Kong, Malaysia, and Singapore introduced a real time gross settlement (RTGS) system for government-issued securities, while corporate bonds need to advance toward the level of progress made for clearing and settlement of government bonds. Korea, Taiwan, and Thailand are revamping their systems. Taiwan implemented a book-entry system for scripless trading in 1998 and all book-entry government bonds are settled through the RTGS system.

Secondary Market Trading: Although fixed-income securities are traded over-the-counter (OTC) in the region, some interesting developments are noted because organized exchanges created trading systems to capture market share of OTC trading volume. The Korea Stock Exchange recently made a serious effort to reclaim some of OTC trading volume by organizing two organized bond markets: general bond market (GBM), a retail market for individual investors, and inter-dealer market (IDM), an electronic wholesale market for institutional dealers. The success of this attempt is too early to assess, but it may serve as an experimental model for other exchanges in the region if this trial becomes successful. Recently, the Korean government licensed a private institution to become an inter-dealer broker in competition with the KSE's IDM. In Thailand, the Bond Dealing Centre (BDC) was upgraded to an organized exchange to facilitate secondary market activities. The BDC was instrumental in formalizing OTC activities and disseminating pricing information and statistics. In Indonesia, the Surabaya Stock Exchange introduced an OTC Fixed-Income Service to support fixed-income securities trading in 1997. As organized exchanges move into the territory of OTC markets, an interesting policy issue emerges---how would an organized exchange interact with inter-dealer brokers who specialize in fixed-income securities trading? Given the recent trend in internet trading, a multiple number of IDBs are expected to compete in the bond market. In alignment with this trend, therefore, regulatory bodies in the region should promote competition in trading services rather than giving monopoly power to an organized exchange.

Interest Rate Hedging: Malaysia (1995), Korea (1996), and Taiwan (1997) joined Hong Kong and Singapore by creating financial derivative markets. However, financial derivative instruments introduced in the region are mainly for hedging of equity investments via equity index futures. No hedging instruments for short- and long-term interest rates have been introduced yet except Hong Kong and Malaysia where short-term interest rate futures were introduced.

REPO market and Bond Borrowing and Lending: The development of bond repurchase (REPO) market and formalization of bond borrowing and lending remain underdeveloped in the region. The slow progress in this area may be blamed for tax complications and lack of legal framework. In Singapore, the withholding tax exemption introduced in February 1998 is applicable only to SGSs issued after February 1998, while older issues are not qualified. Compounding the problem, tax treatment of zero-coupon bonds and discount bonds is not clear in Singapore. In Taiwan, a large volume of REPO trading is reported (almost 90% of total bond market volume), but this represents tax arbitrage around coupon payment dates between individuals and institutions subject to differential tax treatment.¹⁵

When-Issued-Trading: Malaysia is the only exception that allows when-issued (WI) trading in the region. An informal WI trading market has been formed in Taiwan, but the magnitude is small.

¹⁵ According to Hsueh (2000), this tax arbitrage depresses government bond yields as much as 75 to 100 basis point, which translates into an additional funding cost of NT\$80 billion on the total amount (NT\$1.6 trillion) of government bonds outstanding.

III. Development of Regional Bond Markets

This section is devoted to a review of what should transpire to promote regionalized bond issuance and trading, while discussing the readiness of domestic bond markets for cross-border trading in the region. Given the nature of the policy issue at hand, regionalized bond trading should encompass both on-shore and off-shore market activities.

Singapore, for example, has both an on-shore market for Singapore dollar (S\$)-denominated bonds and an off-shore market for foreign currency-denominated bonds, which is officially known as the Asian Dollar Market (ADM) in Singapore, an Asian equivalent to the Eurobond market. Until August 1998, foreign institutions were not allowed to issue S\$-denominated bonds in Singapore due to the Monetary Authority of Singapore's (MAS) basic stance of discouraging internationalization of S\$. However, to promote Singapore as a regional financial center, this policy was relaxed substantially such that foreign corporations can issue S\$-denominated bonds in Singapore if the proceeds are to be used for economic expenditure in Singapore; if not, the S\$ proceeds must be swapped into foreign currency in Singapore. Since the policy change, the total issuance of S\$-bonds by foreign issuers increased to S\$2.95 billion at the end of 1999. The total amount of off-shore ADM bonds issued in 1998 amounted to US\$2.7 billion in contrast to US\$1.2 billion in 1997 and US\$2.2 billion in 1996.¹⁶ In addition, the MAS allowed banks in Singapore to enter into REPO transactions in SGSs and S\$-denominated bonds listed on the Singapore Stock

¹⁶ ADM bonds can be denominated in any currency. Of the 83 issues in 1998, a total of 45 issues were denominated in Indonesian Rupiah [Tan (2000)].

Exchange.

The HKMA has been improving the infrastructure for the bond market. The Central Moneymarket Unit (CMU) service was extended to non-HK\$ debt securities since 1996 and the linkage of CMU with other central securities depositories in the region through a network of bilateral arrangements. In December 1997, HKMA became a member of Reserve Bank Information and Transfer System (for Australian government securities) and Austraclear (for private sector bonds in Australia) to facilitate cross-border trades of debt securities in two economies. A bilateral linkage was also set up with the Korea Securities Depository in 1999.¹⁷ The HKMA is working on the linkage between CMU and China's Government Securities Book-Entry System. Another important infrastructure project under progress in Hong Kong is the creation of US Dollar Clearing System since March 2000. This System will support the local stock exchange's launch of the Growth Enterprise Market, allowing listed shares to be denominated and settled in US dollars. This System will be a valuable addition in promoting cross-border trades of long-term bonds on the Hong Kong off-shore market.¹⁸

The "*Shogun*" bond market (foreign-currency-denominated bonds issued in Japan by non-residents) is Tokyo's off-shore market, while the "*Samurai*" bond market (yen-denominated bonds issued in Japan by non-residents) is the on-shore market. Unfortunately, "*Shogun*" bonds were not issued since 1994. The

¹⁷ Refer to Shiu and Cheung (2000).

¹⁸ With this System completed, US dollar checks will be settled in two days instead of two weeks. See Yam (2000).

issuance volume of “*Samura*” bonds peaked in 1996 with ¥3.9 trillion prior to the Asian financial crisis. After the volume declined to ¥0.3 trillion in 1998, the market recovered to record ¥2.97 trillion in 1999, yet below the level of 1996. The overall statistics for on- and off-shore market activities in Japan are disappointing considering the sheer size of their economy and the leading role they are expected to assume in the region.

Under the New Miyazawa Initiative, a total of US\$30 billion was pledged by Japan and one-half of this amount was made available for the medium- to long-term financing needs for Asian economies affected by the recent financial crisis. At least three measures under this Initiative were directly related to regionalized bond market activities. They were: (i) acquisition of sovereign bonds issued by Asian countries by the Japan Bank for International Cooperation (formerly Export-Import Bank of Japan); (ii) support for Asian countries in raising funds from international financial markets through the use of guarantee mechanisms; and (iii) possible establishment of an international guarantee institution with a primary focus on Asian economies. Although these measures were intended to serve as important vehicles for promoting the regional role of Tokyo, very little has been reported vis-a-vis the three measures. Particularly disappointing is the fact that the majority of sovereign bonds and public sector bonds of the crisis-affected countries could not be issued in the region. Instead, they relied on the Eurobond and Yankee bond markets. Rhee (2000a) attributes the failure of the Tokyo market in gaining any significant momentum from the New Miyazawa Initiative based on two factors.

First, it is difficult for Japan to play the role of a regional financial center with its local government bond market not fully developed. Specifically, Rhee identifies the following areas for post-Big-Bang market reforms for the Japan government bond market to align its infrastructures with those of the U.S. and U.K. government securities markets: (i) elimination of Japanese Ministry of Finance's involvement in the market as a buyer of JGB issues to achieve the separation between government assets and liabilities management; (ii) promotion of JGBs with foreign institutional investors; (ii) introduction of the primary dealer system to intensify the competition at the primary market auction; (iii) adoption of the uniform-price auction method to minimize the cost of JGBs; (iv) allowance of when-issued trading to improve pricing efficiency on the primary market and distribution of new issues; (v) development of an American-style REPO market where foreign institutional investors can participate; and (vi) introduction of the separate trading of registered interest and principal of securities (STRIPS).

Second, Japan alone cannot implement truly regionalized bond trading. Regional issuance and trading activities must be a group effort supported by the region's economies. Even though many impediments had been recognized and addressed by national authorities, a multitude of regional level issues remain unresolved. Moreover, the region is missing a comprehensive study to define action plans for resolving various regional issues, including:

Credit Rating Agencies in the Region: During the Asian financial crisis, credit rating agencies (both local and international) were criticized for the lack of objectivity and reliability in their risk assessment. Does it imply that the

establishment of regional credit rating agencies is justified to facilitate a better understanding of the Asian situation and to improve the rating process? Is it economically feasible to create such a regional body in the presence of two major international rating agencies with market share of over 80% in global rating business? Probably more fundamental issues are: (i) how to harmonize accounting and disclosure standards of the issuers from the region to improve comparability of information available; and (ii) how to improve the dialogue between international rating agencies and Asian issuers who believe their ratings are unjustified. An assessment of credit rating services in APEC economies was one of the APEC finance ministers' mandate issued at their meeting in Cebu, Philippines in April 1997. Beyond voluntary action plan for augmenting and strengthening the role of credit rating agencies in APEC economies, nothing further has been done.¹⁹ In response to this mandate, an APEC Consultative Group was formed to complete a study on credit rating services in APEC economies.

Regional Level Clearing and Settlement Systems: Recognizing that clearing and settlement practices in each country were not supported by practice or quality standards, the Group of Thirty (G-30)(1989), an international private sector group of capital market institutions, recommended nine industry standards of *national* clearance and settlement systems. Unfortunately, the recommendations were made after the October 1987 market break without addressing the complexities

¹⁹ Refer to APEC Consultative Group (1999).

of settling in a *multi-currency, multi-time-zone* environment.²⁰ For regional level clearing and settlement systems, a number of models are feasible with attendant costs and benefits in reducing region-wide frictional costs and pipeline liquidity risk.²¹

Cross-Border Securities Borrowing and Lending Mechanism: Securities borrowing and lending (SBL) transactions are conducted in one of three ways: (i) securities loans; (ii) repurchase agreements (REPOs); and (iii) sell-and-buy-back arrangements. Although legal structures of the three types of transactions differ in terms of who has legal title to the securities that are lent/borrowed, the pricing structure is similar from one type to another.²² The lack of a clearly defined legal framework for the three types of transactions causes confusion on tax and accounting treatments in the region. This is one of the major reasons why the SBL markets, especially REPO markets, have not developed in the region, creating a serious impediment to the enhancement of market liquidity on the secondary market for fixed-income securities. In order to promote regional level

²⁰ The Executive Board of the International Society of Securities Administrators (ISSA)(1995) endorsed minor revisions to the original G-30 recommendations. Therefore, G-30 (1989) and ISSA (1995) catalyzed *national-level* initiatives.

²¹ Morgan Guaranty Trust Company (1993) identifies three possible models: (i) multiple access model in which local central securities depositories (CSDs) are linked with an international central securities depositories (ICSDs); (ii) Worldclear Model in which a single, global CSD performs the safekeeping, clearance, and settlement functions for all securities; and (iii) Global Hub Model in which assumes the establishment of a single, global CSD with both “home-market securities” and other-market securities links with each national and international CSD fro settling cross-market transactions in all securities.

²² For an excellent treatment of securities borrowing and lending transactions, refer to IOSCO (1999).

SBL and REPO transactions, harmonization of their tax and accounting treatments and industry standard legal documents must be achieved.²³

Credit Enhancement and Guarantee Agency: Chan (2000) considers the notion of establishing a regional credit enhancement and guarantee agency to assist most Asian governments and corporate issuers receiving relatively low credit ratings from the international credit agencies.²⁴ Under the New Miyazawa Initiative, a \$3 billion guarantee fund was to be managed by the Asian Development and a total of ¥27.5 billion (or US\$230 million) was to subsidize interest payments. Karigane (2000) estimates that long-term sovereign bonds of approximately US\$17 billion could be raised from the market with such support arrangements. However, as was discussed before, regional bond market activities failed to capitalize on the New Miyazawa Initiative. The feasibility and viability of a regional agency devoted to credit enhancement and guarantee functions must be carefully studied.

Asian Currency Unit to Denominate Sovereign Bonds: With the launching of the euro in January 1999, the most significant development is the integration of European financial markets. A strong convergence of short-term interest rates quickly created a liquid money market for the entire euro area, while longer-term bond markets in Europe have been exhibiting the process of market integration, as indicated by the disappearance of interest rate spreads between 11

²³ The PSA/ISMA GMRA is a commonly used contract for both REPO and Sell-and-Buy-Back transactions. PSA denotes the Public Securities Association which is a bond industry trade association in the United States (currently known as the Bond Market Association) and ISMA is the International Securities Market Association which is a self-regulatory organization for the international securities market. GMRA stands for Global Master Agreement for REPOs.

²⁴ This view is also echoed by Sakakibara (2000).

participating countries. The elimination of exchange risk, the harmonization of market practices, the redenomination of government debt into euro have been heralding emergence of a bigger, deeper, more liquid, and more homogeneous bond market for Europe.²⁵ Similar advantages may be gained in the region through full or partial currency unification as a result of common or partially shared monetary policies in the region's economies.²⁶ Other options are also available. Regional cooperation may be achieved through the introduction of an Asian currency unit as a basket of regional currencies. The region's economies can also insulate their economic activities from the adverse impact of large fluctuations in the yen-dollar exchange rate by pegging their currencies to the yen.²⁷

IV. Summary and Conclusion

The magnitude of reversal in private sector capital flows to the five crisis-affected economies (Indonesia, Korea, Malaysia, Philippines, and Thailand) between 1996 and 1997 was approximately \$100-\$110 billion. This paper begins with the question: "was the reversal too large for the collaborated Asian economies to cushion its impact on their currency and equity markets?" Given the pre-crisis foreign exchange reserves cumulated by the region's economies and total amount of domestic savings, the answer was "negative." What was

²⁵ Refer to Quaden (1999) and Duisenberg (1999).

²⁶ Refer to Sakakibara (1999).

²⁷ This may be politically sensitive especially for those economies in the region with trade structure competitive with Japan.

missing in the region were fully developed domestic as well as regional bond markets, especially both government and corporate bond markets.

Despite the fact that many impediments had been recognized and addressed by national authorities, a plethora of regional level issues remain unresolved. This study proposes that a comprehensive study be undertaken to define action plans for resolving at least five regional issues, including: (i) Regional Level Credit Rating Agencies, (ii) Regional Level Clearing and Settlement Systems, (iii) Cross-Border Securities Borrowing and Lending Mechanism, (iv) Credit Enhancement and Guarantee Agency, and (v) Asian Currency Unit to Denominate Sovereign Bonds.

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