KOREAN BOND MARKET AT A GLANCE

Primary Market

In Korea, bonds and other forms of fixed-income securities are important financial instruments for all sectors of the economy. On the issuer side, manufacturing firms use them alongside risk capital and bank loans; infrastructure projects obtain much of their long-term funding from bonds; and local authorities are often active issuers in the bond market. The government also depends on bonds to finance its budget deficit. On the investor side, bonds are the dominant asset in the balance sheets of banks and investment trust companies.

Korean debt securities are classified into five major categories according to the type of issuer: government bonds, municipal bonds, financial debentures, special (law) bonds, and corporate bonds (see figure 1). Fixed-income securities are issued through public offerings, private placements, or, in the case of government bonds, through auctions.

As of July 1999, the value of outstanding listed bonds was 356 trillion won, an amount larger than the stock market capitalization. Government bonds accounted for 15% of the total. The outstanding amount of government bonds increased 10.1 trillion won from the level of 1998. Corporate bonds were worth 122.7 trillion won, or
34.4% of the total. And the proportion of non-guaranteed corporate bonds to corporate bonds skyrocketed from 15% in 1997 to 68% in 1999.

**Secondary Market**

Bonds are traded on the exchange and in the over-the-counter (OTC) market but mostly in the latter, even though most bond issues are listed on the exchange (see table 1). Member firms of the exchange

<table>
<thead>
<tr>
<th>Year</th>
<th>Exchange-traded Amount (billions of won)</th>
<th>OTC-traded Amount (billions of won)</th>
<th>Total amount traded (A)</th>
<th>Outstanding amount (B)</th>
<th>Turnover ratio (A/2B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>6,433</td>
<td>35,623</td>
<td>42,056</td>
<td>51,117</td>
<td>0.33</td>
</tr>
<tr>
<td>1994</td>
<td>2,362</td>
<td>162,085</td>
<td>164,447</td>
<td>102,492</td>
<td>0.55</td>
</tr>
<tr>
<td>1997</td>
<td>6,875</td>
<td>279,280</td>
<td>286,155</td>
<td>224,116</td>
<td>0.64</td>
</tr>
</tbody>
</table>

are required to concentrate orders for small-lot government bonds and convertible bonds in the exchange market.

The financial sector holds about 82% of Korean bonds issued (see figure 2). The major bondholders among the financial institutions are banks and investment trust companies, which tend to hold the bonds to maturity. The investment trust company (ITC) and investment trust management companies (ITMCs) account for about 33% of the total outstanding amount of Korean bonds. Banks account for about 32% of the total outstanding amount of Korean bonds.

Securities companies have relatively small bondholdings. They invest in bonds for speculative purposes and hold on to their investments for only short periods. Insurance companies, mostly those in the life insurance business, account for 8% of the total outstanding amount of Korean bonds. Because their liabilities extend over the long term, life insurance companies tend to hold their bond investments until maturity.

Until May 1998, local bonds had exceptionally high yields in response to the government’s contractionary monetary policy after the financial crisis. Market interest rates quickly regained stability, however, once the government took steps to lower interest rates. The yield on three-year corporate bonds fell from an annual rate of 18.28% at the end of March 1998 to 8.0% in mid-1999.

Figure 2. Bondholdings by Economic Sector, 1997
HISTORICAL BACKGROUND

The Financial System in Economic Development

In its earlier stages, the Korean economy, unlike the capital market-dependent economies of the United States and the United Kingdom, relied heavily on the banking system to channel savings to industrial investments. By regulating financial institutions with credit rationing and interest rate ceilings, the government intervened heavily in the allocation of financial resources for developing strategic industries. Financial policies implemented to develop the economy included regulating interest rates and credit control through “policy loans.” Policy loans became an important means of providing funds to specific sectors, industries, and even enterprises.

As a consequence of the government’s credit control, banks played a significant role in the country’s economic development, especially as an instrument of national industrial policy. The capital market played only a supplementary role. Meanwhile, the banking system failed to promptly provide sufficient financial resources for the growing and increasingly complex economy of the 1970s and 1980s.

Development of the Bond Market

Policymakers realized that the capital market needed to be developed to cover the deficiencies of the banking system. The corporate bond market was seen as a most favorable alternative source of financing for corporations. In the 1970s, the government introduced various measures to create a favorable environment for the issuance of corporate bonds, most notably a guarantee system for corporate bonds and some revisions to the taxation system. With the establishment of the Securities Investment Trust System and the underwriting system, Korea’s corporate bond market started taking shape.

In the 1980s, the government deregulated the issuance limit on guaranteed corporate bonds, introduced Repurchase Agreements, allowed self-regulation on issuance of corporate bonds, and permitted issuance of floating rate notes. These measures helped pump up the volume in the corporate bond market more than in the stock market and pushed corporate bonds to the forefront of the Korean economy.
bond market. What is unusual, however, is that guaranteed corporate bonds dominated the market.

Meanwhile, the government bond market remained stagnant because the government basically viewed it as just a place to raise necessary funds. It did not recognize the way government bond market structure and operations affects growth of the corporate bond market. The government focused mainly on developing the corporate bond market and, unfortunately, failed to recognize that the government bond market, still being immature, hampered development of the entire bond market, including the corporate bond market. Consequently, the Korean bond market experienced disproportional and fragmented development, despite a significant increase in size.

Following the financial crisis, the government’s attitude toward the bond market changed fundamentally. Faced with the need to raise substantial sums through the bond market, the government saw that the bond market could play an important role as a provider of long-term bonds. A well-functioning bond market would help lower funding costs and minimize the impact on the financial market of large-scale issuance of government bonds.

Deregulation and Market Opening

Starting in early 1998, with the financial crisis in full bloom, the Korean government implemented some comprehensive economic reforms. At the same time, it prepared a full-fledged deregulation plan for the financial market that would allow banks to have autonomous authority and self-regulation in their business activity. In addition, the government decided to lift completely all ceilings on bond investment by foreign investors from January 1998 and also increased the limit on foreign ownership of domestic stocks from 18% to 55% of outstanding stock. In May 1998, the ceiling on foreign ownership of stocks was abolished.

Despite this full opening of the market to foreign investors, that group has shown little interest in the Korean bond market; their share remains below 1%. It is believed that foreign demand for Korean bonds is undermined by four factors: exchange rate risk, default risk, liquidity risk, and high trading costs. Among these, exchange risk
and default risk can be mitigated as the Korean economy recovers from its worst recession on record. However, the high trading costs and liquidity risk stem primarily from the underdeveloped bond market. To cope with these kinds of structural problems, the government needs to undertake full-scale reforms in the securities market.

UNDERLYING PROBLEMS IN THE BOND MARKET

Underdeveloped Government Bond Market

As noted, underdevelopment in the Korean bond market is partly due to immaturity of the government bond market. No government securities function as a benchmark in the bond market. Several factors account for this lack of a government benchmark.

First, the fiscal deficit of Korea is smaller than that of developed countries. Between 1981 and 1993, the average ratio of the fiscal deficit to current GNP amounted to only 1.2%. Since the government was reluctant to increase the fiscal deficit, government bond issues had to be small and limited. The ratio of outstanding government bonds to GNP in 1996 was about 6.7%, which is significantly lower than the 68.8% of the United States, 55.8% of the United Kingdom, 53.0% of Japan, and 20.7% of France.

The main obstacle to Korea’s bond market development is the lack of truly market-determined rates in the public bond auctions. In the past, most public bond issues were allocated to captive syndicates and sold through tender offers, public sales, or compulsory sales to individuals and firms in connection with permit applications and administrative registrations. Since November 1993, all marketable government bonds have been issued using a British auction system. However, the government set a maximum rate for the auction that was generally below the market interest rate; and the highest rate had to be lower than the minimum rate set by the government. As a result, the total amount awarded was lower than the intended government offering. The unsold portion of bonds was purchased by the government bond underwriting syndicate (consisting of 102 financial institutions) at an interest rate of 0.2% lower than the average bid-awarded rate.
Furthermore, too many issuers of government bonds are spread out among numerous special accounts and funds, making it difficult to standardize the issuance of government bonds. Korean government bonds are given different names depending on their specific purpose. Consequently, the outstanding amount per issue is too small to maintain sufficient liquidity in the secondary market, despite the growth of the government securities market in recent years.

In addition, the irregularity of the issue cycle makes it difficult for investors to anticipate future issuance. This, in turn, has an adverse effect on the marketability and liquidity of government bonds.

The short-term maturity of most government bonds pushes up their cost of management. This has also prevented the development of a meaningful yield curve that could be used in pricing issues of corporate bonds. In addition, the fact that bonds are issued in greater concentration toward the end of the year undermines the stability of the bond market.

Bond prices are often set by a select group of large institutional investors, and the liquidity of government bonds remains low. Hence transaction costs are high and individual investors are reluctant to participate in bond trading.

Dominance of Short-term Bonds

Most Korean bonds have short maturities, averaging less than three years, because investors are concerned with inflation. With the prevalence of short-term bonds, it has been impossible to develop a meaningful yield curve. Corporations are forced to rely heavily on short-term borrowing, putting them into an unstable state, with maturity mismatches between their assets and liabilities.

Lack of Liquidity in the Secondary Market

The turnover rate in the bond market is relatively low. Illiquidity in the secondary market can be traced to the following factors: most purchasers hold bonds until maturity, no real-time information is available on bond prices and quantities, there are no market makers for bonds, and the credit rating system is underdeveloped.
Predominance of Guaranteed Corporate Bonds

With investors averse to credit risk and a price determination mechanism that malfunctions, guaranteed corporate bonds have come to dominate the Korean bond market. “Guaranteed” here means that guarantees for the payment of principal and interest are made by financial institutions, such as local commercial banks, local merchant banks, local guarantee insurance companies, the Credit Guarantee Fund of Korea, or foreign banks with branch offices in Seoul.

Being under close government control, financial institutions have relied on the government to ensure their soundness. The conventional wisdom has been that the government would surely give a hand to any faltering or failed financial institutions. Indeed, until 1997, no financial institution was allowed to fail. The implicit government guarantee created moral hazard among financial institutions. They guaranteed corporate bond issuers without a prudent examination of the credibility and financial soundness of such institutions. Although the guarantee system helped create a leading position in the Korean bond market, it passed the credit risks of an industrial sector on to the financial sector without any filtering. Eventually, the burden of restructuring these industries was transferred to the public.

UNDERDEVELOPMENT OF THE BOND MARKET AND THE FINANCIAL CRISIS

Many economists have attributed the financial crisis in Korea to the following structural problems: overvaluation of the currency and prolonged imbalances on the current account, excessive investment in risky and low-profitability projects, moral hazard effects of implicit and explicit government bailout guarantees for banks, and accumulation of short-term foreign-currency debt. The overexposure of firms to short-term debt is undoubtedly one of the key causes. The mismatch between their liabilities and their investments made firms vulnerable to both market and structural risk. Once the market conditions turned against the highly leveraged corporations, the firms experienced serious liquidity problems that forced many into bankruptcy.
Indeed, the financial crisis of 1997 was triggered by a series of bankruptcies involving chaebols, large business groups, that had borrowed heavily to finance their investment projects. The spate of bankruptcies started in January 1997 when Hanbo Steel, the fourteenth largest chaebol, sought court receivership. Sammi Steel, Jinro Group, and Kia Group followed suit in March, April, and July, respectively. In 1996, 20 of the 30 largest conglomerates in Korea showed a rate of return on invested capital lower than the cost of capital.

The excessive mismatch between borrowed and invested funds could have been alleviated by making active use of the bond market as a key funding source. In the absence of such a market, firms turned to bank loans. As of the end of 1997, Korea’s manufacturing sector was financing only 17.7% of its outstanding debt by issuing bonds. Relying so heavily on bank loans, Korean firms were particularly hard hit when the crisis evolved into a credit crunch in the banking sector. The shock could have been greatly softened had indirect financing not been the only funding route for the business sector, and had bond issuance been operating as an alternative funding channel.¹

As for the moral hazard problem, implicit government guarantees make it difficult to properly assess risk when selecting projects. In the Korean economy as a whole, too much attention was given to investment and too little to risk. The problem would not have been so severe with an active bond market, which would have acted as a competitor to the banking business and thus would have curtailed

¹ For example, if the investment projects driven by Hanbo Steel had been profitable, and if the bond market in Korea had been functioning well, the corporation could have raised a large amount of long-term capital at a lower cost without the added worry of frequent repayment on principal and interest. If investment projects were risky or not profitable enough to cover the cost, the corporation would have had difficulty in raising funds and would have given up the investment project owing to high costs. This investment decision mechanism based on capital market response was also applicable to the investment projects driven by all the other corporations. That meant the financial crisis in Korea could have been avoided, or at least softened, had the bond market functioned properly as a provider of long-term capital.
the banks’ power in the financial sector. This, in turn, would have reduced the adverse effect on the local business sector caused by the banks’ moral hazard behavior.

MEASURES FOR RESTRUCTURING THE BOND MARKET

In February 1998, on the recommendation of the World Bank, Korea formed a task force to investigate how to improve the government bond market system and activate the secondary market. With input from a workshop sponsored by the Bank and Korea’s Ministry of Finance and Economy (MOFE), the task force prepared a restructuring plan for the Korean bond market. The government agreed to adopt several of the plan’s key policy measures to restructure the primary and secondary markets, along with the infrastructure for the bond market:

Developing a Benchmark Rate through the Government Bond Market

The problem of low liquidity and lack of a benchmark rate is one of the major problems in Korea’s government bond market. In the absence of liquidity, no benchmark rate could be formed on which all fixed income pricing depends. The absence of a benchmark discourages fixed income transactions, creating a chronic vicious cycle between liquidity and a benchmark rate. To address this, the government is taking several steps to make government bonds a reliable benchmark. First, it has decided to promote three-year bonds as the benchmark debt instrument, making them much like U.S. Treasury bonds. The proportion of three-year government bonds is soon scheduled to increase to a predominant share of the entire market. In line with a downward stabilization of interest rates, the emphasis will be on expanding long-term bonds with a maturity of five years or more.

Second, the government is simplifying the type and kind of government bonds. National Debt Management Fund bonds have been renamed “Treasury bonds.” Grain Security bonds are being merged with National Debt Management Fund bonds. The government will
also examine introduction of a fungible issue system to increase the outstanding volume of a benchmark bond by matching the terms and coupons of new issues with those of existing ones.

Enhancing Transparency of the Issuance Process

In an effort to reform the process of issuing government bonds, Korea has discontinued the policy of fixing a preset rate for the auction. Instead, free market forces are being allowed to determine the rate. Furthermore, to raise the efficiency in bond offerings and transactions, the government has introduced electronic (that is, paperless) tenders at auction.

Introducing a Primary Dealer System

Under the proposed system, a financial institution that is named a primary dealer (PD) will be given exclusive rights to purchase a portion of sovereign bonds for resale. This measure is designed to make the domestic bond market more competitive and to resolve the liquidity problem in the secondary bond market. Under such a system, the government will be able to issue government bonds periodically. It will also be able to simplify fragmented bonds and establish government bonds as the benchmark for domestic interest rates.

As a preparatory measure, the government has allowed every commercial bank to deal in the government securities market as a principal under its own name and without going through a broker. A total of 66 financial institutions—22 domestic banks, 27 securities houses, 8 merchant banks, and 9 foreign bank branches in Seoul—have applied for the primary dealerships. About 24 applicants are to be chosen as primary dealers after their performances are evaluated during the test period.

Qualifications for Candidacy. Candidate status is restricted to syndicate members who have been licensed for dealing in government securities. This limits potential PD candidates to the commercial banks, merchant banks, and security houses duly authorized by MOFE and supervised by the Financial Supervisory Commission
This group includes branches and subsidiaries of foreign institutions authorized to deal in government securities. The pool of candidates from which the first batch of PDs was selected at the end of the test period consisted of those who had submitted letters of intent.

Minimum capital requirements and other financial criteria for prudential regulation purposes were not imposed at this stage. Such restrictions might unfairly eliminate some of the institutions, particularly those in the middle of restructuring.

After candidates were identified, they were asked to undergo a test period of close monitoring for about three months. At the end of this test period, MOFE invited candidates to apply formally for primary dealership. The first group of PDs was selected from the applicants on the basis of their performance in specified areas during the test period and other qualification criteria.

**Selection Criteria.** During the test period, from March 29 to the end of June, candidates were asked to demonstrate their potential market-making capacity, and their performance was monitored. Test scores were based on the arithmetic average of two subparts, one for the primary market activity and the other for the secondary market activity.

Performance in the primary market was assessed primarily in terms of the actual volume taken, not the volume of bids at the auctions. The secondary market was divided into the centralized electronic dealer market organized by the Korean Stock Exchange (KSE) and the over-the-counter (OTC) market. In each section of the secondary market, performance was monitored and evaluated on the basis of the trading volumes for the benchmark issues specified as the most recent issues of each type of government securities offered through auctions. Preliminary primary dealers had to make markets at the KSE’s inter-dealer bond (IDB) market, providing daily bids and offers greater than 1 billion won on benchmark issues according to their maturity.

**Selection of PDs.** It was agreed that the selection of PDs needed to reflect the diversity of the institutions (commercial banks, security

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2 As a result of government restructuring, the authority to grant financial service licensing will be removed from MOFE and transferred to the FSC.
firms, and merchant banks) active in the market. To this end, 50% of the predetermined number of primary dealerships to be licensed were distributed among the different types of institutions in proportion to their presence in the total applicant pool. Within each category of institution, PDs were selected on the basis of the quantitative performance index. The rest of the PDs were selected solely on the basis of performance criteria, regardless of the type of institution.

In order to alleviate the effect of adverse selection and excessive competition, additional members consisting of up to 20% of the predetermined number of PDs were nominated as PDs by the minister of MOFE, on the basis of such factors as their prospective contribution to the government securities market, amount of capital, and reputation.

**Obligations of Primary Dealers.** Over time, PDs in the primary market must meet a 2% minimum underwriting requirement. Their main secondary market obligation is to make a two-way market in government securities, normally for a specified minimum volume and a maximum spread. The two-way prices are made on the KSE electronic trading system. In addition, a minimum trading requirement similar to that of the primary market is also imposed on 24 PDs. That is, each PD is required to account for at least 2% of the total secondary market trading between dealers in all government securities. The other main obligation is that the PD must provide information to the debt manager. In the primary market, PDs could provide information about client interest ahead of each auction. PDs must also provide daily information about their proprietary trading and own positions.

**Privileges of Primary Dealers.** The greatest privilege is the prestige that comes with the status of being a PD. Although it is hard to put a value on being a PD, this is one of the most important marketing tools in fixed-income markets. The government does not grant PDs exclusive access to auctions, but it allows them to enter noncompetitive bids. The share of the noncompetitive auction is set at 20% of the total volume offered. PDs undertake bidding on behalf of clients. If the share of noncompetitive auction is not sold off, PDs are exclusively entitled to bid on the remainder. Meanwhile, PDs will be granted a standing borrowing facility with the Korea Security

Financing Company. It is believed that access to such a standing (borrowing) facility could be useful to PDs in the early stages of market development in Korea. Finally, through regular consultations with the debt manager, they could influence government decisions on structural issues relating to the market, such as regulatory procedures and rules of conduct, and on more operational issues such as types of the securities to be issued.

**Implementing the Primary Dealer System.** The PD system officially went into effect at the beginning of August 1999. The first PDs to be appointed consisted of 11 securities houses, 13 commercial banks, and 1 merchant bank. So far, the market activity of these PDs has been invisible because of adverse market conditions: for example, no additional supply of treasury bonds has been available since May, and market yield has begun an upward trend owing to the fast economic recovery and possible dumping of ITC holding bonds caused by Daewoo’s credit crunch. Thus it will take time for the PDs to play an effective role in the government bond market.

**Participation of Individual Investors in the Bidding.** Along with introducing a primary dealer system, the government has adopted a “noncom” bid system for individual investors. The government is assigning 20% of newly issued treasury securities to individual investors and allowing them to bid. Under the revised bidding process, an individual investor can subscribe for a minimum of 1 million won and a maximum of 1 billion won through 24 primary dealers or financial institutions. A person making a noncompetitive tender will get them at the average price of the competitive bids accepted.

**Improving the Infrastructure of the Secondary Market**

The government is setting up a system of disclosing major quotes in real time. Financial institutions having an exclusive government bond dealership (primary dealership) must submit bid-ask orders to the stock exchange, where, in turn, they are announced in real time. To enhance the role of credit rating agencies, the government is encouraging foreign credit-rating agencies to enter into the domestic
The settlement system for bond transactions will be improved with introduction of a delivery-versus-payment (DVP) settlement for OTC bond transactions; this will be established through a linkage between the Korea Securities Depository’s (KSD) securities settlement system and the payment system of the Bank of Korea (BOK).

On November 15, 1998, in an effort to activate the secondary market and to improve the transparency of trust fund management, the government introduced marking-to-market of bond portfolios held by institutional investors. Before then, financial institutions were permitted to swap bonds among the different funds they operated to guarantee, more or less, stable yields at maturity for their customers. The new regulation no longer allows fund managers to transfer bonds into different funds. Instead, they are able to trade bonds held in trust funds in the secondary market without the worry of investment loss. However, marking-to-market is required only for existing trust funds. It will not be required for newly established funds until the middle of 2000.

**Diversifying the Bond Market**

To diversify market structure and provide hedging tools, the government is introducing asset-backed securities and mortgage-backed securities, and is establishing an interest rate futures market, among other measures.

To create demand for bonds, particularly long-term bonds, the government is expanding the investor base by increasing the number and size of financial institutions. As a first step, beginning in October 1998, it allowed mutual funds to be established. Now, it is also considering introducing corporate pension funds and open-end trust funds, as well as providing attractive tax benefits to foreign institutions investing in domestic fixed-income securities.

**NEW FEATURES OF THE KOREAN BOND MARKET**

The bond market has experienced significant structural changes since the government began promoting greater activity in this
field. The restructuring process appears to be headed in the right direction, if the following developments are any indication: government bonds are growing in importance; structurally, there has been a clear movement from guaranteed corporate bonds to non-guaranteed bonds; the issuer base has expanded from the “Big Five” chaebols to other corporations; and the shape of the term structure has changed.

Growing Importance of Government Bonds

As mentioned earlier, the Korean bond market has long been dominated by corporate bonds, even when government bonds were not functioning as a benchmark instrument. Before August 1998, market participants used three-year guaranteed corporate bonds as benchmark instruments of debt and from then until recently used non-guaranteed corporate bonds. Corporate bonds became predominant in part because government bonds were in insufficient supply. In general, the government bond market was strongly influenced by the government’s fiscal policy. Efforts to maintain fiscal soundness hampered the development of the government bond market.

Things are changing drastically now. The government injected about 60 trillion won into restructuring the nation’s financial and industrial sectors, and in the process produced a huge fiscal deficit. To finance this deficit, the government issued bonds in various forms. The public issuance of government bonds totaled 15.1 trillion won in 1998, 76% greater than in 1997. Meanwhile, large volumes of government bonds are issued on a continuous basis, and the various types of government bonds are unified into a single treasury bond. The share of treasury bonds in gross government bonds increased by 11 trillion won to 17.3 trillion won, which improved the marketability and liquidity of treasury bonds. The increased liquidity of treasury bonds can be seen from the changing market share held by government bonds in the secondary market, which jumped from 1% in 1997 to about 20% in 1999.

As corporate bonds slipped from their benchmark position, market participants began looking for more reliable benchmark instruments. Since 1998 government bonds have reflected this change in market
mood to one favoring government bonds, with yield spreads between treasury and corporate bonds widening since October 1998. With the government’s continued reform efforts, treasury bonds will be a reliable benchmark in the near future.

**Structural Change in the Corporate Bond Market**

Before the financial crisis, the vast majority of corporate bonds were issued as fixed-rate coupon bonds, which were guaranteed by local financial institutions such as commercial banks, merchant banks, and securities companies, for example, Daihan Fidelity and Surety Co., and Hankuk Fidelity and Surety Co. In addition, most corporate bonds had a three-year maturity and were redeemed at maturity. Since the financial crisis, the corporate bond market has been diversified in several aspects.

**Movement from Guaranteed to Non-guaranteed Bonds.** After the worst economic crisis in the country’s history, nonguaranteed corporate bonds became the major fixed-income instrument in the Korean bond market. Concerned about their financial soundness, financial institutions were reluctant to guarantee the payment of corporate bonds. In addition, as the number of corporate bankruptcies grew during the financial crunch, the guarantee insurance companies, the only available guarantors for corporate bond issuers after the financial crisis, also experienced serious financial insolvency. Consequently, few financial institutions were able to guarantee payment on interest and principal. Corporations now have to issue bonds based on their own credit, without any credit enhancement from other financial institutions.

Consequently, there has been a significant increase in the issuance of nonguaranteed bonds in recent months. The ratio of nonguaranteed corporate bonds to listed corporate bonds skyrocketed from 10% at the end of 1997 to 97.2% in July 1999. In addition, the market price of corporate bonds came to be based on the credit rating of each corporation. Hence the yield on corporate bonds now reflects the real difference in default risks among issuers.

As credit ratings take on more importance, various measures are being taken to improve the function of credit-rating agencies and to
increase the credibility and power of discrimination of credit ratings. To this end, one domestic rating agency recently established a joint venture with a prominent U.S. credit-rating agency.

**Spread of the Issuer Base from the Big Five Chaebols to Other Corporations.** Since non-guaranteed bonds were the only fixed income instruments available to bond investors, institutional investors seldom exposed to credit risk grew more cautious with their bond investments. To lower the possibility of default, investors purchased only highly rated bonds, most of which were issued by the Big Five chaebols. Therefore large corporations raised funds freely and easily by issuing bonds. Thus the chronic problem of excessive capital among the Big Five worsened, pushing other corporations into the worst financial hardship in their history. Corporate bonds issued by the Big Five, estimated at 11.08 trillion won in 1996, accounted for 37.5% of the total. As a result, their rate of ‘monopoly’ in the bond market soared from 56.9% in 1997 to 70% in 1998.

To weaken the chaebols’ grip on the domestic money market and to help ease the credit crunch for smaller firms, the government imposed a ceiling, on October 28, on the holdings of bonds issued by the Big Five. That is, domestic banks and insurers were barred from owning corporate bonds issued by the Big Five in excess of 10% of their total bondholdings. The comparable ceiling for investment-trust firms will be 15%. The corporate bondholdings above the law-stipulated level should be disposed of by the end of 2000.

Since the implementation of these measures, the Big Five’s share of new issuance in the corporate bond market has dropped, from 68.7% in 1998 to 33.8% in 1999. Whether or not this may be just a voluntary change in the investment pattern, investors are buying non-guaranteed bonds issued by corporations other than the Big Five, with relatively less resistance to credit risk.

This is thought to be a sign that the corporate bond market is beginning to work properly as a provider of long-term capital, not only for corporations with high credit rating but also for low-rated corporations without any credit enhancement from other financial sectors or institutions.
In summary, since the financial crisis the market benchmark has changed as follows: in the first quarter of 1998, corporate bonds were bank guaranteed; up to the end of August 1998, they were insurance company guaranteed; after that, they were non-guaranteed, with a credit rating over A+.

Change in the Shape of the Term Structure

In the face of a chronic shortage of investment resources and persistent high inflation, short-term yields were usually higher than long-term yields. In addition, bond maturities were abnormally short, averaging only about three years, mainly because of investor aversion to interest rate risk. For the most part, the yield curve sloped downward until April 1998, when the government began focusing on stabilizing the foreign exchange rate, and opted for a contractionary monetary policy.

In response to the lack of cash demand by businesses for fresh investment, a large trade surplus, surging capital inflow, and sluggish domestic consumption, the foreign exchange market became more stable and the government began lowering interest rates to boost the sagging economy. Subsequently, market interest rates regained their stability faster than expected. In 1999, the yield on three-year corporate bonds fell from an annual rate of 18.28% at the end of March to 9.55% on November 25, with a temporary rise to 10.59% on September 18. The drop in the short-term money market interest rate was more dramatic than that for longer-maturity money. On September 18, the overnight call rate plummeted from 22.19% to 4.77%. As a result, the yield curve began an upward trend, augmented by the financial resources being circulated only within the financial institutions, owing to the persistence of credit risk and uneven performance of industry.

Providing higher returns to long-term bonds not only makes them more attractive but creates new demand for them. In general, investors typically expect a higher return for securities with high risk, under the liquidity hypothesis of the maturity structure of interest rates. With short-term interest rates being lower than long-term rates, the Korean bond market is able to extend the maturity spectrum to longer terms and develop a meaningful yield curve for use in pricing corporate bond issues.
AGENDA FOR THE FUTURE

Implementing a Delivery-versus-Payment (DVP) System

Since most bonds are traded in block by financial organizations, the OTC market has been the major trading arena. In the OTC bond market, however, settlements take place on a free-of-payment basis, in the absence of regulations regarding cash settlement. This exposes trading parties to settlement risks. DVP will remove settlement risk, by ensuring that cash is paid only when the securities are available, and vice versa, so that there is no risk of giving away one asset (cash or securities) without receiving the other in return. Normally, this would be achieved by linking the wholesale payments system (Bank of Korea (BOK) wire) with the electronic book-entry settlement system (Korea Securities Depository (KSD)). The BOK and KSD are currently making steady progress in their discussion of a DVP system.

Introduction of Interdealer Brokers

Now that the government securities market is becoming more diversified, a primary dealer system has been introduced and a program for restructuring bonds is being implemented, attention turns to creating a new type of intermediary facility, known as the interdealer broker (IDB). As yet, there are no clear guidelines or legal definition for IDBs. Their role in the bond market, business characteristics, business area in which they will participate, and supervisory system therefore need to be clarified.

Activate Bond-lending and Repo Market

Repos can be a very powerful tool for dealer financing. They can facilitate management of bond portfolios by allowing for short positions. At present repo trading and bond lending face several obstacles, such as tax problems, legal issues related to bankruptcy law, and the lack of a viable transaction system. Without a repo market, short-term borrowers have no choice but to rely on high-cost financing in the call market.
Along with repo trading, the bond-lending system can improve liquidity in the bond market. Bond lending and borrowing is a principal means for hedging in an open and deregulated financial market. In addition, bond lending and borrowing activates arbitrage transactions between the cash and futures market. This may give institutional investors a new way of managing assets and a new source of financing. A few working groups sponsored by the government are investigating the problems entailed in developing these suggestions.

Prepare a Demand-stimulation Plan

The investor base for bonds needs to be widened to promote a more competitive and transparent bond market environment. If only a few financial institutions are allowed to hold most of the outstanding government bonds, those few investors will be able to set bond prices, liquidity will decrease, transaction costs will rise, and individual investors will be kept out of the bond markets.

The fact that a handful of institutional investors (such as investment trust companies and commercial banks) dominate the Korean bond market is one of the key causes of the market’s high volatility and low liquidity. To attract more bond investors, the government should consider removing various restrictions on the operation of their financial assets and giving them more preferential tax treatment. The National Pension fund invests almost 70% of its assets in the public sector, in effect giving loans to government departments. Converting these loans to government bonds would create a new demand for government bonds. A new study seeking ways to encourage the demand for bonds also suggests focusing on tax incentives for bond investment, such as deferring the tax levied on interest when bonds are borrowed or returned or exempting the withholding tax on the interest income levied on mutual funds.