CORPORATE DEBT MARKET IN KOREA

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Abstract

This report conducts an analysis of the corporate bond market in Korea and the changes in interest rates and term structure since the 1997 Asian financial crisis. The potential risks and solutions for stabilizing the corporate debt market are discussed. Corporate bonds not only play an important role in financing long-term corporate investments but also have a positive and persistent influence on enhancing the capital markets. Thus, the authorities in Korea have attempted to increase the proportion of corporate bonds, which is a means of direct financing, rather than bank loans. Implementing specific plans to stabilize the corporate debt market that are mentioned in this report are critical to sustaining the Korean capital markets as a means towards continued economic growth and prosperity.

Introduction

Since the 2008 global financial crisis, there has been remarkable growth in the size of the corporate bond market worldwide due to several factors, including a decrease in long-term U.S. Treasury bond yields. In particular, the corporate bond issuance of the Asian emerging markets, whose corporate debt market was not as developed in the past, increased significantly. Korea also increased its corporate bond issuance, particularly through large corporations and blue-chip companies, which led to a higher level of dependence on direct financing. Accordingly, the importance of corporate bonds as a companies' means of external financing is gaining momentum.

This report conducts an analysis of the corporate bond market in Korea and the changes in interest rates and term structure since the 1997 Asian financial crisis. The potential risks and solutions for stabilizing the corporate debt market are discussed. Corporate bonds not only play an important role in affordably financing long-term corporate investments without diluting managerial control and sharing future cash flows[1] but also have a positive and persistent influence on enhancing the capital markets. Thus, the authorities in Korea have attempted to increase the proportion of corporate bonds, which is a means of direct financing, rather than bank loans. The implementation of specific plans to stabilize the corporate debt market mentioned in this report are critical for sustaining the Korean capital markets as a means towards continued economic growth and prosperity.

This report covers a briefing of the types of corporate bonds in Korea; trends of interest rates and changes in the term structure in Korea since the Asian financial crisis; and the market mechanism and current issues of corporate debt securities, including potential risks, in Korea.

Types of Korean Corporate Debt Securities

In Korea, corporate bonds are categorized into bonds with guarantees or collateral, ways of paying interest, and the rights given to the holders of corporate bonds.

Bonds with Guarantees or Collateral

Guaranteed bonds refer to corporate bonds for which a financial institution guarantees the redemption of the principal and interest payments. These guarantees are provided by banks, the Korea Credit Guarantee Fund, the Korea Technology Finance Corporation, merchant banks, financial investment companies, and surety insurance companies. The issuing company pays a guarantee fee to the guaranteeing company. Collateral bonds are secured by physically guaranteeing the redemption of the principal and interest payments. They are issued in accordance with the Secured Bond Trust Act.

Non-guaranteed bonds are issued based on the issuer's credit without a guarantee or collateral provided by a financial institution for principal redemption. Most Korean corporate bonds are issued as debentures. The underwriters of bonds are required to undergo credit assessments of their debentures from two or more different credit rating agencies.

Bonds Categorized by Interest Payment

Coupon bonds refer to corporate bonds with coupons denoting the payment of interest on a regular schedule. Discount bonds are corporate bonds where the principal and interest rate are paid at the par value upon expiration, with the discount being the de facto interest. Compound bonds involve the computation of compound interest for the interest cycle. Thereafter, the principal and interest are paid in a lump sum on the date of maturity.

Bonds Categorized by Redemption Period

Depending on the redemption periods, bonds can be divided into short-term bonds, medium-term bonds, and long-term bonds. Generally, short-term bonds have redemption periods under one year; medium-term bonds, between one year and five years; and long-term bonds, over five years. Of note, long-term bonds refer to bonds that mature in 10 or 20 years in the United States.

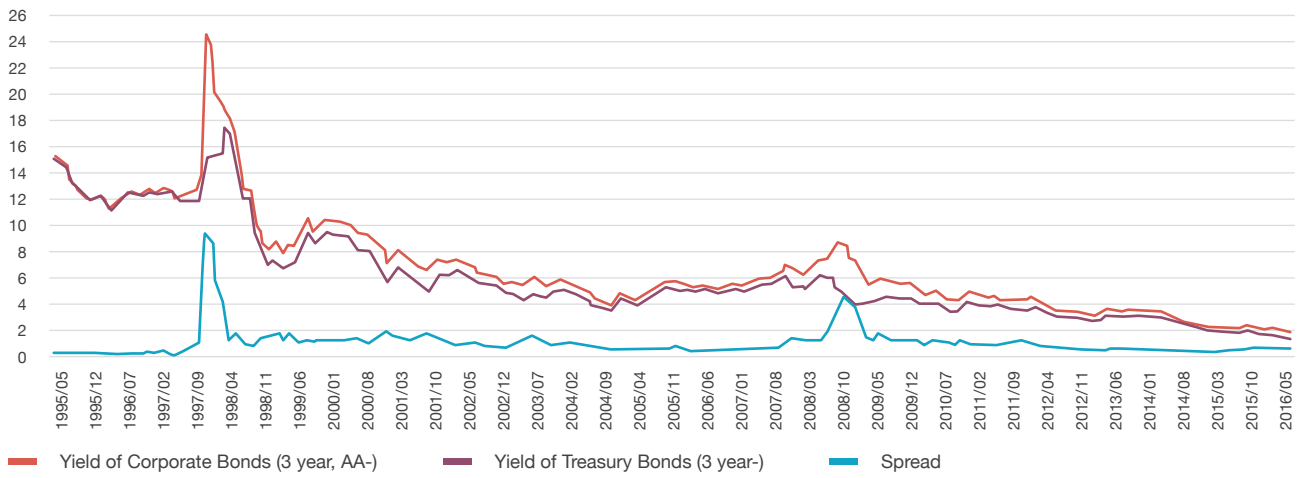
Bonds Categorized by Method of Interest Payment

There are fixed-income bonds and floating rate notes (FRN), depending on how interest is paid. Fixed-income bonds involve the payment of fixed periodic returns, and FRN has a variable interest rate that is linked to the benchmark interest rate.

Bonds Categorized by Bondholder

Convertible bonds (CB) can be converted to the issuing company's equity under certain conditions. Bonds with warrants entitle the holder to purchase a certain quantity of any future issue of the company's stocks at a fixed price after a set period of time has passed. Exchangeable bonds permit the holders to exchange their bond holding for the listed shares of a company under previously agreed conditions within a set timeframe. Participating bonds entitle the holder to receive dividends. Bonds with embedded options allow the issuer to redeem all or part of the bond before it reaches its maturity date. The options include call options such that the issuer can redeem the principal and interest before maturity and put options, which allows the holder of the bond the right to demand the issuer to repay the principal on the bond.

Figure 1 Interest Rate Spread



Source: Economic Statistic System, Bank of Korea

Trends of Interest Rates in Korea since the Asian Financial Crisis

Corporate and Government Bond Yields after the Asian Financial Crisis

As Figure 1 shows, the corporate bond yield underwent dramatic changes after the Asian financial crisis in 1997 and the global financial crisis in 2008.

During the 1997 Asian financial crisis period, the corporate bond yield rose sharply. The three-year yield of corporate bonds with a rating of AA- exceeded 24 percent by the end of 1997, broadening the gap between the corporate bond yield and the government bond yield from 0.1 percent to over 9 percent. As a result, the government established the Bond Market Stabilization Fund (BMSF) in September 1999, and it began to purchase bonds. Its funds consisted of two trillion *won* from banks and 500 billion *won* from insurers. The target bonds for purchase were mostly corporate bonds since the purpose of the fund was to restrain the increase in bond yield and promote the smooth financing of companies. However, due to the insolvency of some conglomerates, such as Hyundai and Daewoo, the corporate bond market shrunk significantly in 2000, and the spread between its yield and the government bond yield widened. After this period, the interest rates of corporate bonds with high ratings (AA- or above) showed a similar trend with the government bond yield, but maintained a spread of 100 bps. On the contrary, the yield of corporate bonds with low ratings (BBB-) showed a high spread of 550 bps.

After the insolvency of Lehman Brothers, the global financial crisis reached its peak, and this led to a credit crunch that included an increase in financial instability and a preference for stable assets. In response to this credit crunch, the Bank of Korea started to lower the base interest rate, and the government bond yield followed suit. Since credit crunches and liquidity crunches were prevailing in the market, the corporate bond yield increased rapidly, from six percent at the beginning of the year to eight percent at the end of the year during the same period. As a result, the spread between the corporate bond and government bond yields broadened.

After March 2009, the global financial market started to stabilize due to decreasing policy interest rates worldwide, stabilization plans for financial markets, and capital expansion for financial companies. Following this global change, the credit crunch and liquidity crunch in Korea's financial market were also alleviated. Accordingly, after the middle of 2009, spreads of companies with high-credit rates returned to the usual rates.

Structural Change in Corporate Bond Yield

By observing the Korean bond market, we can figure out that the structure of interest rates is essentially changing. Before the 1997 IMF bailout crisis, the economic growth rate and inflation rate were the key factors that affected the interest rates, but since the crisis, the risk premium has played a key role in the fluctuation of interest rates.[2] As Figure 2 shows, there has been a significant shift in the composition of the interest rate.

The interest rate of a corporate bond is the value of the risk-free rate added to the risk premium. Moreover, the risk-free rate is determined by the economic growth rate, which is the real growth rate plus the inflation rate, because it depends on the total productivity of all companies in the country. The real GDP growth rate decreased from 8.8 percent in 2000 to 2.0 percent in 2012, while the inflation rate maintained at a similar level (2.3 percent in 2000 and 2.2 percent in 2012), leading to a nominal growth rate of 4.2 percent. Meanwhile, the risk premium increased significantly, from 0.7 percent to 5.1 percent. In short, the proportion of risk premiums

within the bond yield increased significantly, while that of the economic growth rate decreased. The Korean bond market is in the midst of a continuously rising risk premium, which is the cost of economic risk and uncertainty, and a worsening financing environment of companies, especially firms under financial distress. Under this low-growth and high-risk economic condition, households and companies are expected to experience difficulties. It is challenging to promote corporate investments in an environment where not only the return on investment is expected to be low but also the risk premium is prohibitively high, resulting in steep costs of capital.

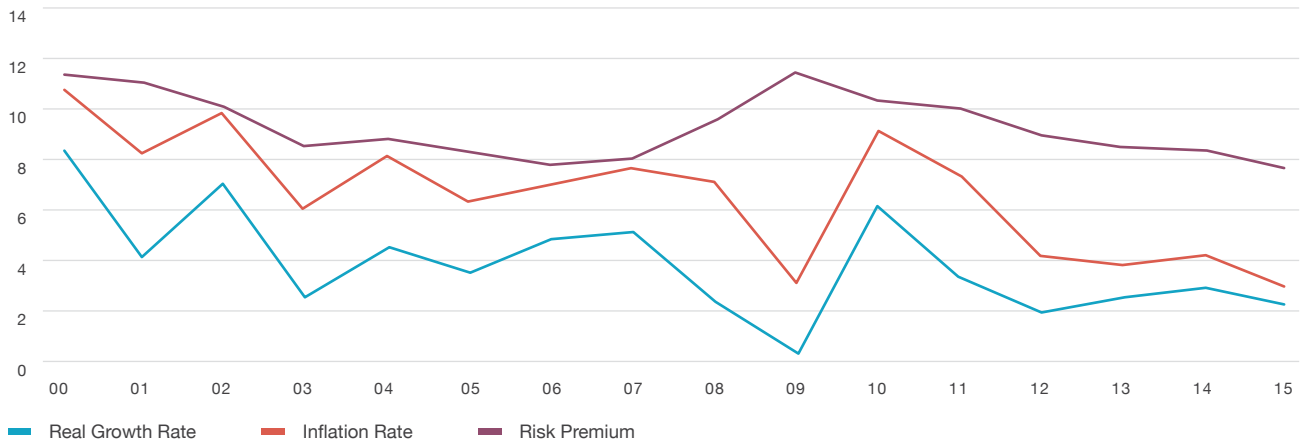
Characteristics of the Structural Change in Bond Yields

Abnormally Low Risk-Free Rate

The ideal level of interest rate is the inflation rate added to the potential growth rate, at which the risk premium is zero. Of course, it is almost impossible to expect this golden rate in our reality full of uncertainties.

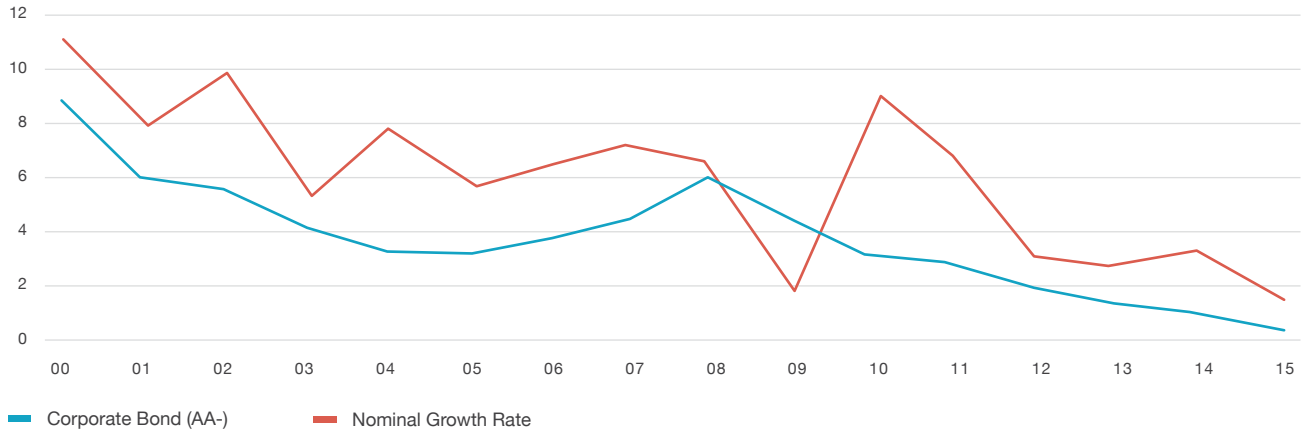
As Figure 3 shows, the interest rate of risk-free bonds in the Korean market is far below the ideal rate, which is the nominal growth rate (growth rate plus inflation rate). This huge gap between the market interest rate and the ideal interest rate

Figure 2 Composition of Interest Rate in Korea



Source: Economic Statistic System, Bank of Korea

Figure 3 Trend of Nominal Growth Rate and Corporate Bond Yield (AA-)



Source: Economic Statistic System, Bank of Korea

shows us that the financial sector does not properly reflect the economic outcomes of the real sector. The fact that the interest rate, which is the link that connects the financial markets and the real economy, is diverging away from the standard level means that the function of financial linkages has weakened. In other words, investors who invest in risk-free bonds with AA ratings or above receive lower interest and thus cannot properly collect their economic opportunity costs. On the contrary, firms with low credit ratings face the difficulty of paying exorbitantly high capital expenses due to such excessive risk premiums.

Expansion of Risk Spread

In the Korean bond market, the gap between the interest rates of different levels of risk—the risk spread—is widening. The interest rate of risk-free bonds hovers lower than the optimum level, while that of corporate bonds issued by companies with low credit ratings are abnormally high. In other words, risk and uncertainty are deepening in the Korean market, although the economy has entered a low-growth and low-interest period, which shrouds the current murky environment of business operations. The expansion of the risk spread means that risk aversion among economic subjects is increasing, and the economic sentiment, or the mental state that drives the economic behavior of people, is waning. In other words, the bond market is not neutralizing the risks. The market originally had a function of neutralizing risk by maintaining a balance between risk lovers and risk averters. However, in a situation where the risk premium is excessively high, a possibility of a credit crunch lurks in the market whenever there is an internal or external shock. Thus, large corporations, as well as small and mid-sized firms, cannot avoid trouble in financing under low credit ratings.

Corporate Debt Market in Korea

Market Mechanism

Corporate bond markets connect debt-instrument investors to companies operating in the real economy in need of funding (1) by allocating growing private savings pools in productive corporate investments; (2) by providing finance to companies seeking business expansion; (3) by encouraging broader ownership of assets for production; and (4) by providing facilities for the competitive transfer and transfer pricing of capital resources.

Companies issue bonds to raise funds for particular time-limited investment projects or business needs. Much of the trading activity in corporate bonds takes place in the primary market at issuance or shortly thereafter. Securities companies help the issuing company structure the issue to match its financial needs and investor demand and to minimize the frictional costs of advisory; they also underwrite the issue and take on the risk of placing it with investors, providing the company with immediate security of funding. Trades in secondary markets are typically infrequent and in large size. Dealers play a significant role.

In a supposedly efficient bond market, investors' confidence is sustained by stable issuances and market processes. Standardized documentation and issue processes, with high levels of transparency and regulation, contribute to maintaining an ideal corporate bond marketplace. Transparency leads to the efficient pricing of debt instruments, the efficient allocation of capital resources, the effective promotion of high standards of corporate conduct, and the stimulation of healthy credit. Although liquidity in the secondary debt market was aggravated following the 2008 financial turmoil, the corporate bond market in Korea sustained its function and role

Market Size and Growth

Soon after the 1997 Asian financial crisis, the proportion of funds raised from the corporate bond market in relation to the total borrowings of the bond market maintained a high level of 30 percent.[3] Starting in 2000, that proportion fell; a decrease in the debt-to-equity ratio of companies and an increase in bank loans also occurred. However, after the 2008 global financial crisis, the issuance of corporate bonds experienced a huge turnaround with the help of lower interest rates, and the proportion of corporate bonds increased to 14.8 percent by the end of April 2014.[4] Also, the proportion of corporate bonds and that of bank loans are moving in opposite directions, as the two sources have a complementary relationship. Amid a credit crunch, the supply of credit through loans tends to shrink and the issuance of corporate bonds increases.[5]

Scale of Issuance by Company Size

In terms of company size, large companies have led the corporate debt market, issuing a majority of the total corporate bonds. In the first quarter of 2013, the proportion of corporate bonds issued by large firms reached 100 percent. On the contrary, the issuance of corporate bonds by small and medium-sized enterprises (SMEs) continued to dwindle; it had a volume below 100 billion *won* (less than $100 million) in 2012 and recorded zero in the first quarter of 2013.[6]

Scale of Issuance by Credit Rating

With respect to credit rating, firms with high credit ratings (AA or above) issued more than 80 percent of the total corporate bonds in the first half of 2014. On the other hand, firms with credit ratings of A or below accounted for 61.3 percent in 2007 and 28.3 percent in 2013 due to scrutinized credit analysis and weakened trust in credit ratings. Furthermore, the total net value of issued bonds with ratings of AA or was about 6.2 trillion *won*, while those with A ratings and BBB ratings and below underwent a net redemption of 7.9 trillion *won* and 1.7 trillion *won*, respectively, showing a clear sign of "polarization among the ratings."[7]

Potential Risks in Corporate Debt Market

As corporate debt instruments generally show a higher interest rate volatility than commercial bank loans do, there is a high risk of financing uncertainty for companies. In addition, a liquidity crunch from the bond market can cause a contagious spillover to other markets. Bond trading in Korea is dominated by government and public-sector (agency) bonds, and due to the market structure reflecting such a bias, the liquidity of corporate bonds remains at a low level. This deterred foreign investors' access to both corporate and other types of bonds, resulting in mere a 2.5 trillion *won* worth of bond holdings by the end of 2012.

Furthermore, there are fundamental problems with market infrastructure and practices, which leads to conservative investing: a lack of investor protection upon default and a heavy reliance on credit rating rather than thorough credit analyses. For these reasons, in Korea, only large companies, or Chaebol affiliates, have easy access to bond issuance, while SMEs face severe challenges in debt financing through bonds unless they have accompanying policy support, such as primary collateral bond obligations (P-CBOs).

Stabilization Plans for Corporate Bond Market

To address the potential risk and current problem of the corporate bond market, four major plans for market stabilization are suggested in the 2016 policy announcement of the Financial Services Commission,[8] as follows: First, financially distressed companies can maintain liquidity through debt rollovers. Second, it is crucial to alleviate the aforementioned polarization that is now prevalent in the Korean corporate debt market by supporting high-yield bond taxation, encouraging qualified institutional buyers (QIBs), and promoting the issuance of collateralized bonds. Third, reforming the market infrastructure can stabilize the corporate bond market. It is necessary to overhaul both the credit-rating system and the debt-financing demand forecast system and to enhance efficiency and transparency in the secondary bond market. Lastly, it is necessary to implement programs that support the issuance of corporate bonds for SMEs. Currently, SMEs with credit ratings below BB find debt financing unfeasible without external debt guarantees. To prevent these marginalized SMEs from being outcast from the capital markets, proactive policy supports are necessary. There has been a weakening sign in the market sentiment with shortfalls in SME debt issues, with credit ratings in the range of BBB and A.

Conclusion

This report conducts an analysis of the corporate bond market in Korea and the changes in interest rates and term structure since the 1997 Asian financial crisis. The potential risks and solutions for stabilizing the corporate debt market are discussed. Corporate bonds not only play an important role in affordably financing long-term corporate investments but also have a positive and persistent influence on enhancing the capital markets. Thus, the authorities in Korea have attempted to increase the proportion of corporate bonds, which is a means of direct financing, rather than bank loans. Implementing specific plans to stabilize the corporate debt market that are mentioned in this report are critical to sustaining the Korean capital markets as a means towards continued economic growth and prosperity.

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[1] Myers, S.C. and Majluf, N., "Corporate Financing and Investment Decisions When Firms Have Information Investors Do Not Have," Journal of Financial Economics 13 (1984): 187–221.

[2] Structural Changes and Characteristics of Yields on Corporate Debt Securities in Korea, Korea Listed Companies Association (October 2013).

[3] Status and Evaluation of Corporate Debt Market, Bank of Korea (June 28, 2013).

[4] Analysis and Outlook of the Issuance Environment of Corporate Debt Market, Korea Development Bank (June 24, 2014).

[5] Kim, Mi-Ae, Importance of Corporate Debt Market as a Market for Corporate Financing: Evaluation of Market Stabilization Policies, Korea Economic Research Institute (December 2014).

[6] Analysis and Outlook of the Issuance Environment of Corporate Debt Market, Korea Development Bank (June 24, 2014).

[7] Kim, Mi-Ae, Importance of Corporate Debt Market as a Market for Corporate Financing: Evaluation of Market Stabilization Policies, Korea Economic Research Institute (December 2014).

[8] Suggestions for Improvement of the Infrastructure of Corporate Bond Market and Assistance to Corporate Financing, Financial Services Commission (2016).