
Japan

S. Ghon Rhee

I. Introduction

At the end of 1999, Japanese Government bonds (JGBs) issued by the central Government reached ¥359 trillion (US\$3.30 trillion), exceeding the United States' outstanding Treasury securities balance of \$3.28 trillion. In fiscal year 2000 alone, Japan's Ministry of Finance (MOF) planned to raise ¥85.87 trillion gross through the issuance of JGBs, while the US Treasury paid \$140 billion in debt over the last two years and plans further payments. As a result, Japan is expected to remain the largest issuer of government debt in the world in the foreseeable future. As summarized in Table 1, Japan's government debt is expected to reach 137 percent of gross domestic product (GDP) in 2000, whereas the United States and United Kingdom are expected to achieve respective debt levels of 53 percent and 61 percent relative to GDP.

TABLE 1
Government Debt and Fiscal Deficit
 (percent)

	Japan	United States	United Kingdom
Government Debt/GDP			
1997	101.1	65.9	65.8
1998	117.9	62.1	65.8
1999	127.8	57.7	62.6
2000	137.2	53.2	61.0
Fiscal Deficit/GDP			
1997	-3.4	0.4	-2.1
1998	-5.3	1.3	0.3
1999	-7.3	1.6	-0.4
2000	-7.1	2.0	-0.6

Source: IMF, World Economic Outlook (October 1999)

This is bad news for Japan's economy and the future credit rating of JGBs. Even though it sounds far-fetched at present to discuss the risk of runaway inflation given the deflationary trend of the Japanese economy, the latent threat of inflation cannot be overlooked in the presence of ever-increasing fiscal deficits in the Japanese government budget. According to International Monetary Fund (IMF) predictions, Japan's fiscal deficit will reach 7.1 percent of its GDP in 2000, while the United States will gain a surplus of 2 percent (Panel B of Table 1). Furthermore, international credit rating agencies such as Moody's and Duff and Phelps issue warnings about possible down-grading of yen-denominated debt rating.

The fact that Japan will remain the largest issuer of government debt securities is important news for further development of the JGB market because the MOF will be forced to heed the cost minimization of JGBs.¹ Any reform measures necessary to attain this goal will be adopted more expediently and decisively than ever before.

This paper reviews the key steps for further development of the JGB market in aligning its infrastructures with those of the US and UK government securities markets. The remainder of this paper is divided into three sections. In Section II we assess if Japan's MOF is able to minimize the cost of JGBs given the current status of the market, and in Section III, we identify numerous reform measures to create a more effective and efficient JGB market. The last section touches upon particularly urgent policy issues on the regional level for the progression of the JGB market to better serve global and regional constituencies.

II. How to Minimize the Cost of Government Securities

Schinasi and Smith (1998) recommend three courses of action to minimize the cost of government debt securities: (i) tap the pool of global capital; (ii) grant greater independence to government debt management from monetary policy; and (iii) reform primary and secondary market infrastructures to appeal to institutional investors. When the cost minimizing effort is assessed against the above three criteria, Japan's MOF does not score highly.

1. The ratio of government bond issues to total government expenditure in the fiscal year 2000 budget will be 38.4 percent. Refer to a fiscal policy speech by Finance Minister Kiichi Miyazawa at the 147th Session of the National Diet in January 2000.

A. Tapping the Pool of Global Capital

Inoue (1999) reports that nonresidents hold approximately 10 percent of JGBs, while nonresident holdings of US and UK government debt amount to 36.9 percent and 14.4 percent, respectively. Schinasi and Smith (1998), however, report a smaller percentage in the order of 4 to 5 percent for Japan, citing the Bank for International Settlements (BIS) source. This suggests that further internationalization of the yen is necessary to tap the pool of global capital. Although some concerns have been expressed regarding the delay of the implementation of reform measures in areas such as the pension system, bank recapitalization, and deposit insurance scheme, the MOF should be credited for its Big Bang reforms in internationalizing the yen. As of April 1999, the withholding tax on redemption gains and interest income from JGBs was exempted for nonresidents and foreign corporations.² The impact of eliminating withholding taxes in Japan is yet to be assessed, but it is expected to have a significant and lasting effect on nonresident holding of JGBs.³

B. Granting the Government Debt Management Program Greater Independence from Monetary Policy

As far as the management of government assets and liabilities is concerned, Central Banks are responsible for asset management while Ministries of Finance maintain operational authority over liabilities management. According to Cassard and Folkerts-Landau (1997), such separation of responsibilities is necessary considering the potential conflicts of interest between monetary policy and debt management. In Japan, however, MOF violates the simple rule of separating assets and liabilities management because of the activities of its Trust Fund Bureau (TFB). The TFB is the largest fund manager in the world, managing a total of ¥440 trillion in assets, which is known as the Fiscal Investment and Loan

2. Campbell (1997) forcefully illustrates how the counterparty risk was unnecessarily created by the lack of ownership registration to avoid withholding taxes, and how unnecessary “churning” prior to coupon payment dates added costly transaction costs as nonresident investors switched out of their JGB holdings before the Big Bang financial reforms were implemented.

3. Germany eliminated withholding taxes on interest income from domestic government bonds held by nonresidents in October 1984. As a result, the percentage of German government bonds held by foreign investors jumped from 10 percent in 1984 to 38 percent in 1988. This information is drawn from the Tokyo-Mitsubishi Securities Company’s web site.

4. This amount is equivalent to approximately 80 percent of Japan’s GDP.

TABLE 2
Fiscal Investment and Loan Program (February 2000)
 (billion yen)

	Amount	Percent
Assets		
Long-Term Government Bonds	¥ 83,302	18.8
Treasury and Financial Bills	999	0.2
General Account and Special Accounts	102,145	23.0
Government-Owned Organizations	117,850	26.5
Local Government	66,042	14.9
Special Companies	69,821	15.7
Bank Debentures	1,278	0.3
Others	1,533	0.3
Cash/Deposits	1,100	0.3
Total	¥ 444,069	100.0
Liabilities		
Postal Savings and Postal Transfer Deposits	¥ 256,268	57.5
Postal Life Insurance Deposits	4,587	1.0
Employee's Pension Deposits	130,942	29.5
National Pension Deposits	10,772	2.4
Other Deposits	36,238	8.2
Others	5,262	1.2
Total	¥ 444,069	100.0

Source: Ministry of Finance, <http://www.mof.go.jp/english/mr-tfb/e1014ao.htm>

Program (FILP).⁴ As shown in Table 2, the primary sources of the FILP fund are comprised of postal savings (58 percent) and employees' and national pension deposits (32 percent). On the asset side of the balance sheet, the fund is invested in government-owned organizations (27 percent), general and special accounts (23 percent), JGBs (19 percent), municipal governments (15 percent), etc.

Although MOF considers FILP an extension of its fiscal policy, its purchasing of JGBs is perceived as critically important by market participants in predicting the direction of long-term interest rate movement. For example, the TFB announced in the latter part of 1999 that it would suspend ¥200 billion (\$1.91 billion) bond purchases in the open market each month. This triggered a sharp decline in the prices of JGBs, raising their yields to as high as 2.7 percent. After the resumption of purchasing

5. Refer to "Bond Plan Key to Halting Rise in Japan Interest," *Asian Wall Street Journal* (30 November 1999).

activities by TFB, however, the yield level stabilized to the current level of around 1.8 percent (10-year JGBs).⁵ With FILP's holdings accounting for over one third of JGBs outstanding, the MOF is effectively the largest seller and buyer of JGBs. This dual role executed by MOF is in explicit violation of the rule of separation between government debt management and monetary policy. Comingled management of assets and liabilities, especially FILP's inadvertent influence over monetary policy, not only causes the cost of government-issued debt to increase but also creates serious impediments to the development of the JGB markets, as discussed below.

Unfinished Primary and Secondary Markets Infrastructures

Recognizing the growing importance of capital market-based financing, the Big Bang program implemented numerous reform measures to improve the infrastructure of the primary and secondary markets from November 1996 onwards. These measures include: (i) the deregulation of cross-border transactions and foreign exchange business; (ii) the adoption of competitive auctions to issue financial bills;⁶ (iii) the abolition of the securities transaction tax; (iv) the deregulation of brokerage commissions; (v) the preparation of legal framework for loan/asset securitization; (vi) the deregulation of off-exchange trading; (vii) the entry by banks, securities companies, and insurance companies into each other's business; (viii) the introduction of individual stock options, and (ix) the replacement of a merit-based licensing system with a disclosure-based registration system for securities companies. As shown in Table 3, the scope and complexity of the reform programs were unprecedented, and the coordinated efforts of various government agencies were exemplary.

To identify the unfinished reform areas for the JGB market, Japan may want to consider the US government securities market as a role model. In retrospect, four major developments signify the underlying forces that rapidly expanded the US government securities markets in the 1980s. These are: (i) the active trading of Treasury securities on a when-issued (WI) basis, which assisted in minimizing the underwriting risk by reducing price and quantity uncertainties; (ii) the introduction

6. Financing bills are issued on a document basis like Treasury bills. Because the discount rate remained below prevailing short-term market interest rates, virtually all issues had to be subscribed by the Bank of Japan. Under the Big Bang reform programs, Treasury financing bills, food financing bills, and foreign exchange fund bills are all integrated into single financing bills and they are issued under a competitive auction system.

TABLE 3
Financial System Reform^a

Expansion in means of asset investment

	Fiscal 1997	Fiscal 1998
Enhancement to investment trusts		
Introduction of general securities accounts (CMA)	Necessary deregulation carried out and introduced on 1 October.	Further improvements in product attractiveness (amendment concerning salaries effected 10 September)
Introduction of company-type investment trusts		Establish the general institutional framework (Investment Trust Law) (law took effect on 1 December)
Introduction of privately placed investment trusts		Stipulate privately placed investment trusts in law (Investment Trust Law) (law took effect on 1 December)
Introduction of over-the-counter (OTC) sales of investment trusts by banks and other financial institutions	Store space lent for "direct sales by investment trust companies" (introduced on 1 December after sales rules were finalized)	Sales by banks themselves (Securities & Exchange Law) (law took effect on 1 December)
Full liberalization of securities derivatives	Tokyo Stock Exchange and Osaka Stock Exchange introduced options on individual stocks (on 18 July)	Introducing OTC securities derivatives (Securities and Exchange Law) (Law on Foreign Securities Law Firms) (law took effect on 1 December)
Enhance attractiveness of stocks	Expanding use of stock options (law took effect on 1 June)	
	Promoting share buy-backs as a means of writing down profits (law took effect on 1 June)	
Smaller minimum investment lots for stocks	Have already articulated how the Commercial Code is to be interpreted regarding conditional changes in the Articles of Incorporation (31 July)	
Streamlining of foreign equity listing by using depository receipts (DRs)	Introduced DR-based trading in listed foreign equities (1 June)	Designate DRs as securities. (Securities and Exchange Law) (law took effect on 1 December)
		Revision of listing standards (1 December) (Tokyo Stock Exchange)
Improve access to trading and quotation information	Eliminated the system that gives access to real-time information only to branches near the market (1 October)	Tokyo Stock Exchange Enhancement of market information (30 November)

^a – This schedule was released by MOF in June 1999. It contains major reform programs even though some updating of correct progress is needed. Please refer to <http://www.mof.go.jp/english/system/system.htm>.

of financial futures and options written on Treasury securities, which provided necessary vehicles for hedging of interest rate risk; (iii) the expansion of repurchase (repo) and reverse repo (RRP) transactions which supported the increase of market liquidity and short-term investment activities, and (iv) the introduction of the Separate Trading of Registered Interest and Principal of Securities (STRIPS) which facilitated hedging of reinvestment risk through coupon stripping.

Currently, WI trading is illegal in Japan, and STRIPS is yet to be introduced. Although localized variations of repo markets such as the *Gensaki* market and the *Kashisai* market emerged in Japan, their developments were inhibited by tax-related impediments (*Gensaki*) and the interest rate ceiling on cash collateral (*Kashisai*). For example, as *Gensaki* is recognized as a form of bond trading, trading was subject to securities transaction tax. Therefore, the majority of *Gensaki* transactions were implemented using Treasury bills and financing bills that were exempted from securities transaction tax. However, stamp duties on bills could not be avoided. In contrast, transactions on the *Kashisai* market have not been subject to securities transaction taxes. Legal and operational modalities of the two market reflected a hybrid form of American-style classic repos and European-style sale-and-buyback contracts. As a result the two markets could not fully develop. The Japanese futures market (with equity index and long-term bond as underlying assets) has earned the unfortunate reputation of being overregulated because of stringent regulatory policies, including margin requirements and circuit breakers.

III. Post-Big Bang Reform Measures

In terms of GDP, Japan's economy is about one half the size of the US economy and about four times as large as that of the UK. As Japan's capital market development emulates the past experiences of its US counterpart, the above four areas should be an interesting point of departure in assessing further reforms for the JGB market. Since the JGB market has matured in its own historical, macroeconomic, and institutional framework, it faces a unique blend of capital market policy issues. Therefore, this section will examine some capital market policy issues that are unique to the JGB market and in light of US market experiences.

A. Lack of Primary Dealer System

One idiosyncratic feature of the JGB market is the lack of the primary dealer (PD) system. This may be largely attributed to the role played by TFB as a de facto underwriter in the primary market. With

TFB serving as an active buyer of newly issued JGBs (usually under a buy-and-hold investment strategy), purely competitive public auctions must have been difficult to implement. Naturally, underwriting by a syndicate has been the standard in the JGB primary market, especially for the benchmark 10-year bonds, with the specific goal of absorbing the full amount of new issues. Although competitive auction features were built into the current syndicate underwriting, their utilization has been limited. Public auction systems (based on multiple-price auctions) were introduced later for bonds with maturities of 2, 4, 6, and 20 years, but syndicate underwriting and noncompetitive auctions remain the major vehicle for absorbing new issues of JGBs. Thus, a PD system providing competitive bidding at primary auctions did not find a position in the JGB market.

With respect to international investors' primary concerns regarding low liquidity and large spread between bid and ask prices on the JGB market, the introduction of a PD system is definitely a viable alternative worthy of serious consideration (Table 4). PD systems are designed to attain at least three goals in the government securities market: first, efficient price discovery through intense competition among participating dealers; second, provision of liquidity through market-making, and third, distribution of government-issued securities. In addition, PDs serve as the counterparts to Central Banks in open market operations (OMO). Most advanced economies have adopted the primary system with the exceptions of Japan and Germany, which are both historically known for their bank-based financial systems, rather than the US- and UK-style capital market-based financial systems.

The major impediment to the adoption of the PD system in Japan is MOF's role as a buyer of JGBs. Therefore, it is a blessing in disguise that the MOF expects a large shortfall in FILP funds, amounting to approximately ¥35 trillion, when fixed 10-year deposits in the National Postal Savings System mature in 2000 and 2001.⁷ This will force MOF to review structural reforms in the funding method and management of FILP agencies, with an implementation target of 2001. Given the sheer magnitude and scope of FILP activities, the complexity of FILP reforms is beyond comprehension.⁸ However, the overall direction of FILP reform is not difficult to define, no matter how complicated the process. First, FILP agencies should be corporatized to gain complete autonomy, while the MOF should adopt a hands-off policy to facilitate the separate

7. "Japanese turn to 'zaito' to boost finances", *Financial Times*, 13 March 2000.

8. MOF web site, <http://www.mof.go.jp/english/zaito/zae054a.htm>, "Fundamental Reform to the Fiscal Investment and Loan Program (FILP)."

TABLE 4
Government Securities Markets

	Japan	United States	United Kingdom
Turnover Ratio	6.9	22.0	7.0
Bid-Ask Spread			
10-Year On-the-Run Issues	7.0	3.1	4.0
10-Year Off-the-Run Issues	7.0	6.3	4.0
Maturity Distribution (percent)			
< 1 Year	5	21	7
1-5 Year	8	62	29
5-10 Year	78	0	34
> 10 Year	9	17	30
Average Issue Size (US\$ billion)	8.2	13.9	5.6
Government/Central Bank Holding (percent)	46.3	13.1	3.6
Nonresident Holding (percent)	10.0	36.9	14.4
Settlement	T+3	T+1	T+1
DVP-Basis Settlement (percent)	* 67.6 percent of registered JGBs and 42.7 percent of book-entry JGBs	100	100
	* All JGBs through BOJ-NET		
Number of Primary	None	37	16
Number of Dealers	501	1,700	16

Source: Inoue (1999)

management of government assets and liabilities. Second, the MOF should not meddle with the JGB market as an active buyer. The MOF's direct involvement should be limited to issuer's function in the capacity of the manager of government debt.

B. Introduction of the Uniform-Price Auction Method

In a MOF publication *Guide to Japanese Government Bond 1998*, the uniform-price auction method is introduced as a noncompetitive bidding method executed auction undertaken concurrently. This is not a generic definition of the uniform-price auction but a Japanese-specific interpretation. Under the conventional uniform-price auction (also known as the Dutch auction), all bidders whose tenders are accepted pay the same price for a given security. This is either the lowest of the accepted prices or the highest of the accepted yields. Therefore, some of the successful

bidders may pay a lower price than they actually bid. In contrast, under the multiple-price auctions (also known as the discriminatory auction), participants submit sealed bids and pay the prices they bid. The Government accepts the bids at gradually lower prices until the price at which the auction is fully subscribed.⁹ As a result, successful bidders for a security may pay different prices for that security. These multiple-price awards result in the winner's curse, which means that the highest bidder wins the auction by paying the highest price, only to find that another bidder pays a lower price. Bidders therefore tend to shade their bids below the maximum that they are actually willing to pay.¹⁰ Since Salomon's short squeeze scandal was uncovered in mid-1991, the multiple-price method has been criticized for failing to minimize financing costs to the US Treasury, and for encouraging manipulative behavior in the marketplace. The uniform-price, sealed-bid auction is advocated as an alternative.¹¹

Australia, France, and New Zealand now utilize multiple-price (or multiple-yield) auctions to sell marketable securities, while Canada, Belgium, Italy, and the Netherlands use them for some portions of marketable securities. Uniform-price, sealed-bid auctions are employed in Denmark, Switzerland, and the United Kingdom. Beginning in 1992, the US Treasury experimented with uniform-price auctions for two-year and five-year notes. Malvey, Archibald, and Flynn (1995) and Malvey and Archibald (1998) indicated that these auctions produced marginally greater revenue on average for the US Government. Nyborg and Sundaresan (1996) report that WI market volume is higher under uniform-price than multiple-price auctions, which indicates a higher information release. The information release, in turn, reduces preauction uncertainty, the winner's curse, and the probability of short squeeze. Feldman and Mehra (1993) stated that uniform-price auctions become readily accepted because of their administrative simplicity, economic efficiency, and revenue-enhancing

9. In some countries, minimum cut-off prices are imposed by Ministries of Finance or the fiscal agents conducting auctions. This may prevent a truly competitive bidding process because: (i) the bidders try to second-guess cut-off prices rather than assessing the demand and supply of the securities to be issued, or (ii) the cut-off prices may set the yields higher than market conditions warrant. At the time of writing, it is not known to the author whether this practice is used in multiple-price auctions in Japan.

10. For details, refer to the *Joint Report on the Government Securities Market (1992)* prepared by the Department of the Treasury, the Securities and Exchange Commission, and the Board of Governors of the Federal Reserve System.

11. Friedman (1991 and 1960), Chari and Weber (1992), and Umlauf (1993).

12. Umlauf (1993), Nyborg and Sundaresan (1996), and Heller and Lengwiler (1998).

potential. A plethora of academic research papers provide empirical evidence in support of this perception.¹²

As shown in Table 5, Japan's MOF never adopted uniform-price auctions, whereas the US and UK employ these auctions for index-linked bonds and some bonds with specific maturities (two- and five-year bonds in the United States).¹³ The US Treasury is considering expanding the use of uniform-price auctions for all Treasury issues in the near future.

C. Lack of When-Issued Trading

Among developed government securities markets, Japan is the only one that considers WI trading illegal. In most advanced markets, including the United States, trading between the time a new issue is announced and the time it is actually issued (ranging from one to two weeks) is allowed, and the issue is said to trade "when, as, and if issued."¹⁴ WI trading functions like trading in a futures market, in which long and short positions are taken prior to the settlement date, which is the issue day of the security traded. Prior to auctions, WI securities are quoted for trading on a yield basis, because a coupon is not determined until after an auction is completed. Subsequent to auctions, they are quoted on a price basis. The most important benefit of WI trading is the minimization of price and quantity uncertainties. The risk of underwriting becomes smaller, and potential revenue from the new issue increases for the government as trading on a WI basis facilitates price discovery and distribution. By not allowing WI trading, the MOF foregoes these benefits.

D. Repo Market

A repo represents the sale of securities by the borrower to the lender (investor) with an agreement to repurchase the securities at a specified date and price. It is a combination of spot sale and forward purchase of the securities. The difference between the selling and repur-

13. Because the uniform-price auction is a legitimate competitive mechanism, the Japanese version of a noncompetitive uniform-price auction is a misnomer. Noncompetitive bids specify quantity only, while competitive bids specify both price (or yield) and quantity. In Japan, the price used for settlement for a noncompetitive bid is the weighted average price from the competitive auction conducted concurrently. By design, this noncompetitive method should be restricted to small transactions intended for small investors and should remain as an insignificant supplement to multiple-price auctions.

14. Appendix A "Background on the Treasury Securities Market," *Joint Report on the Government Securities Market* (1992), A1-A19.

TABLE 5
Auction Methods for Government-Issued Securities

	Japan	United States	United Kingdom
Uniform-Price Auction	None	•2- and 5-year notes •10- and 30-year index-linked bonds	•Index-linked Bonds
Multiplice	All JGBs •20-year bonds: Competitive auction Only •2-, 4-, and 6-year bonds: both competitive and non-competitive auction •5- and 10-year bonds: syndicated underwriting	•10- and 30-year bonds •3-, 6-, and 12-month bills	•All Securities other than index-linked bonds

Source: Asia-Pacific Financial Markets Research Center, University of Hawaii.

chasing prices represents the interest on the transaction. The borrower's repo is the lender's RRP. The repo market serves numerous purposes. It allows PDs to cover their short positions, institutional investors to maximize their investment income by lending their securities, and foreign investors to reduce currency risk through money market hedging.¹⁵ It also facilitates clearing and settlement transactions and enhances market liquidity. Without an active repo market, the primary and secondary markets cannot develop their full potential.

The *Kashisai* market (now patterned after the US-style repo market) is basically a cash-backed bond lending market with the same effect as that of the *Gensaki* market. However, *Kashisai* transactions differ from *Gensaki* transactions in that they are marked-to-market on a daily basis like the US-style repos. *Kashisai* transactions steadily increased since the shift to rolling settlement in October 1996.¹⁶ The *Kashisai* market

15. Bossard (1998) reports that the newly developed repo market in 1991 to 1993 was essential to foreign participation in the French government securities market. At present, one third of French government securities are held by non-residents.

16. "Executives Meeting of East Asia and Pacific Central Banks and Monetary Authorities," *Financial Markets and Payment Systems in EMEAP Economies* (1997).

witnessed the elimination of a major impediment when the upper limit on interest rates charged on the cash collateral was lifted in 1996. In addition, market participants in the *Gensaki* repo market have been exempted from payment of securities transaction tax since 1999. With these positive developments, one would expect the *Kashisai* and the *Gensaki* markets to take off. Puzzlingly, no drastic changes in market activities have been reported so far, and this warrants a careful review.

E. Introduction of STRIPS

At present, Japan does not allow coupon stripping, which splits bond income streams into coupon interest and principal repayment. Coupon stripping was devised in 1982 by Merrill Lynch and Salomon Brothers to serve bond investors who were concerned about reinvestment risks. Beginning in 1985, the Treasury introduced the STRIPS program to formalize the stripping of designated Treasury securities. The main appeal of STRIPS is to provide the market with highly liquid zero-coupon Treasury bonds and notes, thereby expanding the bond investor base. The strip market also generates arbitrage activities. PDs continuously check the price of strippable bonds against the sum of the stripped parts (the “whole” versus the sum of “parts”). The existence of a zero-coupon yield curve allows a better pricing of traditional coupon bonds. In developing a very active government securities market from an insignificant and illiquid market, the French authorities, for example, introduced a set of well-sequenced reform measures. As shown below, the introduction of STRIPS and the creation of a legal and institutional framework for the repo market were the latest set of reform measures implemented in France:

- Bond futures market (1986)
- Primary dealer system (1987)
- Interdealer broker network (1987)
- Purely competitive auctions (1987)
- Repos (1991)
- STRIPS (1991)

Given the US experience with STRIPS, and more recent experiences in the French government securities market, the MOF should expedite the introduction of STRIPS.

Internationalization of the Yen: Implications for the Creation of a Regional Bond Market

Under the new Miyazawa Initiative, a total of US\$30 billion was pledged by Japan, with half being made available for the medium- to long-term financing needs of Asian economies affected by the financial crisis. At least two measures under the initiative are directly related to regional bond market activities. These are: (i) the acquisition of sovereign bonds issued to Asian countries by the Export-Import Bank of Japan, and (ii) support for Asian countries in raising funds from international financial markets through the use of guarantee mechanisms. These are important vehicles to promote the global and regional role of the Tokyo market by expanding the *Gaisai* market. *Gaisai* is a general term assigned to all foreign and yen-denominated bonds issued in Japan by nonresidents. Yen-denominated bonds are called *samurai* bonds, while foreign-currency denominated bonds are known as *shogun* bonds. The capital market-related funding programs of the new Miyazawa Initiative were expected to provide the Tokyo financial markets (both on- and off-shore) with a critical momentum to reaffirm itself as a global and regional financial center. Unfortunately, no details have been available from the MOF regarding the implementation of the above two measures, and the underlying reasons for this are not clear. As shown in Table 6, the amount of *Gaisai* bonds issued does not exhibit any substantial increases over the five-year period from 1995 to 1999.

As an international financial center, the Tokyo market must compete with other financial markets, including the Eurobond market. As shown in Table 7, the difference in all-in-cost to a sovereign borrower of ¥20 billion between *samurai* bonds and Euro-yen bonds amounts to seven basis points or ¥14 million. The time difference required for bond issuance in both markets differs substantially (from six to seven weeks to a few days). With a recording system still in place, the clearing and settlement processes in the *samurai* bond market are far more cumbersome than the Eurobond market, where Euroclear and Cedel are readily available and utilized. Concerted efforts must be made for the Tokyo market to serve both global and regional customers more efficiently, and at less cost.

Numerous reform measures have been undertaken to internationalize the yen and promote foreign investments in the Tokyo financial markets. A legal framework for the promotion of cross-border transactions has been put in place with the revision of the Foreign Exchange Law in April 1998, but much more has to be done to facilitate actual transactions. For example, clearing and settlement have to be revamped to introduce delivery versus payment (DvP). At present, 67.6 percent of

TABLE 6
Volume of Gaisai Bond Issuance
(trillion yen)

	1995	1996	1997	1998	1999 ^b
<i>Samurai</i> Bonds	1.6	3.9	2.1	0.3	0.5
<i>Shogun</i> Bonds ^a	0	0	0	0	0

^a Last *shogun* bonds were issued in 1994; ^b Including the first 10 months only.

Source: Industrial Bank of Japan Securities Company (<http://www.ibjs.co.jp/e/reports>)

TABLE 7
Cost Differential between *Samurai* and Euroyen Bonds

Assumptions:

Issuer:	Sovereign Borrower
Issue Amount:	¥20 billion
Term:	Five years

	<i>Samurai</i> Bonds	Euro-Yen Bonds
Underwriting Fee	40 bp (upfront)	25 bp (upfront)
Commissioned Bank Fee/Recording Fee	3 bp (upfront)	not applicable
Interest Payment Commission	20 bp (of each payment)	nil
Principal Payment Commission	10 bp (at maturity)	nil
Out-of-Pocket Expenses	¥15 million (upfront)	¥ 8 million (upfront)
All-in-Cost to Issuer (percent)	2.03 (s.a.)	1.961 (s.a.)
Time-Length of Launch	6 to 7 weeks	A few days
Clearing and Settlement	Recording System	Euroclear and Cedel

Note: bp = basis point; s.a. = semi-annual basis

Source: Industrial Bank of Japan Securities Co. (1998)

registered JGBs and 42.7 percent of book-entry JGBs are settled on the DvP basis, whereas all JGBs processed through the Bank of Japan Financial Network System (BOJ-Net) rely on the DVP settlement. In contrast, US and UK government securities are all settled on a DvP basis. Additionally, JGBs are not eligible for clearing through international clearing houses such as Euroclear and Cedel, whereas all US and UK government securities are. Furthermore, no regional clearing network has been created to link the Tokyo clearing system with the region's financial centers such as Hong Kong, Singapore, and Sydney. A T+3 settlement period for JGBs is longer than the T+1 cycle for US and UK securities. Real-Time Gross Settlement must also be completed to bring Japan's practices in

line with US and UK systems.¹⁷ No publicly accepted practice exists for failure of deliveries in Japan, unlike in the US and UK markets.¹⁸

A great deal of work has yet to be done for the harmonization of cross-border listing, trading, clearing and settlements, securities borrowing and lending, repo markets, etc, and a study of inter and intraregion portfolio capital flows must precede the implementation of the above cross-border infrastructures. In his own assessment of the Japanese debt market serving the Asian and Pacific region's financing needs, Sakakibara (1999) noted that the JGB market still lagged substantially behind those of London and New York in terms of market infrastructure. Therefore, in addition to building domestic market infrastructures, Japan should intensify its efforts to assume a leadership role in creating regional bond market infrastructures in Tokyo and other financial centers in the region. One of the key projects in the development of such infrastructures should focus on the creation of a single regional central securities depository to perform the safekeeping, clearance, and settlement functions for all securities available in the Asian and Pacific region.¹⁹

17. The target date of adopting RTGS for JGBs is the latter part of 2000.

18. Refer to Appendix "Table of Questionnaire Results" of Bank for International Settlements, 1999, *Market Liquidity: Research Findings and Selected Policy Issues* (May).

19. For the regional and global level clearing and settlement, refer to Rhee (2000) and Morgan Guaranty Trust Company (1993).