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Corporate Financing Choices, Deregulations and Corporate Bond Market Development: Lessons from Japan

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Abstract

Corporate bond market development is important for reducing vulnerabilities to future financial crises by resolving the maturity mismatch problem; this has been a high priority for policymakers in East Asia since the crisis of 1997. Many policy studies have emphasized the importance of bond market infrastructure, including creating benchmark yield curves, roles for credit rating agencies, trading platforms, clearing and settlement systems, and reforming legal systems. This paper is the first that presents corporate bond development as mainly dependant on deregulation. The experiences of Japan and the United States have provided many important lessons that can aid policymakers in East Asian countries. If an over-reliance on short-term debt of East Asian firms is attributable to regulations, removing regulatory constraints on bond issuance is the only effective way to develop East Asian corporate bond markets. Also, competition among regional markets is very important. Allowing firms to go to the euro market, the Tokyo market and other foreign corporate bond markets may be an easy way to reduce vulnerability when domestic market infrastructures are poor or heavily regulated.

1. Introduction

In this paper, I provide a comprehensive survey of the corporate financing literature. Information-problematic smaller firms with collateral rely on bank lending, less information-problematic medium-sized firms turn to private placements, and large, established safer firms have access to public placed bond markets. Equity finance and equity-linked finance are driven by “hot issue” markets. Accordingly, it is very important to develop corporate bond markets in order to prevent over-reliance on short-term bank lending, which is viewed as the main trigger of the 1997 crisis. To draw lessons from the development of the corporate bond market in Japan, I review the deregulation policies that have taken place since the 1970s. Through this process I have found that regulatory constraints placed on financial markets delayed the development of the domestic corporate bond market in Japan. In addition, the development of private placements under the Rule 144A in the United States suggests that circumventing the time-consuming securities registration process at issuance allows firms to issue securities with less uncertainty about the final terms and conditions and receive funds more quickly, while apparently imposing no significant information costs on investors (Fenn, 2000).

Japan has the largest corporate bond market by volume in Asia, and it is most likely the second largest corporate bond market in the world following the United States. Japan and the

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United States' experience can provide important lessons for other developing corporate bond markets in Asia. This is the first paper to propose that the goal of corporate bond market development in Asia is to create a public placed corporate bond market along with a private placements market. In the public placed corporate bond market, issuing firms should be free from regulatory constraints such as minimum capital requirement, financial ratio requirements, minimum credit rating requirements and other restrictions, except for information disclosure for the purpose of the public security registration. For the private placement market, policymakers should not impose time-consuming information disclosure and credit rating requirements on issuers in the name of transparency, because in such cases incremental information disclosure requirements would offset the merits of private placements. Developing private placed corporate bond markets is a particularly high priority in East Asia, as medium-sized firms account for a large fraction of firms. This is the first step toward corporate bond market development in Asia.

2. The literature on corporate financing choices

2.1 Informed lenders versus arm-length lenders

At present, there is an enormous literature on bank monitoring. Diamond (1984) is the first that presents a formal model on financial intermediation. If a firm has to borrow from a large number of lenders, the diffused ownership of debt reduces the incentives of individual bondholders to engage in information production and monitoring activities. Moreover, duplicate monitoring by a large number of lenders is also inefficient. The delegation of monitoring, wherein a large number of lenders delegate information production and monitoring activities to an intermediary, typically to a commercial bank, resolves the above problems. In the time since Diamond (1984), researchers have devoted great effort to providing evidence on how bank debt reduces agency costs. For example, James (1987) and Lummer and MacConell (1989) find that stock prices typically rise following the announcement of bank financing. Subsequently, Petersen and Rajan (1994) provide direct evidence on the benefits of relationship lending, or bank debt for small U.S. firms.

In Japan, the roles of banks have been emphasized, and is known as the Main Bank Theory (Aoki and Patrick, 1994). According to this theory, sub-banks delegate monitoring duties to a main bank, similar to how investors delegate monitoring to banks as in Diamond (1984). In the context of a repeated game, the main bank establishes a reputation for monitoring. Hoshi et al. (1990a, 1991) also find that investment by Japanese firms with strong bank ties is little liquidity constrained. As opposed to U.S. banks, Japanese banks are allowed to hold equities of borrowing firms below 5%. Thus, a large Japanese bank plays two roles: a large creditor and a large shareholder. Also, Japanese banks play more active roles in corporate governance, such as executive turnover and appointment, as has been examined in Kang and Shivdasani (1995), Kaplan (1994) and Kaplan and Minton (1994).

The literature on bank monitoring raises an interesting question. If commercial banks are able to reduce agency costs of debt, why do firms issue corporate bonds or commercial papers? In other words, what are the costs of bank debt? Diamond (1984) does not answer this question. In the 1990s, a new line of literature developed on the choices between bank lending and issuing publicly placed corporate bonds in the market. A firm will choose the cheapest way to raise money, including agency costs. Banks can reduce agency costs of debt, but monitoring costs and regulatory costs incurred by banks directly offset the benefits of using bank

debt (Fama, 1995; Diamond, 1991). More importantly, while informed banks make flexible financial decisions that prevent a firm's manager from pursuing unprofitable projects, a monopolistic bank may obtain bargaining power over the firm's profits due to developed private information once a project has begun. Using information to obtain monopoly power, a bank can hold up a successful firm during the process of over-rolling bank short-term loans (Rajan, 1992). To test the relationship between debt composition and firms' growth opportunities, it is very important to identify a sample of firms that are more likely to be held-up by a bank. Houston and James (1996) find that high growth firms with a single bank use less bank debt.

Diamond (1991) presents an alternative model for the choices between bank loans and directly placed debt. High-rated borrowers lose the value of future profits once they default on debt. Very low-rated borrowers have nothing to lose if they reveal incriminating information about themselves through defaulting, or by being caught through bank monitoring. As a result, borrowers with credit ratings closer to the middle of the spectrum rely on bank loans. This model also has important macroeconomic implications. In periods of high interest rates or low future profitability, higher-rated borrowers choose to borrow from banks. Consistent with Diamond (1991), most studies show that large firms are more likely to use commercial papers across countries because of the higher ratings of large, established firms.

2.2 Seniority and maturity of debt

One important difference between Rajan (1992) and Diamond (1991) is that in Rajan (1992) firms make choices between long-term public debt and short-term bank debt, whereas bank debt and public debt are both short-term in Diamond (1991).¹ Generally, public debt and bank debt differ in maturity and seniority. Diamond (1993) illustrates a model of how borrowers with private information about their credit prospects and private control rents choose seniority and maturity of debt. The main implication here is that short-term debt is senior, and long-term debt is junior, which allows additional debt to dilute its value. The seniority of short-term debt provides short-term lenders incentives to liquidate insolvent firms. However, senior short-term lenders are prone to liquidate too often, because they ignore the control rent to the borrower. A desirable debt contract, or an optimal mix of senior short-term debt and junior long-term debt, leads to early liquidation for insolvent borrowers and protection for solvent-but-illiquid firms.

Barclay and Smith (1995) examine the percentage of a firm's debt maturing in more than three years.² Consistent with Diamond (1993), they find that firms with larger information asymmetries issue more short-term debt. Due to data availability constraints, however, it is not clear how the maturity variation of bank debt contributes to the total variation. Guedes and Opler (1996) illustrate the determinants of the term to the maturity of bonds and notes. Their main finding is that large firms with investment-grade credit ratings typically issue short-term or long-term corporate bonds, while firms with speculative-grade credit ratings typically use bonds in the middle of the maturity spectrum. This pattern strongly suggest that risky firms do not issue short-term debt as a means to avoid inefficient liquidation (Diamond, 1993), but are screened out of the long-term debt market because of the prospect of risky asset substitution. One remaining question concerns the maturity determinants for trade credit, commercial

¹ Therefore Diamond (1991) is a good model for dealing with bank loans and commercial papers. After a shock, when low economy-wide future profitability is expected, more firms turn to banks instead of issuing commercial papers.

² Their results are qualitatively similar using the percentage of debt maturing in more than one, two, four or five years.

papers, private placements and bank debt.

2.3 Debt composition and debt renegotiation

As explained above, banks are informed senior short-term lenders and are often prone to liquidate illiquid or distressed firms. Asquith, Gertner, and Scharfstein (1993) exploit a sample of firms that all have substantial amounts of junk bonds outstanding and consistently find that short-term lenders are less likely to make concessions outside of bankruptcy when there is long-term debt in place. In their paper, they do not directly measure maturity, but compare bank loans to public debt. In practice, bank loans are senior and shorter in term. In Japan, Xu (2007) examines banks and finds they are less likely to forgive debt if the fraction of secured bank debt is high. Moreover, both in the U.S. and Japan, secured creditors suffer losses lesser than unsecured creditors do when borrowers go bankrupt, as documented in Weiss (1990), Franks and Sussman (2005) and Xu (2007) ³.

Contrary theories argue that outside court debt renegotiation is more likely to succeed when debt is concentrated in a small number of large bank lenders. This is because the free rider problem is more severe if creditors consist of a large number of small, dispersed creditors such as public bondholders or trade creditors (Diamond and Dybvig 1983; Bolton and Scharfstein 1996; Berglöf, Roland and von Thadden 2000 2003). This is known as “coordination failure” or “credit run” among dispersed creditors. Also, a reputation for reasonable renegotiation with borrowers helps banks to specialize in lending to medium-risk firms. To preserve their reputations, banks often avoid liquidating borrowers and thus avoid risky firms. By contrast, financial companies or non-bank lenders have a reputation for being tough and inflexible.

Empirical findings consistently suggest that large distressed firms are more likely to restructure their debt privately if they owe more debt to banks and have few debt contracts (Franks and Torous 1994, Gilson et al. 1990, James 1995 1996, Xu 2007). Not only in private debt renegotiation, but also in bankruptcy, banks may play an important role as informed lenders. For example, Dahiya, Jone, Puri and Ramirez (2003) provide some evidence that prior lenders have a comparative advantage in providing DIP (debtor in possession) financing⁴ to smaller, more information sensitive firms, because previous lenders establish lending relationships and share private information about bankrupt firms. In addition, Chatterjee, Dhillon and Ramirez (2004) find evidence of intense monitoring using covenants and higher fees and charges associated with DIP loans. They conclude that a significant monitoring role by DIP lenders is comparable to the advantages of bank and private debt in terms of monitoring efficiency. Higher fees could be interpreted as either compensation for this monitoring activity, or market power for extracting monopoly rents.

In Japan, it was emphasized that the main bank system provided a flexible, effective private alternative to bankruptcy reorganization and for dealing with financial distress and debt restructurings. Until the early 1990s, bankruptcy resolutions were rarely employed for large Japanese firms. Most financially distressed large firms in Japan successfully restructured their troubled debt privately with main bank intervention, rather than through formal bankruptcy, and two main reasons are usually considered regarding the use of the main bank system: first, banks represented the interests of various classes of claimholders, usually holding both equi-

³ Weiss (1990) and Xu (2007) use a sample of large and listed firms respectively. Franks and Sussman (2005) exploit a sample of small and medium-sized firms.

⁴ Most likely, debtor-possession finance is preferred and is thus less risky.

ties and loans, because the debt and equities of Japanese firms were concentrated within a small number of banks, while banks often held the largest blocks of Japanese firms; second, Japanese firms have traditionally relied heavily on bank loans (Aoki and Patrick, 1994).

Unfortunately, Gilson (1997) shows that post-workout firms remain highly-leveraged and more than 30% subsequently experience financial distress or go bankrupt. As is addressed later in more detail, however, this can be seen as evidence for different theories, such as those supported by a new stream in the corporate finance literature.

2.4 Bank debt enforcement and collateral

Despite the enormous amount of literature on bank monitoring, a new stream in the corporate finance literature argues that banks enforce debt repayment, relying heavily on collateral (Diamond and Rajan 2000, 2001). In this new stream of corporate finance, the human capital of entrepreneurs is indispensable in generating cash flows. The inalienability of human capital enables the entrepreneurs to renegotiate the terms of already negotiated past contracts by threatening to withhold human capital. In such situations, the only way for banks to enforce repayment is by threatening to foreclose on collateral, which would destroy all future cash flows. Thus, the value of a loan is in proportion to its collateral value. In other words, bank debt contracts are not information-based but asset-based. Consequently, banks may know little about a distressed borrower and take no action until the borrower defaults. Gilson's findings (1997) may be consistent with this new viewpoint.

Recently, the land-price collapse in Japan has provided a natural experiment for testing the relationship between collateral value and bank lending. According to Diamond and Rajan (2000, 2001), banks are unable to extract promised repayment by threatening to foreclose on collateral in the face of collateral losses. Japan's debt restructuring practice after the mid-1990s is consistent with a weak enforceability hypothesis. For example, Hoshi and Kashyap (2004) show how the current dysfunctional Japanese banking system misallocates funds by keeping many insolvent firms in business. Similarly, Peek and Rosengren (2005) examine the misallocation of credit in Japan associated with the perverse incentives of banks to provide additional credit to the weakest firms. Also, Tsuruta and Xu (2007) find that banks respond slowly to smaller firms' suffering from debt in excess of their assets or through ordinary losses for up to two consecutive years.

On the contrary, Gan (2007a, 2007b) confirms that lending to manufacturing firms started to decline soon after the bubble burst. What is responsible for this difference? Whether or not there exists room for debt renegotiation is the key to answering this question. In addition to a reliance on collateral and a bank's reputation for being tough, a borrowing firm's reputation for acting in good faith is also an important factor in bank debt enforcement. The manufacturing firms in Gan (2007a, 2007b) are relatively healthy and thus value their reputations, whereas weaker firms may attempt to find breathing space rather than maintain their reputations. Consequently, only weak firms attempt to renegotiate debt or avoid repaying bank loans altogether. Japan's experience suggests that bank debt enforcement weakens for weaker firms after a land price collapse.

3. The development of the Japanese corporate bond market

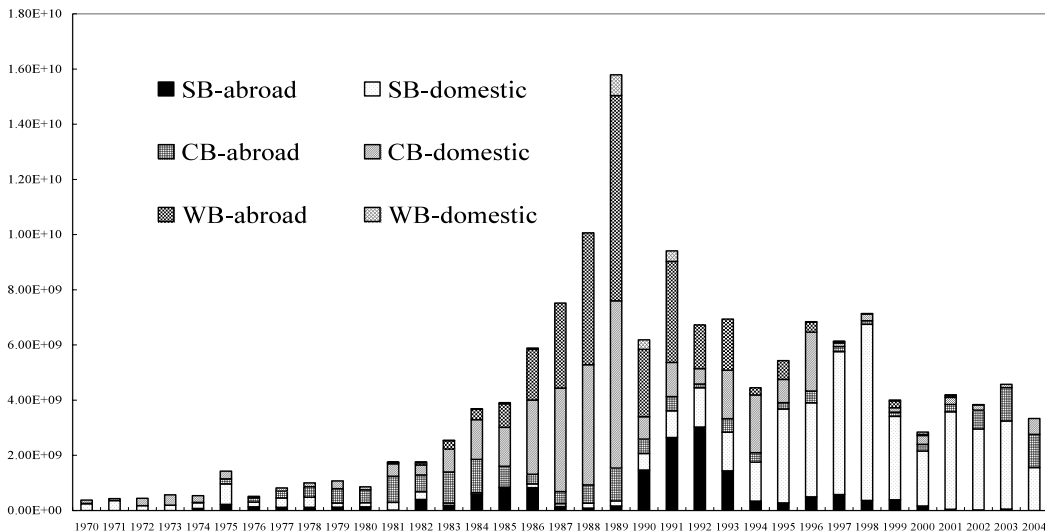
In this section, we briefly outline the development of the Japanese corporate bond market by applying corporate financing theories. What follows in this section is mainly based on

Shirasu and Xu (2007). Historically, Japanese firms have relied heavily on bank debt, because the regulatory constraints on financial markets restricted firms from issuing unsecured bonds. This is one of the most important features in developing corporate bond markets in Japan, with important implications for all developing Asian bond markets.

3.1 A rush to foreign bond markets

Fig.1 illustrates Japanese corporate bond issuances from 1970 to 2004. In the early 1970s, most straight and convertible bonds were issued in the domestic market. Since 1974, more and more firms have shifted to foreign bond markets, and after 1980, most bonds were issued outside Japan. This substantial change indicates that the reforms of the Foreign Exchange and Trade Control Act first enabled these developments in the foreign bond market (Sato and Kanovsky, 1990; Hoshi and Kashyap, 1999). Before the 1980s, under the old Foreign Exchange and Trade Control Act, Japanese firms were able to issue bonds outside Japan but only with the approval of the Ministry of Finance.

Fig.1



Corporate bonds issued by listed firms, 1970-2004

This figure illustrates straight bonds, convertible bonds and warrant bonds issued at home and outside Japan for all non-financial, non-transportation, non-communication, non-broadcasting and non-utility companies in the Nikkei Financial Quest database, 1970 - 2004.

The primary reason for this rush was the low issuing cost outside Japan. Indeed, total costs were as high as 2.24 yen to issue unsecured straight bonds of 100 yen in the domestic bond market in 1987, while total issuance fees cost only 0.56 Yen in foreign bond markets (Matsuo, 1998; Karp and Koike, 1990). These high issuing costs were a result of policies meant to prevent banks and security houses from competing with each other. Until 1993, the amount of corporate bonds issued abroad dominated those issued in the domestic market, but after 1994, more and more Japanese firms shifted their bond issuances to the domestic market. The reason is quite straightforward. The issuing costs in the domestic bond market declined substantially because the underwriting service market appeared to become more competitive after 1993, as Japanese banks were then permitted to enter the underwriting ser-

vice market through security sub-companies.⁵ The issuing costs of 100 billion yen for straight bonds at home declined to 0.92 billion yen by 1993.

3.2 Deregulations

Japanese firms were able to bypass high domestic issuing costs even if the Ministry of Finance still imposed regulatory constraints on bond issuances both at home and outside Japan. In principal, domestic firms were able to issue secured straight bonds, secured warrant bonds, and secured convertible bonds. Another way to raise long-term funds was to borrow from the three long-term credit banks. The three long-term banks,⁶ and in particular the Industrial Bank of Japan (IBJ), had strong political power and their interests had long influenced financial regulations; they had issued bank debentures in the bond market and charged regulatory rents on long-term lending to industrial firms. It is worth noting that commercial banks and trust banks were not allowed to issue bank debentures. Apparently, allowing unsecured industrial corporate bond issuances results in not only a shift of customers from the three long-term banks to the corporate bond market but also competition with industrial firms to raise money in the corporate bond market. Indeed, for a long time industrial firms were not permitted to issue straight bonds that reached maturity in four years, simply because bank debentures had a maturity of four years.

During the 1980s, this regulation was gradually relaxed. Firms were qualified to issue unsecured bonds if earnings per share, dividends per share, operating profit rate, book equity to paid-in capital ratio, book equity to assets ratio, coverage ratio and minimum credit rating criteria were cleared. The criteria for issuing unsecured straight bonds at home were the most stringent⁷. The same criteria were also imposed on the issuance of unsecured straight bonds and unsecured warrant bonds abroad, regardless of whether they were denominated in foreign currency or yen. Similarly, the criteria for issuing yen-denominated unsecured convertible bonds outside Japan were as stringent as those at home. One exception was that the Ministry of Finance only allowed firms to issue foreign currency denominated unsecured convertible bonds if the criteria for domestic secured convertible bond issuance had been cleared.

Interestingly, the domestic market was dominated by convertible bond issuances whereas warrant bonds were more popular overseas. This indicates that a bank guarantee was required in foreign bond markets rather than collateral requirements if firms only qualified to issue domestic secured bonds. Campbell and Hamao (1994) consistently report that outside Japan 20% of straight bonds and 40% of warrant bonds were issued with bank guarantees, while no domestic bonds were. Also, overseas convertible bonds were rarely bank-guaranteed, perhaps because the option of conversion to equity makes the amount to be hedged uncertain *ex ante*, unlike straight bonds and warrant bonds. Thus, banks still earned regulatory rents when Japanese firms issued bonds outside Japan. The issuance criteria were in effect until 1989, and the minimum credit rating requirement was removed in 1996.

Because regulatory constraints artificially bound corporate financing choices in the late 1980s, in earlier studies it is an important to carefully identify the underlying regulatory constraints and to screen a sample of Japanese firms that were eligible to issue domestic secured

⁵ In exchange, the four biggest security companies were also permitted to enter the trust banking industry by establishing trust bank departments as sub-companies.

⁶ After the deregulation of the 1990s, of the three long-term banks, the Nippon Credit Bank and the Long Term Credit Bank of Japan were nationalized after bank failure and sold to foreign investment funds and industrial firms, and the Industrial Bank of Japan merged with two giant, commercial banks.

⁷ For details, see Anderson and Mahkija (1999), and Shirasu and Xu (2007).

bonds⁸. As will be discussed later, however, the shift from bank lending to equity-linked bond issuances might have been driven by the “hot issue market” phenomenon. To overcome these problems, Shirasu and Xu (2007) recently examined data on corporate bond issuance after the binding criteria were moved in 1993. In short, most studies find that large firms, firms with high profits or high growth opportunities and low leveraged firms use more corporate bonds, except Anderson and Makhija (1999). This suggests that a main bank is more likely to hold borrowing firms. Because monitoring is delegated to the main bank, this situation is quite similar to that of Houston and James (1996). This is also consistent with the findings of Weinstein and Yafeh (1998), wherein the main bank, being more risk averse than the shareholders, imposes the bank’s interests on a firm and thus prevents the firm from investing in profitable but risky projects. This results in lower growth for firms with strong bank ties.

3.3 Equity-lined bonds and the Hot Issue Market

Fig. 1 also shows that equity-linked bonds were the principle source of Japanese corporate bonds at home and abroad. Shirasu and Xu (2007) report that from 1985 to 1989, 32% of bonds issued were warrant bonds and 53% were convertible bonds. The proportion of equity-linked bonds was even as high as 85%. Two reasons may be responsible for this large shift from the bank loan market to corporate bond markets: first, it may simply be that the issuing criteria for convertible bonds were less stringent than the issuing criteria for straight bonds (although this does not explain why firms preferred to issue warrant bonds abroad); second, this shift may have been driven by the Hot Issue Market. In Japan, the economic growth rate reached a peak of 6% in 1990. Though this peak rate is low relative to that of the high-growth era, it is much higher than many other OECD countries, and when stock prices skyrocketed in the late 1980s, Japanese firms tapped the overvalued stock market. Kang, Kim and Stulz (1999) found that in the long-term, the stock prices of Japanese firms that issued equities or equity-linked bonds dropped more than firms without equity finance during the late 1980s. This evidence suggests that Japanese firms with equity finance in the late 1980s could have been overvalued.

However, the economic growth rate shrank to 2.2% in 1991, 1.1% in 1992 and -1.0% in 1993, recording an average of 0.74% during that period. After a short recovery from 1994 to 1996, the economy started to contract more rapidly, recording an average of almost 0.0% growth in GDP from 1997 to 2002. At one point, Hoshi, Kashyap and Scharfstein (1993) doubted this assessment, questioning why equity-linked bond issuance did not dry up after the 1990 decline in stock prices. However, both convertible bond issuance and warrant bond issuance did finally dry up in the late 1990s, following the lengthy economic depression that had begun in the early 1990s. The new shift from equity-linked bonds to straight bonds is similarly caused by business cycles.

According to the corporate finance literature, stock prices fall when a firm announces new equity issuances, and is interpreted as a signal that firms have access to information that investors do not have (Myers and Majluf, 1984). There are two types of firms that can be invested into: a G type, which is low risk and high return; and a B type, which is high risk but low return. While each firm knows what kind of firm it is, investors often know little more than the proportion of B types. If the information is symmetric, a G-type firm will have a higher stock price than a B-type firm, but in the case of an asymmetric information problem,

⁸ See Hoshi et al. (1993), Fukuda, Ji and Nakamura (1998), Anderson and Makhija (1999), Hosono (1999), Miyajima and Arikawa (1999) and Shirasu and Xu (2007) for details.

G-type firms and B-type firms will have the same stock prices, as investors have difficult distinguishing G-type firms from B-type firms. In other words, a G-type firm's stock price becomes undervalued while a B-type firm's stock price becomes overvalued. To avoid undervaluation, G-type firms choose debt financing rather than issuing equity, because debt pricing is less sensitive to information. The cost of issuing equity caused by asymmetric information is called an equity information dilution cost. Similarly, Stein (1992) hypothesizes that the high quality firms prefer straight debt to convertible bonds and equity finance, the medium quality firms prefer convertible bond finance to straight debt and equity finance, and the low quality firms tend to issue equities.

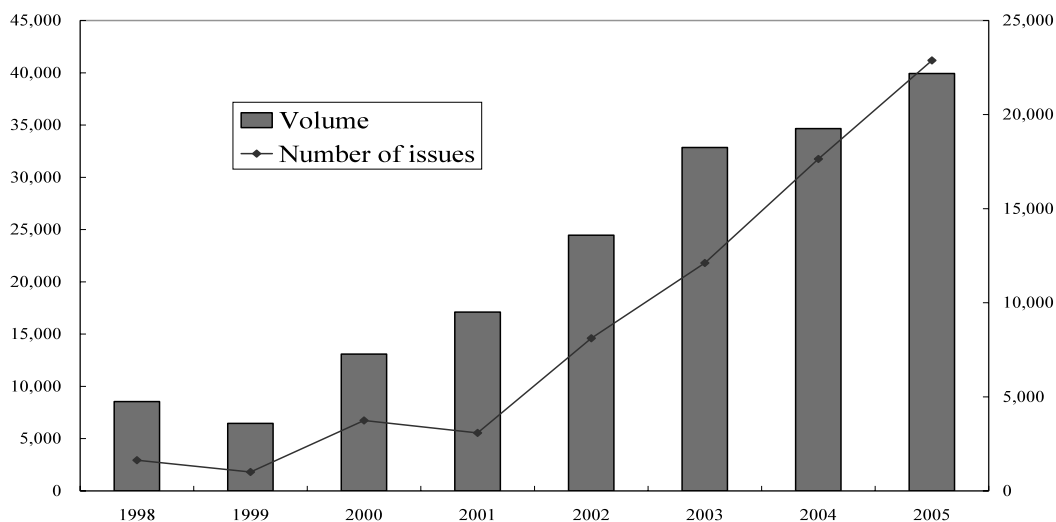
In the following context, Bolton and Freixas (2000) show that the most information-problematic firms choose bank lending, the safer firms issue bonds and the medium firms issue both equity and bonds. As argued previously, bank lending is senior and short-term to debenture, and debenture is senior and short-term to equity. Senior claim pricing is also less sensitive to information than junior claim pricing. Therefore, stock prices are the most sensitive to information, while bank-lending pricing is the least sensitive. An important difference between this model and the one shown in Stein (1992) is that bank lending is more easily renegotiated, allowing inefficient liquidation by bondholders to be avoided. If bank lending did not impose an intermediation cost, all firms would use bank debt. Otherwise, investors see them as B types. To avoid this intermediation cost, firms turn to bond financing or issuing equity. However, bonds have a high renegotiation cost and equity financing has the informational dilution cost. Recently, Dittmar and Thakor (2007) provided a new model in which managers issue equity to finance projects when they believe that investors' beliefs about project quality are aligned with theirs, thus maximizing the likelihood of an agreement with investors.

Empirically, Hadlock and James (2002) find that firms who exhibit large preannouncement stock price run-ups are relatively more likely to announce a common stock issue. Japan's experience in the last two decades is for the most part consistent with studies on the coexistence of bank lending, bonds, equity-linked bonds and equity financing.

4. Deregulations and private placement market developments

Corporate bonds can be placed either publicly or privately, and at present the domestic private placement market is as strictly regulated as the public placed bond market. In 1996, restrictions on totals per issue and annual totals were removed, and in 1999, regulatory constraints on the resale and purchase of large private placements were removed as well. In addition, a Ministry of Finance letter that provided comprehensive regulatory constraints on private placement was withdrawn. In a similar move, industrial corporations and venture capital companies were added to the list of Qualified Institutional Buyers (QIBs) in 1999 and 2003. As a result of these developments, domestic private placements increased substantially after 1999, as illustrated in Fig. 2. In 2005, the volume of issuance comprised nearly 50% of public market.

Fig.2



Privately placed corporate bonds in Japan, 1998-2005

This figure reports the aggregated private placements for all issues reported to the Japan Securities Dealers Association by members, 1998 - 2005. Non-listed firms are included.

Similarly, as a result of deregulation, private placements in the United States also exhibited a rapid increase beginning in the 1990s and came to account for a large proportion in corporate finance. Because a substantial portion of private debt is placed under SEC Rule 144A, we start by looking at that rule, adopted by the Securities and Exchange Commission (SEC) in April 1990. It provides regulatory conditions for qualified institutional buyers to trade private placements and is aimed at attracting issuers, in particular foreign issuers, in order to avoid the illiquidity premiums in the traditional private placement market and the time-consuming public securities issuance registration requirements of the public market.⁹ Though it was unanticipated, domestic high-yield issuers of public bonds shifted their financing activity from the public to the 144A market.

Denis and Mihov (2003) make use of data on debt financing sources to examine the determinants of debt source choices. They find primarily that firms with the highest credit ratings issue publicly placed bonds, firms with medium credit ratings borrow from banks, and firms with the lowest credit quality issue Rule 144A privately placed bonds. Other key research interests are whether investors require premiums on bonds placed under Rule 144A, as they do not require public security registration. Fenn (2000) finds that investors do require premiums of first-time issuers and to privately owned firm issuers, regardless of whether securities are issued under 144A or in the public market. These findings imply that sophisticated investors do not value the incremental information disclosure provided by securities registration, but do value ongoing disclosure. This point will be discussed in more detail later.

Aside from Rule 144A private placements, there are also other forms of private placements. In the United States, a private placement is regulated as a security that is exempt from registration with the SEC as a result of being issued in transactions not involving any public

⁹ Since 1990, foreign bond issuance in the U.S. has increased sharply in both the public and Rule 144A markets. Fenn (2000) expresses doubts that Rule 144A was needed to trigger this growth. See Carey et al. (1993) for more detail.

offering. Carey, Prowse, Rea and Udell (1993) provide evidence in detail for private placements. What follows in this subsection is mainly based on their findings. If only institutional investors or wealthy individual investors are involved, the SEC rule exempts public security registration. However, the issuer must disclose that the privately placed bonds have not been registered with the SEC and that they cannot be resold unless they have been registered or the resale transaction is exempt. For the public disclosure exemption, the issuer or its agent may not engage in any general solicitation or advertising; the investors must purchase securities for their own accounts and not for distribution to the public.

Private placements are hybrids of bank loans and public bonds. Commercial and industrial bank loans are short-term debt; private placements tend to have intermediate to long-term maturities, and public bonds are more likely to have long-term maturities. Also, bank loans have tighter financial covenants than private placements but public bonds generally have non-financial covenants. The primary determinant of choices among bank loans, private placements and public bonds is firm size. The size of a firm serves as an apt representation of the extent of information problems it may experience. Less information-problematic small firms or wealthy, small firms are prone to rely on bank loans, and less problematic medium-sized firms have access to the private placement market. Large corporations can borrow in any of these markets and in the public bond market. Recently, Kwan and Carleton (2004) argue that in comparison to public bonds, private placements have intensive monitoring using tighter covenants and are more likely to be used by smaller and riskier borrowers.

Table 1 Firms characteristics and private placement issuers

This table is from Sato and Xu (2007). The data source is TSR and the Privately Placed Corporate Bonds Handbook (*Shibosai Binran*, Japan Securities Dealers Association).

		All sample		Firms with no corporate bond		Firms with corporate bond	
		Median	# of firms	Median	# of firms	Median	# of firms
Assets (1,000 yen)	2000	1,006,630	5,672	934,965	5,356	5,101,480	316
	2001	948,300	5,936	851,055	5,525	4,572,731	411
	2002	955,643	5,691	835,480	5,189	4,123,638	502
	2003	1,015,290	4,804	848,630	4,244	3,768,076	560
	Total	984,160	22,103	866,022	20,314	4,267,830	1,789
Fixed assets/assets	2000	0.381	5,672	0.377	5,356	0.438	316
	2001	0.39	5,936	0.384	5,525	0.45	411
	2002	0.401	5,691	0.395	5,189	0.439	502
	2003	0.398	4,804	0.394	4,244	0.421	560
	Total	0.392	22,103	0.387	20,314	0.435	1,789
EBITDA	2000	0.052	5,115	0.051	4,810	0.064	305
	2001	0.051	5,437	0.05	5,042	0.063	395
	2002	0.05	5,425	0.049	4,929	0.061	496
	2003	0.05	4,728	0.049	4,170	0.058	558
	Total	0.051	20,705	0.05	18,951	0.061	1,754
Interest Coverage Ratio	2000	1.8	5,390	1.727	5,085	2.973	305
	2001	1.555	5,631	1.469	5,235	2.951	396
	2002	1.715	5,356	1.593	4,870	3.041	486
	2003	1.984	4,504	1.78	3,959	3.391	545
	Total	1.75	20,881	1.626	19,149	3.159	1,732

Similar to Carey et al. (1993), Japanese banks provide short-term loans, especially loans with maturities shorter than one year. Japanese banks also tend to roll over existing short-term loans. Private placements generally have longer maturities than lending. For all private placements in *Shibosai Binran* (the Privately Placed Corporate Bonds Handbook by the Japan

Securities Dealers Association), the most frequent maturity is five years and more than 70% of private placements have maturities longer than five years. This is similar to the distribution of maturities of debt instruments in the United States illustrated in Carey et al. (1993). In addition, more than 90% of private placements both by volume and by number of issues are bank guaranteed but without collateral. In comparison with bank lending, private placements are less likely to rely on collateral. In all, these differences suggest that less problematic medium-sized firms have access to the private placement market, as do their United States counterparts.

Sato and Xu (2007) examine data on private placements among a sample of unlisted firms to examine the determinants in choices between bank lending and private placements of small and medium-sized firms. The sample is created by matching *Shibosai Binran* and a sample of financial data provided by TSR (Tokyo Shoko Research).¹⁰ Because our sample includes small and medium-sized firms, it is expected that less information-problematic medium-sized firms are more likely to use private placements. Indeed, Sato and Xu (2007) find that the main determinant is firm size. On average, firms with private placements outstanding are much larger than firms that rely on bank lending alone. Also, banks tend to lend to lesser profitable and riskier firms.

Finally, it is worth noting that the complete deregulation of the private placements market allows less information-problematic, medium-sized firms to avoid the time-consuming public securities issuance registration requirements, thus avoiding the higher flotation costs of the public market. Overall, the presence of a free private placements market complements a deregulated public placements market. Most importantly, Fenn (2000) concludes:

By circumventing the time-consuming securities registration process at issuance, high-yield terms are able to issue securities with less uncertainty about the final terms and conditions and receive funds more quickly, while apparently imposing no significant information costs on investors. Ironically, these benefits indeed, the very manner in which Rule 144A has been used by high-yield issuers were probably not anticipated by the SEC in adopting Rule 144A.

This suggests that enhancing information disclosure in registration may only impose higher issuing costs on issuers but provide no incremental information to investors. As will be discussed in more detail later, this has important implications for the development of the Asian corporate bond markets.

5. Deregulations and the development of the Asian corporate bond market

In 2005, Japan had the largest corporate bond market by volume in Asia, and probably the second largest corporate bond market following the United States. Japan's experience, along with that of the United States, provides important lessons for developing Asian corporate bond markets. In this section, I propose that the goal of the Asian corporate bond markets is to create a public placements market along with a private placements market. In the public capital market, issuing firms should be free from regulatory constraints such as minimum capital requirements, financial ratio requirements, minimum credit rating requirements, except for information disclosure for public security registration. For the private placements market,

¹⁰ TSR specializes in providing credit information and financial data for small and medium-sized firms in Japan.

policymakers should not impose time-consuming information disclosure and credit rating requirements on issuers in the name of transparency, because in such cases incremental information disclosure requirements would offset the merits of private placements. This is the first step toward the development of the Asian corporate bond market.

Despite numerous policy papers on the development of the Asian corporate bond markets, quite a few corporate bond markets in Asia are unfortunately regulated as stringently as the previous Japanese market. Corporate bond issue requirements and market development in East Asia are summarized in Table 2. The SEC in the Philippines charges 1/10th of 1% of the total issue amount, in addition to approval by two thirds of shareholders and net wealth requirements. Similarly, in the East Asian corporate bond market, the Philippines' market is the least developed and the percentage of corporate bonds outstanding to GDP is just 0.5%. Indonesia and the PRC follow the Philippines and are ranked in the top 3 of the least developed due to minimum net wealth requirements and minimum credit rating requirements. In contrast, the corporate bond markets in Japan, Malaysia and Korea are ranked as the top three most developed in proportion to deregulation. These top three countries have a percentage of corporate bonds outstanding to a GDP of 39% in Malaysia, 42% in Japan, and 49% in Korea. A significant difference between the top three most developed markets and the top three least developed markets is the presence of a minimum net wealth requirement and a minimum credit rating requirement.

Table 2 Corporate bond issue requirements and market development

This table illustrates corporate bond issue requirements and market development in the PRC, Indonesia, Korea, Malaysia, Philippines, Singapore, Thailand, Japan and the United States. Corporate bond issue requirements are from the Asia Bond Monitor April 2005, ADB. Corporate bond amounts outstanding as percentage of GDP is from Gyntelberg et al. (2006).

	Minimum net wealth	Credit rating	Charges of total issue amount	Shareholder approval	Bond interest rates	Corporate bond amounts outstanding as % of GDP
PRC	yes	a minimum of AA	no	no	fixed at 1.4 times the bank savings-deposit rates	11
Indonesia	yes	a minimum of BBB-	no	no	no	2.4
Korea	no	Non-guaranteed bonds must be rated by at least two credit ratings	no	no	no	49.3
Malaysia	no	All corporate bond issues must be rated by a rating agency recognized by the SC.	no	no	no	38.8
Philippines	yes	All local currency bond issues must be rated by PhilRatings	1/10th of 1%	2/3	no	0.2
Singapore	no	SGD bonds issued by residents may or may not be rated, while SGD bond issuance by nonresidents must be rated.	no	no	no	18.6
Thailand	no	All bond issues require credit ratings by SEC-recognized rating agencies.	no	no	no	18.3
Japan	no	All corporate bonds issues may or may not be rated	no	no	no	41.7
The United States	no	no	no	no	no	128.8

Developing efficient corporate bond markets is important for reducing vulnerabilities to future financial crises by resolving the maturity mismatch problem; this has been a high priority for policymakers in East Asia since the crisis of 1997. Many policies have emphasized the importance of bond market infrastructure, including creating benchmark yield curves, roles for credit rating agencies, trading platforms, clearing and settlement systems, and reforming legal systems. This paper is the first that presents corporate bond development as mainly dependant on deregulation. The experiences of Japan and the United States have provided

many important lessons that can aid policymakers in East Asian countries. If an over-reliance on short-term debt of East Asian firms is attributable to regulations, removing regulatory constraints on bond issuance is the only effective way to develop East Asian corporate bond markets. Also, competition among regional markets is very important. Allowing firms to go to the euro market, the Tokyo market and other foreign corporate bond markets may be an easy way to reduce vulnerability when domestic market infrastructures are poor or heavily regulated.

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