

THE DEVELOPMENT OF CORPORATE DEBT MARKETS¹

November 13, 2000²

Tadashi Endo
Financial Markets Advisory Department
International Finance Corporation
The World Bank Group

tendo@ifc.org

¹ The author gratefully acknowledges the comments of Jack Glen, Alison Harwood, Michele Lubrano, and Debra Perry at IFC, and Christopher Juan Costain and Clemente Luis Del Valle at IBRD. In addition, the author is gratefully indebted to Michele Lubrano for the section of securities laws in this chapter. The author also thanks Mari Ishii and her Bond Database project team at IFC for valuable data and insights on the emerging bond market, and Peter Taylor for excellent research assistance. The views here are those of the author and do not necessarily reflect the views of either IFC or IBRD.

² Revised from the draft version dated March 28, 2000

Table of Contents

| | |
|--|----|
| 1. INTRODUCTION..... | 3 |
| 2. EXPECTED ROLES OF CORPORATE BOND MARKETS..... | 4 |
| 2.1. <i>Macroeconomic roles</i> | 4 |
| 2.2. <i>Microeconomic comparisons</i> | 6 |
| 2.2.1. Comparison with equity | 6 |
| 2.2.2. Comparison with bank loans | 6 |
| 3. OVERVIEW OF CORPORATE BOND MARKETS | 8 |
| 3.1. <i>Developed countries</i> | 8 |
| 3.2. <i>Developing countries</i> | 10 |
| 3.2.1. The economic context..... | 10 |
| 3.2.2. Comparisons with developed countries..... | 10 |
| 4. “MAJOR” AND “MINOR” CORPORATE ISSUERS..... | 16 |
| 4.1. <i>Major corporate bond issuers</i> | 16 |
| 4.2. <i>Minor corporate bond issuers</i> | 17 |
| 5. PRIMARY CORPORATE DEBT MARKETS | 18 |
| 5.1. <i>Primary-market-centric minor corporate issues</i> | 18 |
| 5.1.1. Buy and hold | 18 |
| 5.1.2. Specific investment needs, specific types of issues..... | 19 |
| 5.1.3. Incessant competition | 20 |
| 5.2. <i>Impediments to primary market development</i> | 21 |
| 5.2.1. Statutory restrictions and requirements | 21 |
| 5.2.2. Mandatory investment in government bonds..... | 23 |
| 5.2.3. Lack of market infrastructures..... | 23 |
| 5.2.4. Distraction by an equity boom..... | 23 |
| 5.2.5. Predominance of commercial banks | 24 |
| 6. DEVELOPMENTAL COMPONENTS..... | 25 |
| 6.1. <i>Disclosure system and information</i> | 25 |
| 6.1.1. Disclosure system versus merit system | 25 |
| 6.1.2. Enforcement of regulatory disclosure | 26 |
| 6.1.3. Promotion of voluntary disclosure..... | 28 |
| 6.1.4. Development of information service professions..... | 29 |
| 6.2. <i>Credit rating system</i> | 30 |
| 6.2.1. Role of credit rating system..... | 30 |
| 6.2.2. A chicken and egg situation | 31 |
| 6.2.3. Development of rating agencies | 31 |
| 6.2.4. International brands of credit ratings | 33 |
| 6.2.5. Issues with a mandatory rating system..... | 34 |
| 6.3. <i>Securities registration system</i> | 34 |
| 6.3.1. Distinct markets | 35 |
| 6.3.2. Incentive mechanisms..... | 35 |
| 6.4. <i>Bankruptcy laws</i> | 37 |
| 6.5. <i>Trading systems</i> | 37 |
| 7. A POLICY DILEMMA AND AN ALTERNATIVE SOLUTION..... | 41 |
| 7.1. <i>The dilemma</i> | 41 |
| 7.2. <i>An alternative solution – an approximation of benchmark issues</i> | 42 |
| 8. DE FACTO BENCHMARK ISSUES..... | 43 |
| 8.1. <i>Likely candidates for major corporate issuers</i> | 43 |
| 8.1.1. Infrastructure and utility companies..... | 43 |
| 8.1.2. Housing finance companies..... | 44 |
| 8.1.3. Development finance companies..... | 45 |
| 8.2. <i>Policy measures for de facto benchmark issues</i> | 45 |
| 8.2.1. Characteristics of a bond issue and its issuer | 46 |
| 8.2.2. Transaction modes..... | 49 |
| 8.2.3. Transaction environments | 54 |
| 8.2.4. Portfolio investment demand..... | 56 |

1. Introduction

The limitations of public finances as well as the systemic risk awareness of the banking systems in developing countries have led to growing interest in developing corporate bond markets. It is believed that well run and liquid corporate bond markets can play a critical role in supporting economic development in developing countries, both at the macroeconomic and microeconomic levels.

However, even under a properly designed policy framework in a developing country, only a very small number of selected corporate bond issuers (“major” corporate issuers) can be expected to enjoy a liquid secondary market of their bonds. The rest of corporate bond issuers (“minor” corporate issuers) will hardly have it. Despite their illiquid secondary market, minor corporate bond issuers can substantially benefit from the corporate bond market by opportunistically raising long-term funds on a deregulated primary market. An aggressive deregulation policy, in conjunction with market infrastructure building, is central to the development of an efficient primary market.

In other cases, macroeconomic constraints may not permit the existence or establishment of a large, liquid market for government bonds. But in such cases, a major corporate issuer may approximate the role of a sovereign, providing a *de facto* benchmark yield curve to a larger market in debt securities. These situations raise special policy issues that will also be discussed in this chapter.

This paper will start with an outline of both the macro- and microeconomic roles a corporate bond markets is expected to play in a developing economy, viewed in comparison with the markets for equities and bank loans. Section three offers a comparison of the characteristics of corporate bond markets in selected developed and developing countries, and will identify the policy implications suggested by these characteristics. Section four presents a conceptual framework delineating “major” and “minor” issuers, highlighting the limited liquidity which challenges most developing corporate bond markets. Section five outlines the centrality of the primary market in light of institutional investors’ behavior, and explains why a focus on aggressive deregulation of the primary market is key to the development of a corporate bond market. Section six analyzes the key stages of development of corporate bond markets, including disclosure systems, credit rating systems, securities registration, and bankruptcy laws. The last two sections examine a macroeconomic policy dilemma which can ensnare some developing countries when they work for public finance consolidation, the role of corporate bonds as *de facto* benchmarks, and the institutional characteristics conducive to liquid secondary markets for corporate bonds.

2. Expected roles of corporate bond markets

The benefits of a government bond market are not limited to the financing of a country's fiscal deficit, or achieving certain objectives in the area of monetary policy, such as the sterilization of inward capital flows. For a developing country, a functioning government bond market helps facilitate the growth and functioning of a corporate bond market, in part by establishing a benchmark yield curve for pricing fixed-income instruments like bonds.

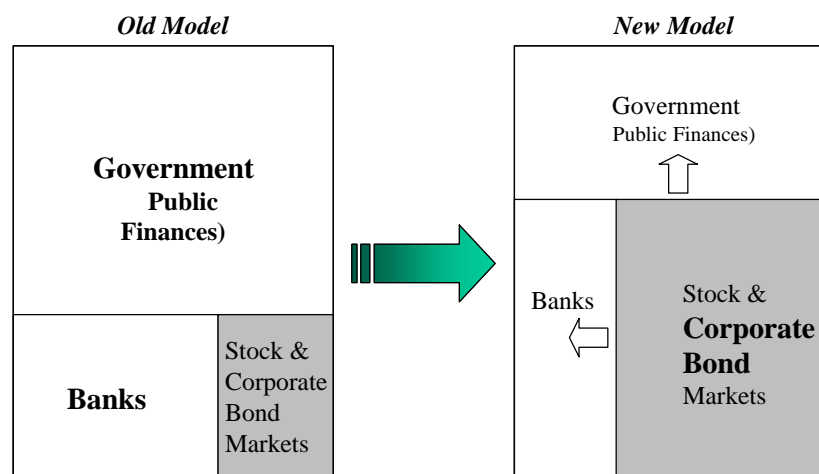
2.1. Macroeconomic roles

Why are corporate bond markets important for developing countries? While in any economy a satisfactory pace of economic growth cannot be achieved without adequate debt capital, most developing countries face an additional challenge in the form of banking systems unable to provide long-term debt in a sound or efficient manner.

A corporate bond market is generally expected to play the following roles:

- diffusing stresses on the banking sector by diversifying credit risks across the economy;
- supplying long-term funds for long-term investment needs;
- supplying long-term investment products for long-term investors;
- lowering funding costs by avoiding a liquidity premium;
- providing products with flexibility to meet the specific needs of investors and borrowers; and
- allocating capital more efficiently.

Figure 1: Increasing Roles of Corporate Bond Markets in Economic Development



Public finances and bank loans increasingly give way to capital markets.

Among these roles, the most commonly known is the provision of long-term funds for long-term investments. In today's world, private sector growth depends on capital-intensive production technologies, which in turn entail long-term investment risks (Demirgüç-Kunt, 1995). Long-term investment risks can be better managed when paired with long-term capital. A functioning corporate bond market can intermediate between long-term investment needs and long-term capital for private sector activities. These roles, commonly noted in developed economies, are becoming increasingly relevant objectives in developing countries.

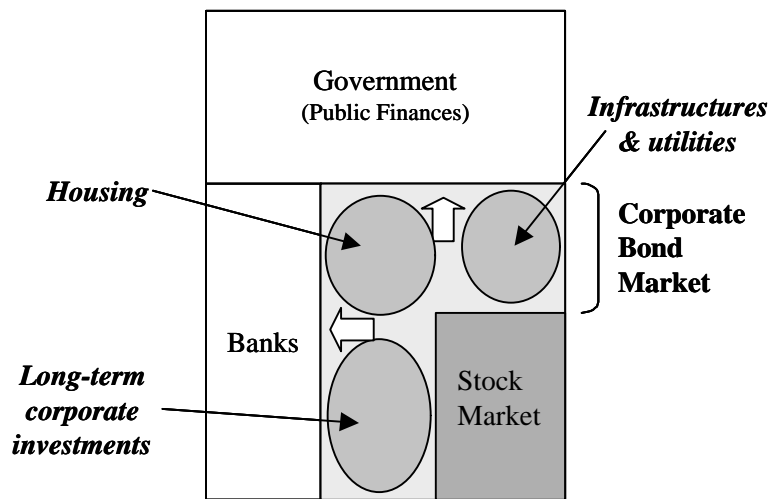
But why are domestic corporate bond markets rather than bank lending or public finances now considered so crucial to developing economies? Two major factors can be pointed out. They are (i) the reducing roles of bank loans and (ii) public finances in developing economies, and are schematically illustrated in Figure 1.

The Asian financial crisis which began in Summer 1997 dramatically underscored the limitations of even reasonably regulated, supervised, capitalized and managed banking systems in financing industrial investments. The primary role of a banking system is to create and maintain the liquidity needed to finance production, acting within a short-term horizon (Bossone, 1998). Banking systems cannot be the sole source of long-term investment capital without making an economy dangerously vulnerable to external shocks.

Second, many developing countries have embarked upon significant long-term structural adjustment programs which have both increased the size and capital requirements of the private sector and led to a consolidation of public finances in such areas as infrastructure development.

It is believed that corporate debt markets can address these new requirements, providing

Figure 2: Major Sub-markets of Corporate Bond Market



Infrastructures, utilities, housing and long-term corporate investments, among other things, are increasingly expected to be financed by corporate bond issuance.

capital to those areas ill served by the public purse or the banking sector, in addition to the equity capital supplied through the stock market and private equity investors. And as we can see in Figure , a functioning corporate bond market is usually divided into several key “sub-markets,” including infrastructure and utilities, housing, and long-term corporate investments.

2.2. Microeconomic comparisons

2.2.1. Comparison with equity

An economy will generally grow faster given enterprises have access to financial leverage, because the growth pace and potential of private enterprises will be significantly increased if debt capital is efficiently available.

The attractiveness of debt capital is based on a number of factors, including the fear of ownership dilution through equity financing, and the high historical cost of equity capital relative to debt.

In many cases, controlling shareholders do not want to dilute their equity stakes by raising additional equity capital from outside for expansion. If banks' lending capacity is constrained, the existing shareholders may choose not to make additional investments for the corporation's future. And, as noted above, if banks recklessly accommodate corporations' long-term investments with their own short-term liabilities, that is, deposits, a country's banking system can become dangerously vulnerable to external shocks.

In general, equity capital is costlier than debt, because of two main factors. First, equity investment is by definition riskier than debt investment, and, therefore, the equity investor demands a higher return than a lender or debt investor. Second, interest expenses on debt are usually tax-deductible at a corporate level, whereas corporate profits are usually taxed before dividends on shares are retained or distributed to shareholders.

2.2.2. Comparison with bank loans

The two methods private enterprises most often use for raising debt – taking bank loans or issuing bonds – are commonly termed “indirect” and “direct” financing. Besides each avenue's unique macroeconomic role, their differences can be seen at a corporate level. Table 1 below compares the typical characteristics of publicly-offered bonds and bank loans in a well-developed capital market.

This quick comparison suggests that bonds are generally more attractive for long-term, large-scale and opportunistic borrowing, and bank loans for small, short-term, and ongoing financing. On a company's balance sheet, bonds are more suitable for the financing of fixed assets and investments, whereas bank loans are a superior way to finance inventories and other current asset accounts.

For a company to reap the intended benefits of cost effectiveness of bond financing, strong cash management skills at a corporate level are required. In general, the irregular pattern of cash flows arising from long-term projects inevitably does not match the regular pattern of issue proceeds, interest payments and principal redemption characteristic of bonds. The inability of a company to effectively manage such cash flow

Table 1: Publicly Offered Bonds vs Bank Loans

| | Publicly Offered Bonds | Bank Loans |
|-----------------------------|--|---|
| Size of financing | Substantially large. No particular limit. A smaller issue size is impractical. | Smaller unless syndicated. Limited by a credit line available to a borrower, industry, country and other category to which the borrower belongs |
| Term | Usually one year or longer | Usually shorter and rolled over. Limited by credit policy of a bank |
| Repayment | Bullet or limited prepayment patters. Generally inflexible. | Generally flexible. |
| Interest rate | Fixed or floating rates | Floating rates for long maturities |
| All-in cost | Normally cheaper, depending on market conditions. Very cheap for opportunistic deals. | Normally more expensive. |
| Swap | Available | Available |
| Structured financing | Widely available | Limited |
| Credit analysis | Standardized rating by rating agencies | Proprietary credit analysis by a bank |
| Security | Normally unsecured | Normally secured |
| Use of proceeds | Normally not restricted | Normally restricted |
| Listing | Either listed or non-listed | Non-listed |
| Creditors | “Unspecific, many” investors, including individuals, corporations, banks, insurance companies, pension funds, mutual funds, etc. | A small number of banks and some other financial institutions |
| Transferability & Liquidity | Readily transferable, and limited liquidity except for “major” issuers | Not transferable, and no liquidity |

Note: Each individual bonds and loans may have characteristics different from the generalized descriptions above.

deviations through tactical investment or short-term borrowing can significantly defeat the purpose of long-term bond financing. Therefore, the development of corporate finance knowledge and skills on the part of issuing corporations is indispensable for the development of corporate bond markets.

3. Overview of corporate bond markets

3.1. Developed countries

Corporate bond markets in developed countries share some characteristics, which may contrast with common perceptions. The characteristics are summarized as follows:

1. The corporate bond market in the United States is by far the largest among developed countries, presumably due to the country's unique financial history;
2. Corporate bond markets in other developed countries, which have been growing quite dramatically, are in turn dominated by the bonds of financial institutions rather than non-financial companies;
3. The secondary market for corporate bonds, except for a limited number of "major issues", are generally illiquid. This makes the primary markets the center of activity;
4. Institutional investors, rather than individual investors, are the key players in corporate bond markets in developed countries, and they trade bonds on the counter rather than on the exchange; and,
5. The development of corporate bond markets in developed countries was preceded by that of government bond markets, which had been long preceded by years of capital accumulation through industrial development.

Among developed countries, the bond market of the United States has several distinct features.

Until as late as 1994, the commercial banks of U.S. were confined to their home states.³ Moreover, under so-called unit banking rules, nearly half the states required banks to do all their business from one location. This so limited the lending capacity of banks that they were largely unable to meet the funding needs of companies expanding nationally, let alone their need for long-term capital. As a result, the corporate bond market, in conjunction with the stock market, developed as a mechanism through which companies

Table 2: Selected Industrial Countries – Domestic Debt Securities by Nationality of Issuers (1997)

(In US\$ Billion)

| | France | Germany | Italy | Japan | The Netherlands | UK | USA | Total |
|--------------------------------------|---------|---------|---------|---------|-----------------|---------|----------|----------|
| GDP | 1,392.5 | 2,089.9 | 1,139.0 | 4,197.4 | 362.6 | 1,312.3 | 8,110.9 | 18,604.6 |
| Total Debt Securities | 1,113.2 | 1,730.0 | 1,471.7 | 4,433.7 | 227.8 | 767.8 | 12,414.6 | 22,158.8 |
| <i>Against GDP</i> | 79.9% | 82.8% | 129.2% | 105.6% | 62.8% | 58.5% | 153.1% | 119.1% |
| Public Sector | 647.4 | 777.5 | 1,123.4 | 3,116.8 | 177.5 | 465.4 | 7,337.1 | 13,645.1 |
| <i>Against GDP</i> | 46.5% | 37.2% | 98.6% | 74.3% | 49.0% | 35.5% | 90.5% | 73.3% |
| <i>Against Total Debt Securities</i> | 58.2% | 44.9% | 76.3% | 70.3% | 77.9% | 60.6% | 59.1% | 61.6% |
| Private Sector | 465.8 | 952.5 | 348.3 | 1,316.9 | 50.3 | 302.4 | 5,077.5 | 8,513.7 |
| <i>Against GDP</i> | 33.5% | 45.6% | 30.6% | 31.4% | 13.9% | 23.0% | 62.6% | 45.8% |
| <i>Against Total Debt Securities</i> | 41.8% | 55.1% | 23.7% | 29.7% | 22.1% | 39.4% | 40.9% | 38.4% |

Source • Table 1 in Schinasi and Smith (1998) and World Economic Outlook database

Table 3: Debt Securities Financing by Non-Financial Firms in Selected Industrial Countries

(As a percentage of total funds raised in financial markets)

| | Germany | Italy | Japan | The Netherlands | USA |
|------|---------|-------|-------|-----------------|-------|
| 1990 | 0.0% | 0.2% | 14.2% | 3.4% | 48.6% |
| 1991 | 0.0% | 1.0% | 10.4% | -2.5% | 33.5% |
| 1992 | 0.1% | 0.2% | 4.6% | -0.1% | 18.2% |
| 1993 | 0.0% | -6.5% | 7.1% | 12.0% | 10.6% |
| 1994 | 0.0% | -2.9% | 11.5% | - | 27.7% |

Source: Table 3 in Schinasi and Smith (1998). Original sources • OECD, *Financial Statistics: Non-Financial Enterprises Financial Statements (Part III)*; R. Todd Smith, "Markets or Corporate Debt Securities", IMF, Working Paper No.95/67; Deutsche Bank, *KapitalMarket Statistik*. Notes: For Germany, does not include international issues of bonds. For Italy and the Netherlands, does not include commercial paper.

could raise capital from across the country – as well as from abroad.

The markets for debt securities in Western European countries and Japan are much smaller than that of the U.S., not only in absolute terms but also as of percentage of GDP (see Table 2). As Table 3 illustrates, the issues of financial institutions also dominate them. According to Table 2, corporate bonds in Germany accounted for 55.1% of the total volume of debt securities outstanding in 1997, as compared to 40.9% in the U.S. However, as underscored in Table 4, most German corporate bonds were those issued by financial institutions, namely, banks. Non-financial corporate bonds were marginal. The percentage of non-financial corporate debt issues in Japan, second only to the U.S. and steadily rising, remained at about half of that in the U.S.

Once they are purchased and settle into institutional investors' portfolios upon issuance or shortly thereafter, the majority of corporate bonds do not change hands until they come to maturity. Even in the U.S., more than 95% of corporate bond issues outstanding have not traded at all in the secondary market. Nonetheless, corporations raised \$663.1 billion and \$861.3 billion in 1997 and 1998 respectively in the U.S. corporate bond market⁴.

Corporate bonds issued in developed countries are mainly bought by institutional

Table 4: Debt Securities of Non-Financial Corporate Sector Relative to Financial Sector

| | Germany | Japan | USA |
|------|---------|-------|--------|
| 1992 | 0.3% | 34.7% | 119.0% |
| 1993 | 0.2% | 33.9% | 107.0% |
| 1994 | 0.2% | 37.1% | 97.7% |
| 1995 | 0.2% | 40.1% | 89.4% |
| 1996 | 0.2% | 41.3% | 81.5% |

From Table 5 in Schinasi and Smith (1998). Originally from Federal Reserve Bulletin; Deutsche Bundesbank Monthly Report; Bank of Japan, Economic Statistics. Note that non-financial sector debt securities include bonds and commercial paper outstanding, and financial sector debt securities include bonds and short-term paper.

⁴ BIS, *International Banking and Financial Market Development* (Quarterly publication), November 1999

investors. The holdings of corporate bonds by households in the United States and Japan both accounted for 12.2% of the total amounts outstanding at the end of 1998; and those by non-financial corporations in the United States and Japan accounted for only 1.5% and 6.9%, respectively⁵. The dominance of institutional investors is due to the fact that long-term debt funds idling in households and corporations can generally achieve superior risk/return tradeoffs through institutional investors who specialize in collecting and managing funds of specific characteristics.

3.2. Developing countries

3.2.1. The economic context

The development of corporate bond markets in the U.S. and other developed countries was preceded by that of stock and government bond markets, which in turn had been preceded by years of capital accumulation through industrial development. If developing countries were to repeat this historical process, current efforts to help them foster corporate bond markets would be irrelevant, unless they have already achieved a relatively high level of economic development. In fact, they have not.

It is therefore crucial to acknowledge that current efforts to introduce corporate bond markets into developing countries' economies are doing so at an earlier stage of capital accumulation in their economies. At the same time, these developing economies are generally smaller in size. This suggests a possibly different process of development for the market framework and infrastructure for corporate bond markets, and a possibly different sequencing of institutional development, depending on particular economic situations of a country.

3.2.2. Comparisons with developed countries

Most developing country corporate bond markets are small even relative to their own GDPs. Table 5 underscores just how marginal these local corporate bond markets are in comparison with other financial markets, while Figure 3-B illustrates developing countries' extraordinary dependence on bank loans. Out of the ten developing countries from which IFC has been able to collect reliable statistics on debt markets, only the corporate bond markets of Malaysia and Korea exceed 10% of GDP. Despite their relative diversity⁶, a majority of Korean corporate bond issues had guarantees from commercial banks⁷, and, therefore can be regarded as a type of bank loans. Another example of a commercial banking industry's dominance of a corporate bond market is

⁵ FRB, *Flow of Funds Accounts of the United States 1998* (released on March 12, 1999), and Bank of Japan, *Shikin Junkan Kanjo 1998* (Flow of Funds Accounts 1998). The corporate bonds in Japan are "industrial securities" (straight bonds, convertible bonds, and bonds with equity warrants) and bank debentures.

⁶ The distribution by sector of corporate bonds issued from February 1997 to October 1999 in Korea is as follows: electric & electronic equipment: 33%; transportation equipment: 21%; whole sale trade: 15%; petroleum and chemical 8%; metal: 6%; communications: 5%; machinery: 4%; construction: 3%; and miscellaneous: 5%. (IFCs bond database)

⁷ In 1996 and 1997, 93% and 87% of corporate bonds were guaranteed, with the remaining 7% and 13% non-guaranteed, respectively. In 1998 these proportions had altered drastically with 33% guaranteed and 67% non-guaranteed. (The Bank of Korea and, Korea Securities Dealers Association, KSDA).

Table 5: GDPs, Equities, Government Bonds, Corporate Bonds in Selected Developing and Developed Countries

(US\$ Bil., % of GDP)

| Country | GDP | | Total Equities | | Bank Claims on Private Sector | | Total Bonds | | Government Bonds | | Corporate Bonds | |
|-----------------|-----------|------|----------------|--------|-------------------------------|--------|-------------|--------|------------------|--------|-----------------|-------|
| | Log10 | | | | | | | | | | | |
| Czech Republic | \$56.0 | 1.75 | \$12.05 | 21.5% | \$35.20 | 62.9% | \$6.62 | 11.8% | \$2.33 | 4.2% | \$3.72 | 6.6% |
| Hungary | \$48.0 | 1.68 | \$14.03 | 29.2% | \$8.26 | 17.2% | \$12.04 | 25.1% | \$11.80 | 24.6% | \$0.24 | 0.5% |
| India | \$372.0 | 2.57 | \$105.19 | 28.3% | \$98.79 | 26.6% | \$108.88 | 29.3% | \$63.07 | 17.0% | \$16.49 | 4.4% |
| Indonesia | \$92.0 | 1.96 | \$22.10 | 24.0% | \$63.37 | 68.9% | \$1.70 | 1.8% | \$0.00 | 0.0% | \$1.00 | 1.1% |
| Korea | \$321.0 | 2.51 | \$114.59 | 35.7% | \$264.67 | 82.5% | \$277.78 | 86.5% | \$178.46 | 55.6% | \$99.32 | 30.9% |
| Malaysia | \$72.0 | 1.86 | \$98.56 | 136.9% | \$74.92 | 104.1% | \$37.78 | 52.5% | \$19.74 | 27.4% | \$15.13 | 21.0% |
| Philippines | \$65.0 | 1.81 | \$35.31 | 54.3% | \$32.71 | 50.3% | \$9.26 | 14.2% | \$7.87 | 12.1% | \$1.26 | 1.9% |
| Poland | \$158.0 | 2.20 | \$20.46 | 13.0% | \$30.84 | 19.5% | \$12.63 | 8.0% | \$12.63 | 8.0% | \$0.00 | 0.0% |
| Slovak Republic | \$20.0 | 1.30 | \$0.97 | 4.8% | \$8.92 | 44.6% | \$3.39 | 16.9% | \$2.78 | 13.9% | \$0.51 | 2.6% |
| Thailand | \$113.0 | 2.05 | \$34.90 | 30.9% | \$144.44 | 127.8% | \$21.02 | 18.6% | \$9.67 | 8.6% | \$3.46 | 3.1% |
| France | \$1,455.0 | 3.16 | \$991.48 | 68.1% | \$1,121.82 | 77.1% | \$1,209.90 | 83.2% | \$731.30 | 50.3% | \$478.60 | 32.9% |
| Germany | \$2,123.0 | 3.33 | \$1,093.96 | 51.5% | \$2,672.98 | 125.9% | \$2,005.90 | 94.5% | \$865.90 | 40.8% | \$1,140.00 | 53.7% |
| Italy | \$1,186.0 | 3.07 | \$569.73 | 48.0% | \$740.64 | 62.4% | \$1,579.90 | 133.2% | \$1,215.60 | 102.5% | \$364.30 | 30.7% |
| Japan | \$3,787.0 | 3.58 | \$2,495.76 | 65.9% | \$5,046.28 | 133.3% | \$5,213.60 | 137.7% | \$3,700.50 | 97.7% | \$1,513.10 | 40.0% |
| The Netherlands | \$378.0 | 2.58 | \$603.18 | 159.6% | \$468.73 | 124.0% | \$243.60 | 64.4% | \$199.40 | 52.8% | \$44.20 | 11.7% |
| UK | \$1,399.0 | 3.15 | \$2,374.27 | 169.7% | \$1,690.47 | 120.8% | \$852.80 | 61.0% | \$464.30 | 33.2% | \$388.50 | 27.8% |
| USA | \$8,511.0 | 3.93 | \$13,451.35 | 158.0% | \$5,412.90 | 63.6% | \$13,973.20 | 164.2% | \$8,002.40 | 94.0% | \$5,970.80 | 70.2% |

Sources: JPMorgan, *World Financial Markets*; Institute of International Finance (IIF); IFC, *Emerging Stock Markets Factbook 1999*; IMF, *International Financial Statistics*; IFC, Emerging Markets Information Center Bond Database; BIS, *International Banking and Financial Market Developments*.

Notes:

- 1) GDP figures are Nominal GDP for 1998 from JPMorgan's *World Financial Markets* (except Slovakia).
- 2) GDP figure for the Slovak Republic is Nominal GDP for 1998 from the Institute of International Finance (IIF).
- 3) Equities figures are for December 1998 and are from IFC's *Emerging Stock Markets Factbook 1999*.
- 4) Bank claims on the private sector are from the IMF's *International Financial Statistics* and are for end-1998 (except France and the Netherlands, end-first quarter 1999, and Hungary, end-third quarter 1996). The amounts shown are US\$ equivalents for local currency denominated bank claims. Bank claims are the closest available proxy for bank loans, although claims could also other claims, such as, equity securities. Claims on the private sector, therefore, should approximate to loans to the private sector.
- 5) Bond figures for the ten developing countries include only debt securities with initial maturities of at least one year and are from IFC's Emerging Markets Information Center Bond Database. All data as of December 1998, except India (March 1998) and the Philippines (December 1997). Figures for the Slovak Republic are estimates. The amounts shown are US\$ equivalents for local currency denominated bonds.
- 6) Bond figures for the seven developed countries are debt securities of all maturities, not just bonds, and are for December 1998

offered by the Czech Republic, where bonds issued by that country's troubled banks accounted for 77% of all corporate bonds issued from February 1997 to October 1999⁸.

Despite the limitations of available data⁹, this picture gets clearer still when the corporate bond markets of developing countries are compared directly with those in developed countries. Table 5, which was compiled from various sources, shows the 1998 nominal GDPs, their common logarithms, the U.S. dollar amounts and percentages of GDPs for

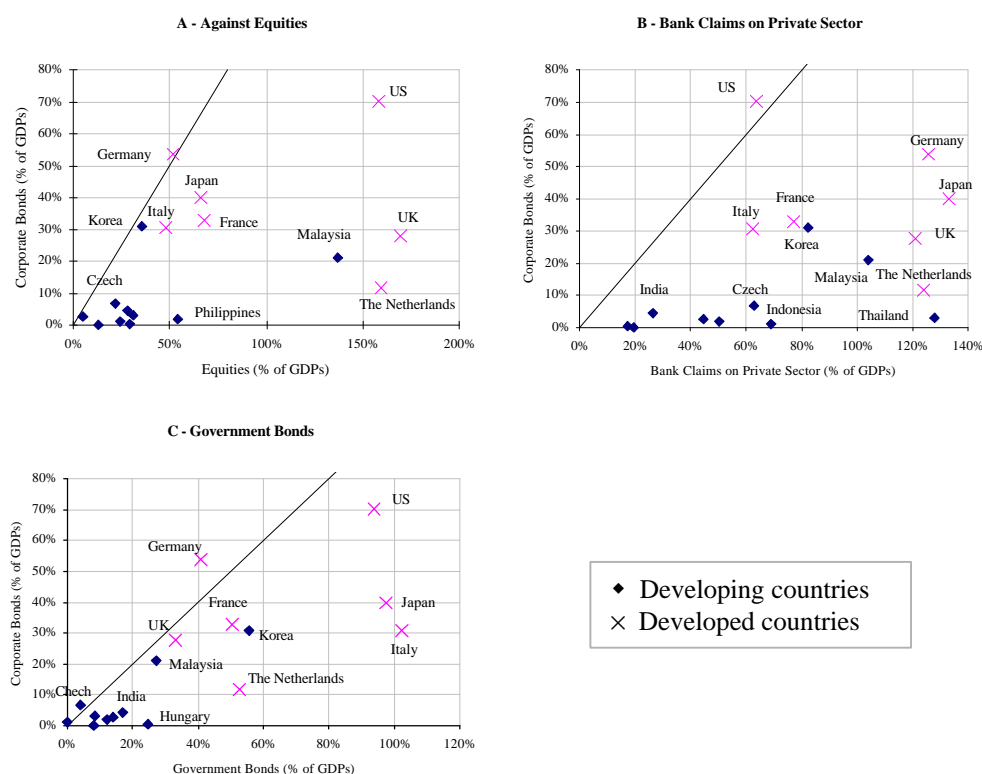
⁸ The distribution by sector of corporate bonds issued from February 1997 to October 1999 in Czech Republic is as follows: banking: 77%; electric, gas and sanitary: 9%; metal: 7%; communications: 3%; oil, gas, petroleum: 2%; and miscellaneous: 5%. (IFCs Bond database)

⁹ Though corporate bond markets already exist in one way or another in many developing countries, it is highly problematic to gather reliable statistical data on their corporate bond markets. More surprisingly, reasonable data of the corporate bond markets in developed countries consistent across countries is not available. For example, bond data for the developed countries was taken from *BIS Quarterly Review*, where as that for the developing countries were taken from IFC's bond database, but not from the BIS source. This is because BIS data does not have amounts of domestic debt securities in some of the developing countries such as Indonesia, Philippines, Slovakia and Thailand, and has amounts different from the IFC data for the other developing countries. Therefore, there are some differences in definitions of corporate bonds or debt securities issued by corporate issuers.

Table 6: Correlation Coefficients between Market Sizes – Corporate Bonds vs Equities, Bank Loans, or Gov’t Bonds

| % of GNPs for | Corporate Bonds as % of GDPs of | | |
|--------------------|---------------------------------|-----------|------------|
| | Countries | | |
| | All | Developed | Developing |
| Equities | 0.5038 | -0.1099 | 0.5108 |
| Bank Claims on P/S | 0.4235 | -0.3195 | 0.4694 |
| Gov't Bonds | 0.7749 | 0.3163 | 0.8477 |

Figure 3: Market Sizes – Corporate Bonds vs Equities, Bank Loans, or Gov’t Bonds



equities and bonds outstanding in selected developing and developed countries¹⁰.

Drawing from these data, table 6 shows the correlation coefficients between, on the one hand, the relative sizes of corporate bonds and, on the other, equities, bank claims on the private sector (as a proxy for bank loans to corporations) and government bonds. The coefficients were calculated separately for the developed countries, the developing countries and all countries. Figure 3 offers scatter diagrams of the same variables.

¹⁰ Korea is no longer usually considered to be a developing country. However, since the Asian Financial Crisis in 1997, Korea has again become a World Bank Group client country eligible for World Bank and IFC programs. As such, it is included in IFC's bond database and is here categorized as a developing country.

Table 7: Correlation Coefficients between Market Sizes – Equities, Bank Loans, Total Bonds, Gov’t Bonds, or Corporate Bonds vs Common Logarithm of GDPs

| % of GNPs for | Common Logarithm of GDPs of | | |
|--------------------|-----------------------------|-----------|------------|
| | Countries | | |
| | All | Developed | Developing |
| Equities | 0.4998 | -0.0770 | 0.0107 |
| Bank Claims on P/S | 0.4184 | -0.2678 | 0.0544 |
| Total Bonds | 0.8713 | 0.7788 | 0.4373 |
| Gov't Bonds | 0.7899 | 0.4622 | 0.3690 |
| Corporate Bonds | 0.8685 | 0.9161 | 0.3797 |

There are some direct relationships between the relative size of the corporate bond market in a given country and the relative size of its equity, bank loan, or government bond market¹¹. The latter three markets are generally instituted ahead of a corporate bond market. Furthermore, the direct correlation coefficients are considerably higher in the developing countries (0.5108 against -0.1099, and 0.8477 against 0.3163). These may imply that a country’s financial system, including equity, bank loan and government bond markets, needs to achieve a certain level of development prior to the development of a corporate bond market, especially in an earlier stage of economic development. The leading role of the government bond market is more obvious.

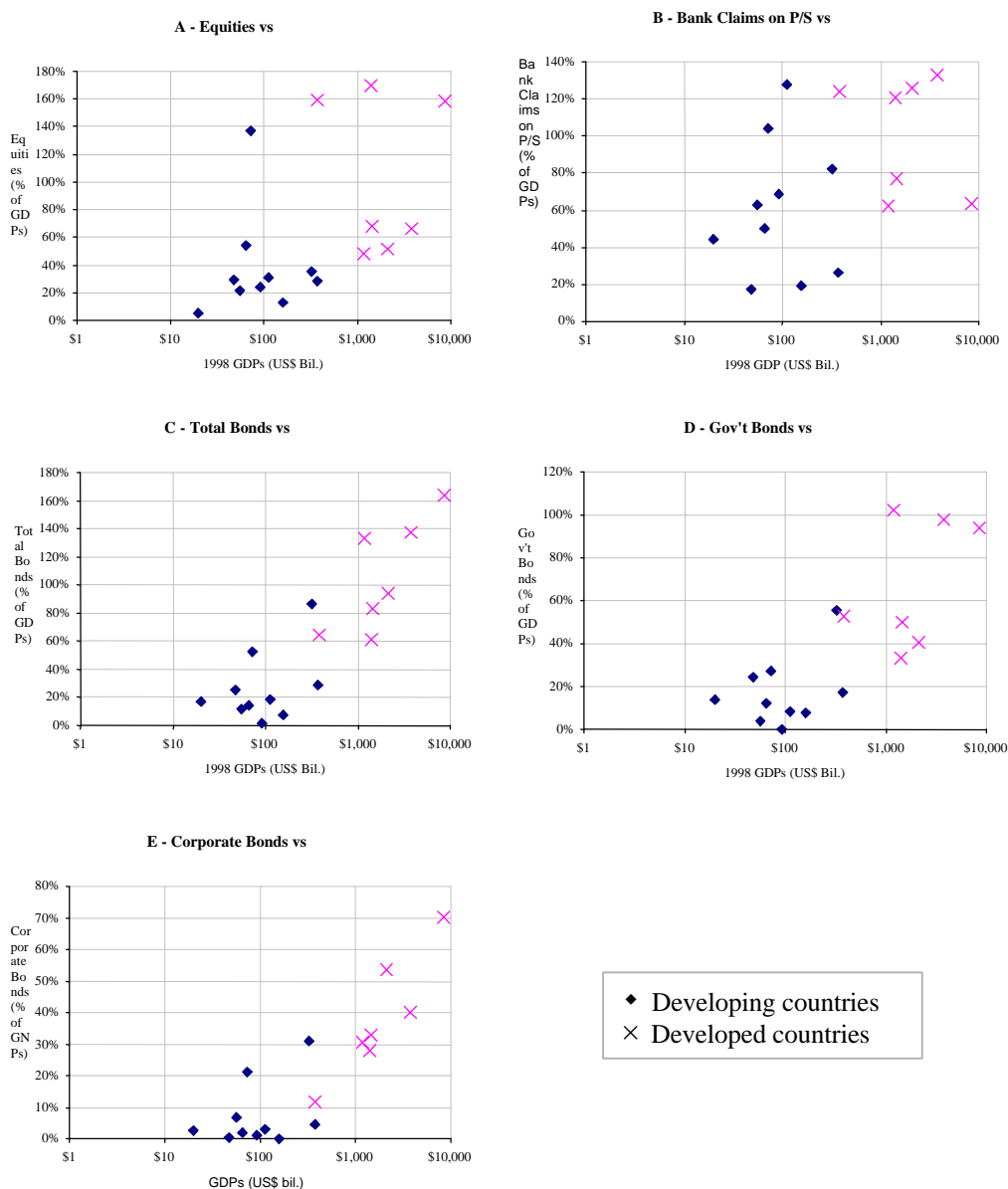
The relationship between the bank loan and corporate bond markets in developed countries is invert (-0.3195), while that in developing countries is direct (0.4694). This suggests the that corporate bonds can be substituted for bank loans on the longer end of the yield curve, and the potential ability of a corporate bond market to relieve the sometimes unbearable burdens placed on banking systems in developing countries.

Using the same data, Table 7 shows correlation coefficients between, on the one hand, the common logarithms of the 1998 nominal GDPs and, on the other, equities, bank claims on private sector, total bonds (government plus corporate bonds), government bonds and corporate bonds. Figure 4 offers scatter diagrams of the same variables.

The table and figure reveal very interesting relationships between the absolute size of a country’s GDP and different financial sub-markets. First, the logarithmic size of the GDP has little relationship with the relative sizes of equity or bank loan markets, excepting the inverse relationship between bank loan markets in developed countries. This also supports the notion that a corporate bond market can act as a partial substitute for a bank loan market. Second, the size of a country’s corporate bond market relative to its GDP is directly correlated with the logarithmic size of its GDP and may be more so as the economy gets larger. This may imply that economic development will be accompanied by an increasingly important role for a corporate bond market, and that a larger population

¹¹ As will be discussed later, it is appropriate in this context to broaden the concept of a government bond market to include a market of major corporate bond issues whose secondary market is liquid enough to substitute the function of a government bond market.

Figure 4: Market Sizes – Equities, Bank Loans, Total Bonds, Gov't Bonds, or Corporate Bonds vs Common Logarithm of GDPs



tends to increase the relative size of a corporate bond market. In other words, a country with a small population may not have the potential for a sizable corporate bond market unless its per capita income increases dramatically.

Summing up the analyses above, Table 8 outlines the policy implications of each possible interpretation of the data for the development of corporate bond markets in developing countries.

Table 8: Policy Implications for Corporate Bond Market Development

| Possible interpretations of the data | Policy implications |
|--|---|
| <p>A country's financial system in general and the government bond market in particular need to be at a certain level of maturity prior to the development of a corporate bond market, especially at an earlier stage of economic development.</p> | <p>Corporate bond market development should be preemptively geared into the whole financial market development.</p> <p>It should timely follow the developments of commercial banking and a government bond market.</p> |
| <p>The corporate bond market in a country can substitute part of the bank loan market, and is potentially able to relieve the stressed banking system in a developing country of unbearable burden.</p> | <p>Corporate bond market development should be designed into restructuring of the banking system.</p> <p>An incentive mechanism should be devised to alleviate resistance from the commercial banking sector against a rapid development of a corporate bond market.</p> |
| <p>Economic development will be accompanied by an increasing role of a corporate bond market.</p> | <p>Unlike the developed countries that completed their capital accumulation process in a pre-open economy era, the underdevelopment of the corporate bond market in a developing country may risk the country's economic development itself in the environments of an open economy. Policymakers need to accelerate a shift from a merit system to a disclosure system, i.e.. to accelerate financial deregulation. Let the private sector play a greater role.</p> |
| <p>A larger population of a country will likely make the relative size of a corporate bond market larger. (A country with a small population may not have potential for a sizable corporate bond market unless its per capita income increases drastically.)</p> | <p>Economic unification may enhance the potential for corporate bond market development. Though it is a politically challenging task, an example is UEMOA (Union économique et monétaire ouest-africaine) in the West Africa.</p> |

4. “Major” and “Minor” Corporate Issuers¹²

It is essential to distinguish between “major” and “minor” issuers of corporate bonds, especially in the context of developing countries. The distinction presumably makes it easier for policymakers in developing countries to realistically lay out a strategy for the debt market as a whole. The two categories of issuers and their bonds differ from each other substantially. Major corporate issuers may enjoy a secondary market for their bonds liquid enough for the bonds’ secondary market prices to form a benchmark yield curve. In contrast, bonds issued by minor issuers will likely be illiquid. But this does not lessen the importance of the primary market even for minor issuers as a long-term funding source, meaning both major and minor issuers can benefit from the development of a functioning corporate bond market.

4.1. Major corporate bond issuers

By “major” issuers we mean those which provide investors with a regular, sizable and stable supply of high quality and uniform bonds through public offerings. They may be termed “impatient traders” with a high demand for immediacy. They issue their bonds almost on a regular basis, say, every week, month, or quarter, so that the investors can reasonably anticipate when the bonds will be available for sale. Their issue timing is basically cyclical and somewhat indifferent to ever-changing market conditions to meet their continuous funding needs. They are not opportunistic. Under normal circumstances, their issue size is large enough to meet a substantial part of investment demand across the market, and their issues are relatively consistent in size. They are financially strong and competently manage their business operations, meaning investors have a great deal of trust in their ability to pay the interests and principal on their bonds in a timely manner. Such strength and trustworthiness allows them a “Triple-A” or otherwise high grade from one or more private rating agencies. Their issues include many of identical or similar maturity or structure, for instance, unsecured, fixed-rate, straight 3-, 5- or 10-year bonds. Ideally, some of them should be made fungible¹³ by reopening outstanding issues at consecutive auctions.

As a result, major corporate bonds will be widely held in the market, and they are likely to be actively traded on the secondary market.

Suitable candidates for major corporate issuers are infrastructure and utility companies, housing finance companies, and development finance companies – strategic enterprises necessary for social and industrial development in developing countries.

Such enterprises tend to have a regular, sizable and stable demand for long-term funds. Properly structured and operated, they can therefore provide investors with a regular,

¹² The terminology of “major” and “minor” issuers or “major” and “minor” bonds is not common in the securities industry. It is arbitrarily coined here to present a conceptual framework for devising a strategy for debt market development in a developing country.

¹³ Interchangeable. Fungible bonds are bonds issued by the same issuer in several tranches with the same nominal coupon rate as well as identical dates for the payment of coupons and for repayment of the principal at maturity; therefore, they can be substituted for purposes of trading, clearing, settlement, coupon payments, repayment, etc. The fungibility of bond ensures the depth and continuous liquidity of the market.

sizable and stable supply of uniform and high-quality bonds through public offerings. Their suitability as major issuers will be further analyzed later in Section 8.1.

4.2. Minor corporate bond issuers

Most corporate bond issuers or their issues cannot meet the stringent criteria for “major” corporate bond issuers or issues. Hence, they are “minor”. The term “minor” no way means that such issuers are marginal in their country’s economic development. Simply their financing patterns in the debt market do not qualify for “major” corporate issuers or issues. Typically, their individual issues are too small in size for exactly identical debt securities to be extensively distributed among a wide range of investors across the economy and frequently change hands.

While they may be of high quality in terms of creditworthiness, “minor” issuers tap the bond market only irregularly, and their issues tend to be small in size, opportunistic in timing, or both. They may be termed “patient traders” with a lower demand for immediate funding. The bond issues of an opportunistic issuer are more likely to be diverse in terms of coupon, maturity and other characteristics. This is because such issuers hit the market only when an attractive financing window opens to meet specific, short-lived investment needs of a particular type of investors. Their bonds are unlikely to trade frequently on the secondary market, not because of shortcomings of the secondary market, but because the bonds themselves are fundamentally short of those prerequisites that “major” bonds have for being actively traded.

For instance, many developing countries faced with weak banking systems and constrained public finances consider financing badly-need infrastructure projects by issuing asset-backed bonds in their capital markets. These bonds, if secured only by the project cash flows or assets of the project, will likely be “minor” issues.

Even in the U.S., only 4 percent of about 400,000 corporate issues outstanding in 1996 traded even once that year¹⁴. This striking reality provides us with two insights into corporate bond markets. First, only a handful of corporate issuers in the market are likely to fall in the category of “major” issuers. Second, in spite of the inherent illiquidity of minor corporate bond issues, the primary market of minor issuers has been playing an enormous role in supplying long-term funds to a country’s private sector.

¹⁴ Mr. Micah S. Green, Executive Vice President of The Bond Market Association in New York, as quoted in the June 27, 1999 issue of the New York Times.

5. Primary Corporate Debt Markets

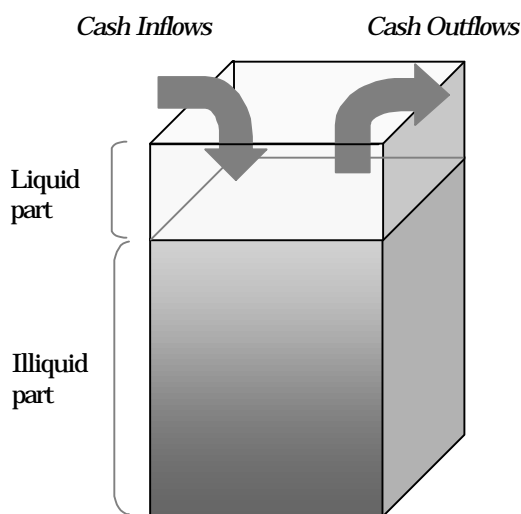
5.1. Primary-market-centric minor corporate issues

Contrary to common understanding, more vital to the development of corporate bond markets is how the issuance of bonds in a primary market can be facilitated than how a liquid secondary market can be developed. This is because of the “buy and hold” strategy legitimately followed by most institutional investors in corporate debt securities.

5.1.1. Buy and hold

The “buy and hold” strategy for corporate debt securities, which is often quoted as a major cause of the illiquidity of their secondary market, is generally legitimate for many institutional investors. Institutional investors purchase corporate bonds, usually in a large lot through public offerings and/or in the secondary market, and hold them to maturity. This strategy is made possible because of the fact that a substantial part of an institutional investor’s investment portfolio does not need to be kept liquid all the time. The money flowing into and out of the portfolio at any given time is relatively marginal, meaning the balance of the portfolio can be made up of relatively illiquid funds, at least for a certain period of time. The actual size of this illiquid component varies and fluctuates, depending on investment objectives, restrictions, the outlook for market conditions, and other factors (see Figure 5).

Figure 5: Liquid/Illiquid Parts of Investment Portfolio



Money that frequently inflows and outflows is marginal to the whole investment portfolio. The rest does not need to stay liquid at all times.

Minor corporate bonds are illiquid and are generally of a lower credit quality, but yield higher returns than government bonds or major corporate bonds. The investor is better off investing this portion of the portfolio in higher yielding bonds, that is, minor corporate bonds at the expense of liquidity and credit quality – to the extent that its risk tolerance parameters permit.

And their illiquidity in turn reinforces “buy and hold” behavior, because if the investor tries to sell them in the secondary market, their realized rate of return will likely get much lower than their yield to maturity due to a large market impact¹⁵.

Only when a country’s capital market development reaches a highly sophisticated level – where institutional investors such as insurance companies

¹⁵ See Footnote 36.

and pension funds are compelled to continuously pursue better performance – will major corporate debt issues and some minor corporate issues be frequently traded in the secondary market. Until that time, most corporate debt securities will trade only when a given investor badly needs to dispose of the security. Consequently, the efficiency of the primary market is the single most critical issue for corporate debt market development in developing countries, save for major corporate issues capable of having some liquid secondary market.

5.1.2. Specific investment needs, specific types of issues

The factor most responsible for the illiquidity of corporate bond issues is their small size. Nevertheless, small issues can also help to most effectively fulfill the specific investment needs of investors.

Different investors have different investment objectives, preferences, capacities and constraints, often due to tax or accounting issues. A single event inside or outside the market will affect the investors' portfolios in different manners, to different degrees, and in different time-frames. Some events will bring about widely divergent impacts on different investors, while others events or developments will have a more uniform effect across the universe of investors. In addition, markets are and will continue to be imperfect.

All these phenomena will create short-lived opportunities for shrewd corporate issuers to selectively exploit, often with specialized debt products. In some cases, investors are willing to pay a premium if particular needs can be satisfied. Conversely, issuers will also be faced with unique or markedly distinct funding needs from time to time, and will consequently need to pay a premium for the fulfillment of these requirements. Evidently, most such deals are limited in size, and once bought by investors on the primary market are the most likely to be held until maturity. Their liquidity is naturally low.

While such minor bonds are highly unlikely to enjoy a liquid secondary market, their pricing in the primary market pricing should be made in reference to the prevailing yield of the benchmark issue – the “on-the-run” issue – with a comparable maturity, rationally adjusted for the vagaries of funding or investment needs. It is this principle that makes primary market activity as a whole coherent, and their economies measurable.

In order to meet these particular needs arising from either temporary or long-lasting market imperfections, investment banks continue to engineer a wide range of debt instruments, in addition to fine-tuning the parameters of individual instruments for specific clients. These include commercial paper, certificates of deposits, floating rate notes, zero-coupon bonds, deep-discount bonds, perpetual bonds, secured or unsecured bonds, convertible bonds, bonds with equity warrants, mortgage-back securities, asset-backed securities, index-linked bonds, medium-term notes, dual-currency bonds, reverse dual currency bonds, and catastrophe bonds.

This diversity and specificity mean that each bond issue has unique contractual features. Some are extremely complex, exposing investors to unique risks, and making crucial the accurate and comprehensible disclosure of product information about the debt issue¹⁶,

¹⁶ See Section 6.1.2 “Enforcement of regulatory disclosure”.

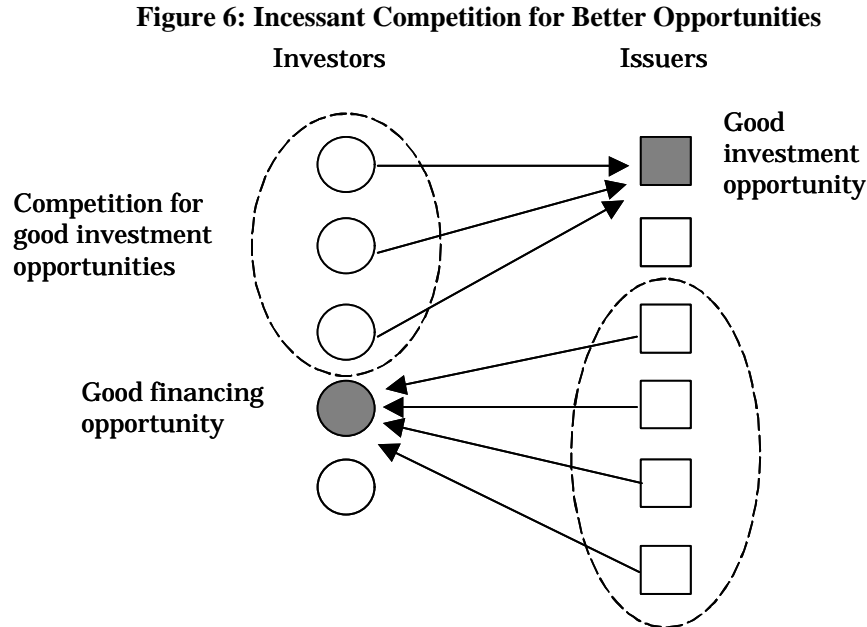
unlike stock issues.

Through these issuing and investing activities exist mainly in the primary market, investors and issuers will continuously match up each other's long-term financial needs in a practically rational way. All in all, an efficient primary market for corporate bonds, even given a marginal secondary market, can still make an unparalleled contribution to a developing economy.

5.1.3. Incessant competition

Both investors and corporate issuers are generating or being faced with specific investment and financing needs under quickly changing business environments in general and financial market conditions in particular. Moreover, developing economies have been more or less financially integrated with international markets. As such, most opportunities for issuers or investors do not last long, and are limited by size in addition to time. In the primary market, investors compete with each other for a finite set of opportunities provided by issuers. The reverse holds true for issuers. This competitive situation is illustrated in Figure 6.

It is under these incessantly competitive circumstances that investors and issuers make investment or financing decisions. As such, anything that hampers their capacity for clear-eyed and nimble decision-making will undermine their confidence in the primary market. Therefore, the market needs to be liberalized or deregulated.



In a marketplace, investors are competing with each other for better investment opportunities provided by issuers, and issuers are also competing with each other for better financing opportunities provided by investors.

5.2. Impediments to primary market development

5.2.1. Statutory restrictions and requirements

Ironically, primary bond markets are more subject to governmental interference than secondary markets. This is because the primary market is the point of entry point for new securities and thus the very first line of investor protection. Statutory restrictions and requirements are usually imposed around the eligibility of market participants or product features, or both. Such government inference often ends up with a merit regime¹⁷.

Table 9 summarizes restrictions and requirements typically imposed on primary corporate bond markets by developing country governments, the possible hidden motives behind the restrictions and requirements, and the potential negative impact of the restrictions and requirements on the development of these markets. Usually, such statutory restrictions have plausible and apparent policy objectives that disguise their negative effects – or the less apparent motives behind the restrictions. These can include protection of the vested interests, preservation of the existing tax base, capital controls, or bureaucratic inefficiency.

Commercial banks in a country may mistakenly feel threatened by the development of a corporate bond market. The bank loan market usually precedes the corporate bond market in a country's financial system by decades or even by centuries. Commercial banks are often tempted to use their political influence to preserve the status quo by restricting the activities of the securities industry. This is despite the fact that a functioning corporate bond market is meant to take a potentially unbearable stress off the country's financial system, and to complement the banking industry for the country's more efficient economic development. Policymakers in developing countries should therefore be aware of risks of administering compromise policies in this regard.

Another potential impediment to the development of a primary market for corporate bonds can be found in a country's securities industry itself. Existing intermediaries like investment banks and brokerage houses may have built up significant vested interests through a banking/brokerage segregation policy like the Glass-Steagall Act in the U.S. They may resist any change to an existing market structure that has effectively barred new and potentially competitive entrants.

Taxes on securities transactions are another common impediment. Taxes not only increase transaction costs, but may fragment the market, depending on investors' tax status. If the country cannot repeal them in the short run, harmonization of tax obligations across the investment community may be a practical solution. Policymakers may also discover that the actual and potential investment community is much more dispersed (and fragmented) than initially assumed.

Lengthy vetting of filed securities registration statements is in all likelihood not an intended restriction. It is a by-product of a statutory action to enforce disclosure requirements. Nonetheless, an inefficient regulatory action can be seen as a *de facto*

¹⁷ See Section 6.1.1 "Disclosure system versus merit system"

Table 9: Examples of Statutory Restrictions and Requirements Impeding to Primary Market Development

| Restrictive areas | Restrictions & Requirements | Possible, Hidden Motives | Possible Negative Impacts on Debt Market Development |
|---------------------------|--|---|---|
| Product features | No short term | To avoid conflicts with banking products. | No reliable/natural anchor for the yield curve, and will distort the yield curve |
| | Cap on coupon rates | To keep the general level of interest rates artificially low | Will hamper the formation of a yield curve, and dampen supply of and demand for long-term bonds |
| | No floating rate | To limit competition with bank deposits | Limited hedging tools against interest rate risks |
| | No/restrictive unsecured bonds | Unsecured bonds may undermine banks' demand for collateral to their loans. | Disadvantageous to new, fast growing companies and non-capital intensive companies |
| | Bank guarantee | To keep bond issuance under a bank's control | Will limit free risk/return tradeoff |
| | No forex-linked bonds | Capital control | Will limit hedging tools against interest rate risks |
| Issuer's eligibility | Credit rating-linked eligibility for bond issuance | To avoid conflict with banks in a lucrative mid-market. | Will limit free risk/return tradeoff; disadvantageous to low-rated companies |
| | Cap on debt issue amount | To keep bond issuance supplementary to bank loans | Will limit free risk/return tradeoff |
| | Queuing system | To keep a room for government bond issuance | Will dysfunction demand-supply relationship |
| Underwriter's eligibility | Too strict or no license for new entrants | Protection of vested interests of existing underwriters | Will limit competition and innovation |
| Taxation | Withholding tax | Conflict or dilemma with a weak tax collection system | Will fragment the market and limit the liquidity |
| | Stamp duties | | |
| Others | Ban on swap Ban on futures & options | Bureaucratic investor protection in the absence of financial expertise and well-organized risk management systems at regulatory and corporate levels. | Will limit hedging tools against interest rate risks, and arbitrage activities |
| | Vetting period of securities registration | Cumbersome and time-consuming. Bureaucratic inefficiency. Banks may benefit from this inefficiency. | Will reduce optimal financing opportunities, and may raise financing costs to issuers |

statutory restriction in that it prohibits issuers from taking advantage of short-lived financing opportunities. In addition to making vetting operation at the regulatory

authority efficient through staff training and other means, a shelf registration system¹⁸ may be an attractive option.

5.2.2. Mandatory investment in government bonds

The most powerful to protect its own vested interests is the state. A fiscal deficit running state is often tempted to save its deficit financing cost, typically by placing its government bonds with its captive investors such as state provident funds, pension funds, or postal saving funds, and by compelling regulated financial institutions such as insurance companies and commercial banks to purchase them, at sub-market interest rates.

Consequently, long-term interest rates are artificially kept low, and, the yield curve on financial assets in the country is kept nearly flat. Investor will have little incentive to invest in long-term bonds. More surplus funds will flow into bank deposits. Banks will get more willing to extend short-term credits to corporations and to roll them over a long term, discouraging corporations from issuing corporate bonds.

5.2.3. Lack of market infrastructures

Besides statutory restrictions, there are vital market infrastructures whose absence, deficiency or inefficiency will impede the development of a primary market. They include disclosure and information systems, credit rating systems, intermediaries, institutional investors, trading systems and clearing and depository systems. Each of these systems will be discussed later.

5.2.4. Distraction by an equity boom

Another potential impediment is an equity market binge. During a booming equity market, the majority of investors, attracted by the potential for handsome or spectacular capital gains, will become indifferent to the risks inherent in equity investments. At the same time, corporate managers will lavishly float equity or equity-linked securities such as common shares, convertible bonds, and bonds with equity warrants. The capital raised will superficially be low-cost, but only because of the ultimately expensive costs to shareholders are ignored or hidden. Few market participants will bother to contemplate financing with or investing in straight debt securities. No serious need for a primary market of corporate debt will be felt.

In the worst case scenario, corporate managers entrusted with more-than-ample equity capital under loose corporate governance will make poor investments. And losing their traditional clients to the equity market, banks will turn imprudently aggressive in lending. All this will most likely end up with an economy facing excessive capacity, a massive stock of bad loans, and finally crisis.

All this makes the development of corporate finance skills on the part of issuing corporations indispensable for the development of a healthy corporate bond market.

¹⁸ A shelf registration system allows for the sale of securities on a delayed or continuous basis. Once it registers for an amount that may reasonably be expected to be sold for a predetermined period (say, two years) after the initial date of registration, the issuer and its underwriters are allowed the flexibility to sell the registered securities when they think market conditions are most favorable during that period.

While training may not be able to tame greed, systematic education on the rational relationship between equities, loans and bonds can reduce the dangers posed to a nascent primary corporate bond market by a booming equity market. For example, the recent, historic equity market boom in the United States did not derail the issuance of corporate debt securities.

5.2.5. Predominance of commercial banks

Commercial banks are by and large far more convenient to industrialists, government officials, politicians, and others as a debt-funding source than a bond market. This often allow commercial banks to be so predominant in a country's financial system that there may be little room left for a corporate bond market. However, banks' credit allocation is generally less transparent than a bond market. Banks' liabilities are largely of short-term, while some of their assets may be long-term loans. Therefore, the over-dependence on the banking system often builds up the systemic risks in the country's financial system. Unless the government takes precautionary measures against such risks, a corporate bond market will have no momentum to evolve.

6. Developmental components

A number of market infrastructures are so essential that the absence, deficiency or inefficiency of such systems may effectively impede the development or functioning of a bond market. They include, but are not limited to, (i) a disclosure and information system, (ii) a credit rating system, (iii) effective bankruptcy laws, (iv) market intermediaries, (v) institutional investors, (vi) a trading system and a clearing and (vii) depository system.

Of these, disclosure and information systems, credit rating systems, and bankruptcy laws are peculiar to non-government bond markets in general and corporate bond markets in particular. The other components are necessary for the functioning of a liquid market in government bonds or *de facto* benchmark bonds, one or the other being the usual antecedent to the development of a corporate bond market.

6.1. Disclosure system and information

There is no question that the fair disclosure of information about an issuer and the securities that it is offering is vital to a functioning of a public market for bonds or equities. It was the arbitrary, incomplete and unsystematic disclosure practices and undemanding, compromising and imprudent investment practices that led to the Asian Crisis, a crisis that scarred nearly every market participant. In addition, it is essential to view disclosure issues in a broader perspective when discussing the development of corporate bond markets, bringing in such issues as (i) the disclosure system versus merit system, (ii) enforcement of regulatory or statutory disclosure, (iii) the promotion of voluntary disclosure, and (iv) the development of information service professions.

6.1.1. Disclosure system versus merit system

Economic development through private investment unequivocally demands the efficient allocation of financial resources. This in turn requires a socioeconomic framework in which the optimal behavior of a diverse universe of investors can be basically assured. A disclosure system is one of key pillars supporting such a framework.

The antithesis of a disclosure system is a merit system, in which the regulatory authorities review the substantive merits of a proposed capital market issue in order to ensure that investors are protected and that the issue is compatible with national economic policy or development schemes. Referring to laws, decrees, or directives, the authorities determine which participants may enter the market and the terms of their involvement, rule on the type of instrument that may be used, and the substantive terms of the instrument (e.g., timing and pricing of the issuance). A merit system in corporate bond markets is exemplified by a queuing system, a coupon rate control, eligibility criteria for issuers, restrictions on bond term, etc. This gives regulators the ability to exercise tremendous power over market outcomes (Wong, 1997).

A merit system, which is operated by a limited number of regulators, induces moral hazards among market participants, including investors, while largely leaving the regulators free from effective accountability. It will impede and ultimately defeat the development of a sustainably efficient market mechanism.

The merit system or its elements tend to have roots in (i) a policy-based development strategy, (ii) two elements latent in a capital market mechanism, *i.e.*, a direct exposure of inventors to issuer's risks and a socially broad base of fund contributors (investors), and (iii) a populist inclination of democratic political process. It is useful to recognize that the pressure for merit system includes weaknesses in key market infrastructures that many developing countries share. They include weak law-enforcement and court systems, unsophisticated investors, weak intermediaries, weak or nonexistent credit rating systems, weak accounting standards and auditing system, and weak corporate governance. The balanced strengthening of these market infrastructures will ensure the materialization or "upgrading" of a disclosure system in a corporate bond market.

Finally, while it is worth noting that there can be no "100% pure" disclosure system as long as there are governments, an ideal system is one that is reasonably close to being pure disclosure.

6.1.2. Enforcement of regulatory disclosure

The degree of regulatory disclosure required for debt instruments may vary by the history of the issuer and the scope of targeted investors. The existence of an equity market is essentially a prerequisite for the development of a disclosure system for a corporate bond market. The adherence by issuers to International Accounting Standards can help address ambiguities. Disclosure should focus on an issuer's creditworthiness rather than its relative prosperity, and on product information.

Varying degree of required disclosure

The most fundamental regulatory disclosure practice for fund raising through a capital market is the filing of securities registration statements with the relevant authorities. The degree and form of required disclosure through a securities registration statement usually varies, depending on the nature of the securities, whether the issuer is seasoned or unseasoned in the capital market, and whether the issue is public or private. Conventionally, disclosure requirements for a publicly offered equities by new entrants (an initial public offering) are the most stringent, while those for privately placed debt issues by repeat issuers is the simplest.

Equity markets as a prerequisite

A listing of an issuer's stock offers a continuing disclosure mechanism not only for the stock itself but also for the issuer's corporate bonds, regardless of whether the bonds themselves are listed on a public exchange. Through the initial public offering process, a company discloses its operations, financial statements and other required information. Under securities laws and, more importantly, contracts with investors, listed companies are compelled to make regular disclosures as well as occasional disclosures after the occurrence of certain events considered material. This statutorily and/or contractually bound flow of information in reference to the issuer's stock listing can form the basis for the information required for investments in the issuer's debt securities. It is extremely important that disclosure requirements under the listing agreement are adequate and duly complied with. If they are not complied with, the stock exchange should be able to

enforce them¹⁹.

International Accounting Standards

There are a number of sources of ambiguity, misunderstanding, or misrepresentation with regard to the issuer's accounting information under developing country settings. These include (i) the consolidation of subsidiaries' accounts; (ii) related party transactions; (iii) contingent liabilities; (iv) unrealized gains and losses from securities investments and forward, swap or futures positions; (v) segment information; and (vi) financial leasing activities. In this respect, the efforts by the International Accounting Standards Committee (IASC) to put in place a comprehensive set of principles for enterprises undertaking cross-border offerings and listings are valuable for developing countries.

Actual willpower and capabilities

Setting high-quality accounting standards in a country is essential. But it is only the first step toward credible disclosure. Accounting standards must be rigorously interpreted and applied. The key issue is the actual level of willpower and the capacity for compliance and enforcement available in a country. And this applies not only to regulators but also auditors and other actors in the private sector.

Credit focus and product information

Disclosure for debt issuance differs from that for equity issuance in certain aspects, including the "prosperity focus" versus credit focus, and product information.

An equity investor focuses more on an issuer's potential for and likelihood of future growth and prosperity. A debt investor is more concerned with the issuer's capacity and willingness to meet its obligations. In the case of asset-backed securities, the characteristics of the assets backing the securities' cash flows need to be disclosed extensively. Credit ratings and reports from rating agencies supplement the disclosure through a listing system.

But the product information required for debt issuance is more complex than that of equity issuance, and varies from issue to issue. Excepting derivatives such as equity warrants, equity issues usually involve common shares whose characteristics are generally well stipulated in the country's company laws or commercial codes. By contrast, there is a wide range of debt instruments, as discussed in Section 5.1.2. In other words, each bond issue has unique contractual features. Some are complex, exposing investors to unique risks. An "exotic" feature, though legally transferable, may make a bond so illiquid that an initial investor would have to hold it to maturity or realize a substantial

¹⁹ In this connection, it is logical that some countries require companies aspiring to publicly issue bonds to have listed their shares on a national stock exchange. However, rules of this kind prevent a project-specific company from publicly issuing bonds to finance its project, because the company often is a special-purpose company but not a public company, and, therefore, disqualifies for listing of its stock. Bonds collateralized with the assets and cash flows without recourse to the issuer would also disqualify for public issuance. These bond structures are of great value to infrastructure and other development projects. Therefore, the rules need some exemptions to facilitate the innovative debt financing techniques that development countries may need for their social infrastructure building.

capital loss to induce a reluctant purchaser.

This makes accurate and comprehensible disclosure of product information of debt issues imperative for a risk and return tradeoff to be correctly and easily recognized by investors. The damaging of investors' interests as a result of inadequate, incorrect or incomprehensible product feature disclosure could severely hamper the development of a functional bond market.

6.1.3. Promotion of voluntary disclosure

On top of regulatory disclosure, efficiency can be dramatically increased through voluntary disclosure. Policymakers in developing countries should promote and facilitate proactive information dissemination activities, especially when driven by private sector initiatives. A credit rating system can be an indispensable element of voluntary disclosure.

There are three major areas identified for voluntary disclosure: (i) corporate governance; (ii) public relations through the media; and (iii) investor relations.

In 1999 the Organization for Economic Cooperation and Development published its Principals of Corporate Governance. These benefited from broad exposure to input from non-OECD countries, the World Bank, the International Monetary Fund, the business sector, investors, trade unions, and other interested parties.²⁰

The issuer can conduct public relations through conventional mass media (press, radio and TV), international electronic media such as Reuters and Bloomberg, and Internet websites. Despite the importance of a cool-eyed assessment of risks and returns, it is nevertheless true that investment banks generally find it easier to place bonds of a well-known issuer, and that such an issuer's yield tends to be lower than one without a household name. The writer-driven nature of the Internet²¹ has made it easier and more economically for an issuer to make itself known, even globally. An issuer can now instantaneously disseminate the contents of its annual reports, including financial

²⁰ The five basic principles are: (1) The Rights of Shareholders: The corporate governance framework should protect shareholders' rights. (2) The Equitable Treatment of Shareholders: The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights. (3) The Role of Stakeholders in Corporate Governance: The corporate governance framework should recognize the rights of stakeholders as established by law and encourage active cooperation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises. (4) Disclosure and Transparency: The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company. (5) The Responsibilities of the Board: The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of the management by the board, and the board's accountability to the company and the shareholders."

²¹ The Internet platform is writer-driven than reader-driven or watcher-driven. The traditional media, such as TV, radio, and hard copy publication, are basically either reader-driven or watcher-driven. This means that unless you are or your intermediary like a publisher is commercially sure that you can attract a critical mass, you cannot present your views and ideas to the public. Moreover, you have to rely on a host of professionals to have your information disseminated. Because the traditional media's fixed and marginal variable costs of transmitting information are substantial, and are almost prohibitive to individuals. The Internet has revolutionarily changed the economic equation of disseminating facts, opinions, views or thoughts. Moreover, you have in principle full control on the contents and the way they are presented.

statements, and other company news to almost every potential investor is the issuer's bonds or equities.

Many issuers in developed capital markets hire in-house or outside investors relation professionals to systematically meet and communicate with the investment community, and proactively address issues of concern to investors, with the intent of maximizing the value of their securities in the marketplace. They design and carry out regular investors relation programs and "roadshows," in which company officers seek out and meet with existing or prospective investors or analysts.

6.1.4. Development of information service professions

It is commonly recognized that capital market activities demand a herd of professionals such as investment bankers, lawyers, accountants, and research analysts. For most developing country, the latter two are perhaps most in need of rapid development.

Corporate Accountants

Financial information available in emerging markets is less often accurate or precise than that available in developed markets. Under the circumstances prevailing in some developing countries, information may not be current, sufficient or carefully prepared at the source. It may be compromised in the communication process, since its handling requires some skill and care. Information may not be professionally analyzed and processed at a brokerage house²².

By corporate accountants we mean those accountants who work for the bond issuer but do not necessarily qualify as public certified accountants (CPAs). They are responsible for the day-to-day accounting operations of the issuer, and probably support a few in-house or outside CPAs in collecting and processing accounting information at source. They may also take charge of passing the information to outside auditors, bankers, and financial analysts. It is often observed in developing countries that there is a wide gap in terms of professional quality between a small number of prestigious CPAs and a much larger number of corporate accountants. The latter appear to be one of the weakest links in the information chains, and significantly responsible for unreliable and inefficient flows of financial information.

Research analysts

Research analysts at brokerages, underwriting firms, fund management companies, and credit rating agencies perform a valuable function for the maintenance of an efficient, orderly, and informed securities market. They gather, analyze, and process information on securities, issuers and industries and other relevant subjects. Their information products are routinely disseminated in various forms such as research reports, media comments, Internet websites or face-to-face meetings with investors. Their expert opinions, which are often diverse and conflicting, drive investors and traders to buy and sell particular securities. In a sense, all financial information that is regulatorily or voluntarily disclosed

²² Compare information can be compared to an egg. In order to enjoy an egg on your dining table, the egg has to be fresh and attentively picked up at a henhouse, carefully transported on the way, and nicely cooked in a kitchen.

is just a raw material, and will remain almost meaningless to the market without being skillful “cooked” by analysts.

Analysts are usually professionally trained and, in some cases, privately qualified for the profession. Many are educated in business administration including economics, finance, accounting, marketing or operations research, and some have technical backgrounds to better analyze the issuers’ technological competence. Usually, they are not directly regulated. They often form a professional association for the promotion and maintenance of professional standards and ethical practice in financial analysis and investment management.

Vernacular languages

While making information available to the market and developing a cadre of analysts both are crucial to the development of a corporate debt market, how the information is communicated is also important. Quite a few developing countries presumably need to develop a vernacular terminology for financial market activities and promote a broader use of it. Such a terminology is important for the efficiency of financial information dissemination, the effectiveness of policy implementation, and, not least, the political support necessary to ensure that these policies are maintained.

Heavy reliance on the market vernaculars of developed countries in communicating financial information may offer certain benefits to developing countries trying to create a more efficient market in financial information. At the same time, communication of financial information in the country’s vernacular language(s) can be a far more efficient way to share information across the entire economy. Functional capital market activities involve and impact a broad spectrum of society. Though the most visible players in corporate bond markets are institutional investors, the ultimate stakeholders are generally households. The policies needed for the successful development of capital markets in general and corporate debt markets in particular can be more effectively instituted if they employ the country’s vernacular language(s), ensuring wider and deeper public understanding and participation.

6.2. Credit rating system

6.2.1. Role of credit rating system

In the long run, a credit rating system is an essential component of any well-functioning corporate bond market, encouraging the most efficient allocation of capital raised by debt issues. Such a system (i) provides the measurement of the relative risk of bonds in question, (ii) conduces to the efficient allocation of financial resources, (iii) affords bond issuers an incentive for financial improvements, (iv) augments the quality and quantity of information on issuers, and (v) alleviates a loss of liquidity due to security fragmentation.

The purpose of credit ratings is primarily to provide investors objective and independent opinions of the relative credit risk of financial instruments, mainly bonds. They measure a given debt issuer’s ability and perceived willingness to make full and timely payments of principal and interest over the lifetime of the rated financial instruments (Pinkes, 1997).

Thus, a credit rating system facilitates the “transferability” of corporate bonds.

Investors will demand a higher interest rate, commonly known as a risk premium, to compensate for the higher credit risk implied by a lower rating. This differentiation of interest rates on the basis of risk in turn helps ensure the efficient allocation of resources by investors while further encouraging companies to improve their financial performance.

A functioning credit rating system also encourages greater transparency, increased information flows, and improved accounting and auditing practices.

In addition, the limited number of creditworthiness symbols alleviates the security fragmentation²³ of bonds and to some extent enhances their liquidity. The system allows for the bundling of bond issues of the same or very similar creditworthiness into a single category from among the universe of issues rated by the same agency. This creates the ground for interchangeability of bond issues by different issuers and facilitates arbitrage activities, which in turn can make the bond market more liquid.

6.2.2. A chicken and egg situation

Not only is a credit rating system essential for the development of a well-functioning corporate bond market. More than one credit rating agency is needed to provide an independent, competitive, and high-quality rating regime.

However, IFC's experience²⁴ indicates that it is difficult to make even a single credit rating agency in a developing country commercially viable without a critical mass of corporate bond issues. But a reliable rating agency is badly needed to build up this critical mass. Thus, we run into a chicken-and-egg situation.

Behind this difficult situation are the thin fees for rating services²⁵ and the long lead-time needed to reach a critical mass of corporate bond issues. A lead-time of five to ten years would not be unusually long after the government has launched a corporate bond market development program.

As such, it is not uncommon for credit rating agencies in nascent corporate bond markets to have a hard time financially and, consequently, to be subject to the perception that their professional credibility is compromised. The Asian Financial Crisis reinforced this perception.

6.2.3. Development of rating agencies

Success requirements

Despite generally difficult start-ups, some rating agencies have been successful in establishing themselves in developing country corporate bond markets. Success appears to be require credibility, both in terms of independence and reliability, the existence or development of a corporate bond market of sufficient size, and interest rate differentials

²³ One issuer issues bonds of different coupon rates, maturity dates, interest payment dates, security arrangements though distinct issuers and/or tranches. This fragments one issuer's fixed income securities into less interchangeable and less substitutable securities even though they are issued by the same issuer.

²⁴ Since 1994, IFC has invested in eight rating agencies in developing countries and has several projects to invest in rating agencies in pipeline.

²⁵ Only a few basis points of a principal amount for straight corporate bonds on an annualized basis.

based on perceived investment risk (Shah, 1991 and 1993).

The second and third requirements, which are basically beyond the control of a rating agency or its promoters, indicate the importance of the timing of a market entry. Perhaps the most important proactive part of launching a credit rating agency is the establishment of credibility, which is rather subjective and a matter of perception management, because the rating would have no track record to show. To this end, the first steps to be taken are to create awareness of the benefits of credit rating among investors, borrowers, regulators and market intermediaries; and to the confidence and trust of the investment community (Shah, 1991 and 1993).

The most logical target of a campaign to make know the need for credit ratings would be financial institutions. This is because they would be the first to employ such ratings.

Business models

There are several routes around the above-mentioned chicken-and-egg problem. A local credit agency can be encouraged to expand into other business lines, allowing them to cross-subsidize credit rating operations, or to cover a group of countries large enough to constitute a critical mass. A rating agency can also be set up as department of the national stock exchange or some government department, excluding the securities commission.

In Turkey and the Philippines, local credit rating agencies provide local banks with ratings in order for them to establish corresponding or credit-line relationships with foreign banks. Other revenue sources include non-rating activities such as financial information services. Whether or not this solution works in a country depends on various factors prevailing in the country.

A regional rating agency can be set up to cover issuers across national markets. In addition to more readily achieving a critical mass of business, it is more likely to provide more comparable companies to determine the relative creditworthiness of companies. A developing country often has only one company in certain industries, such as oil refining, air transport, or telecommunications. A healthy rivalry may encourage corporations and regulators to compete in conforming to global standards. Examples of such regional rating agencies are the Inter-Arab Rating Company (IARC) which covers Egypt, Tunisia, Morocco and Jordan, and DCR Centroamericana, covering the Central American countries and the Dominican Republic. A basic drawback of this approach is that political rivalries may not allow assigned ratings to be objectively accepted among the countries.

The third solution is a public agency approach to the problems. This raises an immediate question over whether a public agency not facing market competition can be efficient, competent and fair. But it should be kept in mind that stock exchanges or securities commissions can function effectively without such competition.

Several measures can effectively ensure the efficiency, competence, fairness and transparency of a public-sector credit rating agency. These include:

- making public rating methodologies and data;
- publishing individual ratings and their rationales in a timely manner;

- subjecting the agency to annual audits or evaluations by more than one internationally reputed rating agency, accounting firm, or consulting firm;
- publishing the results of annual audits or evaluations;
- disclaiming any liabilities arising from ratings; and
- incorporating a sunset clause in the agency's charter.

It is worth noting that, if the above measures were adopted, ratings by a public sector body would not be based on any confidential information – unlike conventional ratings, which rely partly on information supplied and kept in confidence, even after ratings have been assigned and publicized. Limiting the data analyzed to that in the public domain, either before or after the ratings are assigned, would also alleviate concerns over liabilities that may arise from ratings.

While internationally known rating agencies are often hesitant to participate in local rating agencies, their involvement as practice auditors may facilitate the development of local corporate bond markets²⁶.

In any case, departing from the conventional structures in terms of rating agencies is unlikely to critically undermine the credibility or usefulness of credit ratings in local corporate bond markets. The quantity, quality and dissemination efficiency of corporate information should be the primary objective.

6.2.4. International brands of credit ratings

The evolution of the credit rating industry in developing countries may also benefit from international networking under internationally prominent firm, much as local accounting and auditing firms all over the world affiliate with Big Five and other global professional services firms. The international networking may take the form of subsidiaries, franchising or other variations.

Such global networking can help achieve economies of scale in rating, accelerate technology transfer, facilitate foreign investors in a local bond market; and facilitate issuers' access to international capital markets.

Apart from distinctive features that require some country-specific rating approaches, there are a great deal of features that are common across countries, markets, industries and issuers. This allows for significant standardized in cross-border rating institutions, and economies of scale.

Global financial integration and innovation keep pouring new financial products and technologies into local corporate bond markets. New financial products and technologies often require novel approaches to risk analysis. A typical example of this trend is asset-backed securities, which have been rapidly spreading into emerging markets and have required a new rating technology. Technology transfer within the same institution is generally much faster and smoother.

²⁶ Duff & Phelps Credit Rating Co. provides a commercial bank with services of assessing the bank's overall credit administration process (Orabutt , 1999). What is proposed above can be an extension of this kind of services.

Foreign investors, especially institutional investors from developed countries, can play a significant role in fostering the development of a local corporate bond market, though they tend to stick to highly liquid, high credit quality issues only. They are also generally more comfortable with ratings assigned by internationally recognized rating agencies or their local affiliates.

Issuers in developing countries interested in tapping international capital markets may find it convenient and economical to secure a rating from a well-recognized international branded agency. The same holds even for domestic purposes.

A caveat is that international rating networks will hardly cover every developing country, or every issuer in those it does cover. Therefore, the local presence or affiliation of international names will not substitute for indigenous rating agencies but complement them.

6.2.5. Issues with a mandatory rating system

In most developing countries with credit rating agencies, mandatory rating has been introduced. A mandatory rating system usually requires public debt issues to be rated a certain grade or higher, and/or certain institutional investors to purchase securities of a certain grade or higher. This is inevitably accompanied by a system under which the regulator designates or licenses eligible credit rating agencies.

A primary rationale for a mandatory rating system is to ensure the aforementioned objectives of a credit rating industry. In the context of the chicken-and-egg situation, mandatory ratings also help to generate a certain level of demand for credit rating services.

There are several arguments against instituting a mandatory rating system: that it may compromise the accuracy or objectivity of ratings due to a lack of investor-driven competition; that a government sanction may lead investors to put too much weight on a rating agency's opinions; that it may tempt issuers to "shop around" for a favorable rating while leading rating agencies to inflate their ratings in favor of issuers; and that artificially created revenue streams may upset the delicate balance for rating agencies that have been operating as private, profit-oriented institutions in unregulated markets (Pinkes, 1997). In general, these arguments appear legitimate. In fact, it has been observed that some credit rating agencies undercut each other by implicitly selling lax ratings to meet regulatory benchmarks.

The arguments against mandatory ratings are less likely to provide a local corporate bond market with a practical solution to its chicken-and-egg problem. The evolution process of corporate bond markets in developed countries is presumably responsible for the legitimacy of the arguments against a mandatory rating system. Most developing countries are not repeating the same process of corporate bond market evolution.

6.3. Securities registration system

Securities registration is an administrative process through which to register with the relevant authorities securities to be publicly offered, sold and traded to investors. A securities registration system is designed to provide investors in new and seasoned issues

of securities with investment information, and to prevent fraud in the sale of securities. Under a pure disclosure system (as opposed to a merit system), the regulatory authority administering the securities registration system neither explicitly nor implicitly passes on the investment merits of the issue. These aspects common with equity markets. However, corporate bond markets differ from equity markets in (i) having actually or potentially several distinct sub-markets, and (ii) functioning as an incentive mechanism for better disclosure practices.

6.3.1. Distinct markets

In a given country, there are likely to be in fact several distinct markets in debt securities, with different instruments, players and market mechanisms. The types of markets for corporate debt instruments can be divided up differently across countries. They normally segment by maturities of debt, the characteristics of investors or issuers, and product features. Securities registration should be flexible enough to adjust for these differences.

It is typical, for example, to see (i) money markets in which short-term instruments such as commercial paper and certificate of deposit are traded principally or exclusively among banks and other financial institutions, (ii) markets in which both individual and institutional investors are purchasers, and (iii) markets in which only institutions or other large investors are active. Government debt markets are distinct markets by nature of the issuer²⁷. Regulators need to recognize this, and the goal of a securities registration system should be to put in place and enforce appropriate frameworks for each market, recognizing that the cost/benefit analysis of regulations will be different in each.

Money market instruments with maturities of less than a certain period, typically 9-12 months, are generally exempt from securities registration, subject to investment grade credit ratings. In the private markets, where only institutions and other large-scale investors are active, securities are also exempt from registration in exchange for strict restrictions on their distribution.

Another set of attributes that segments debt markets involves new product features. For example, mortgage-backed securities may require, for the protection of investors, information other than that typically required for conventional corporate bonds, such as information about prepayment of underlying home mortgages. A rigid securities registration system may fail to effectively protect investors or may impede market innovation if its adherence to rigid categories prevents the introduction and evolution of new products.

6.3.2. Incentive mechanisms

The much lower risk of corporate bonds relative to the equity of the same issuer, the seasoned nature of corporate bond issuers, and the consideration for a cost/benefit tradeoff together give rise to an incentive mechanism for better disclosure and higher efficiency in the capital market as a whole.

Debt issuers are generally well “seasoned” on the market. In practice, corporate bond

²⁷ Government debt instruments, regardless of their maturities and target investors, are generally exempt from securities registration due to the “risk-free” creditworthiness of the government.

markets do not develop without the existence of an equity market, and rarely does a company publicly issue bonds without first issuing shares. This suggests that the general requirements for securities registration statements are already in place by the time that a country seriously attempts to develop a corporate bond market.

While securities registration as a means for disclosure is a costly affair for an issuer, the protection of investors is in the public interest. But excessively costly and/or burdensome registration systems would discourage corporations from going to a local bond market. Consequently, a securities registration system is generally subject to a cost/benefit tradeoff. In addition, the average issuer is likely to tap the capital market more often by debt issues than by equity issues. As such, registration requirements for corporate issues should be simpler than those for initial public offerings and subsequent equity offerings, as a reward for seasoned issuers with a good track record in terms of disclosure.

Simpler registration requirements usually take the form of the following:

- A simpler and/or shorter registration form;
- Incorporation by reference of information documents into a registration statement;
- A shorter waiting period until the filed registration statement becomes effective; and,
- Shelf registration²⁸.

For granting such advantageous treatment to issuers, regulators typically take into account factors such as:

- The length of the period reporting under a country's securities laws;
- The quality of reporting materials filed;
- The timeliness of filings; and,
- The credit rating (usually investment grade) of the debt issue.

In return for maintaining a proven track record of satisfying these criteria, the issuer is rewarded with less expensive, less time-consuming and less burdensome compliance with registration regulations. Special facilities under which securities can be issued to qualified institutional investors without securities registration may also be linked to compliance with the above criteria.

²⁸ Shelf-registration was initiated in the US, but similar mechanisms have been tried elsewhere. Its process is designed to permit issuers to access the public markets quickly, without sacrificing on the adequacy of information to the public. Generally, qualified issuers may register a prospectus that does not include certain aspects of the final terms of the debt security to be issued (usually, the tenor and interest rate). This prospectus is then reviewed and approved by the supervisor. For a set period of time, during which the information in the prospectus is assumed to be current, the issuer is then permitted to offer securities under this prospectus without further registration. Eligible users of this must usually be reporting companies, with good credit records and the types of debt instruments that may be the subject of shelf registration may be limited to straight debt.

6.4. Bankruptcy laws

Bankruptcy laws are another cornerstone of corporate bond markets development. Default risks distinguish non-government bonds from government bonds. Most events of default on bonds occur when the issuer goes bankrupt or, if the bonds are guaranteed, both the issuer and the guarantor go bankrupt.

An investor is able to rationally assess the risk of investing in bonds only if the limit of the investor's legal ability to force the bankrupt issuer to repay its obligations and the procedures for going to that limit are clearly defined. It is bankruptcy laws that define the limit and the procedures. In other words, a mechanism for efficient reorganization is vital to a smooth functioning of corporate bond markets (Hakansson, 1999) in that it establishes the investor's right to recover investments and the bond's priority or subordination to other creditors in the worst case.

The investor's ability to force a bankrupt issuer to repay its obligations is dependent on the type of security involved: secured or collateralized bonds, senior bonds, or subordinated bonds. Holders of secured bonds have a charge against a particular piece of the bankrupt issuer's assets. This asset (or proceeds from its sale) must be used to satisfy the bankrupt issuer's obligation to the bondholders before it can be used to satisfy debts to other creditors. Holders of senior bonds have a statutory priority interest, and the obligations must be paid before other debts if issuer becomes insolvent. Holders of subordinated bonds have neither a charge against the bankrupt issuer's assets nor do they enjoy a statutory priority. In addition, some countries recognize just two categories: secured and unsecured bonds. But these classifications of bonds by security ranking are meaningless without the existence of a functioning bankruptcy mechanism.

When an issuer becomes insolvent, the issuer's assets are rarely liquidated at once. More often, the issuer first files for protection from its creditors while undergoing reorganization under the relevant provisions of the bankruptcy laws. The issuer's management negotiates a debt-restructuring plan with all outstanding creditors, including bondholders. But given the diversified nature of bondholders – there are likely to be many, compared to one or just a handful of bank lenders – negotiations between a company forced to reschedule bond payments and its bondholders can be difficult. Currently, some authorities are proposing that a majority vote among bondholders, instead of unanimity, should be used in negotiations with rescheduling issuers (Adler, 1999).

6.5. Trading systems

What does the integration of a corporate bond market into the national debt market of a developing country look like? How does it affect the country's existing trading systems or market structures?

We will first examine those characteristics to help identify a trading system suitable to a particular national market.

For the discussion purposes, we decompose the institutional characteristics of the corporate bond market along three dimensional axes: (i) investors, (ii) issuers, and (iii) intermediaries. They virtually form a cubic space as illustrated in Figure 7-A. Each axis

represents the following characteristics:

- (i) Investors: Demand for trading immediacy
Institutionalization
- (ii) Issuers: Demand for trading immediacy
Number of issues per issuer
- (iii) Intermediaries: Capitalization
Sophistication.

The degree of each characteristic increases as you move along the axis outwards, and each axis is divided into two parts: the lower-scale and the higher-scale parts. The division of the scale on each axis makes eight combinations of the institutional characteristics represented by eight sub-spaces in the cubic space, namely, Sub-Spaces 1-8 (see Figure 7-A). A set of institutional characteristics in each sub-space determines a specific market structure or structures suitable for that sub-space.

Sub-Space 1 typifies a well-developed market of government bonds or major corporate bonds (see Figure 7-B). In this type of market, investors are highly institutionalized and have a higher demand for trading immediacy (impatient traders), issuers also have a higher demand for trading immediacy (impatient traders) and a larger number of issues, and market intermediaries, mainly dealers, are better capitalized and sophisticated. A dealer market or quote-driven market is generally suitable for this type of market. The reasons for this will be later discussed in detail in Section “Transaction modes”.

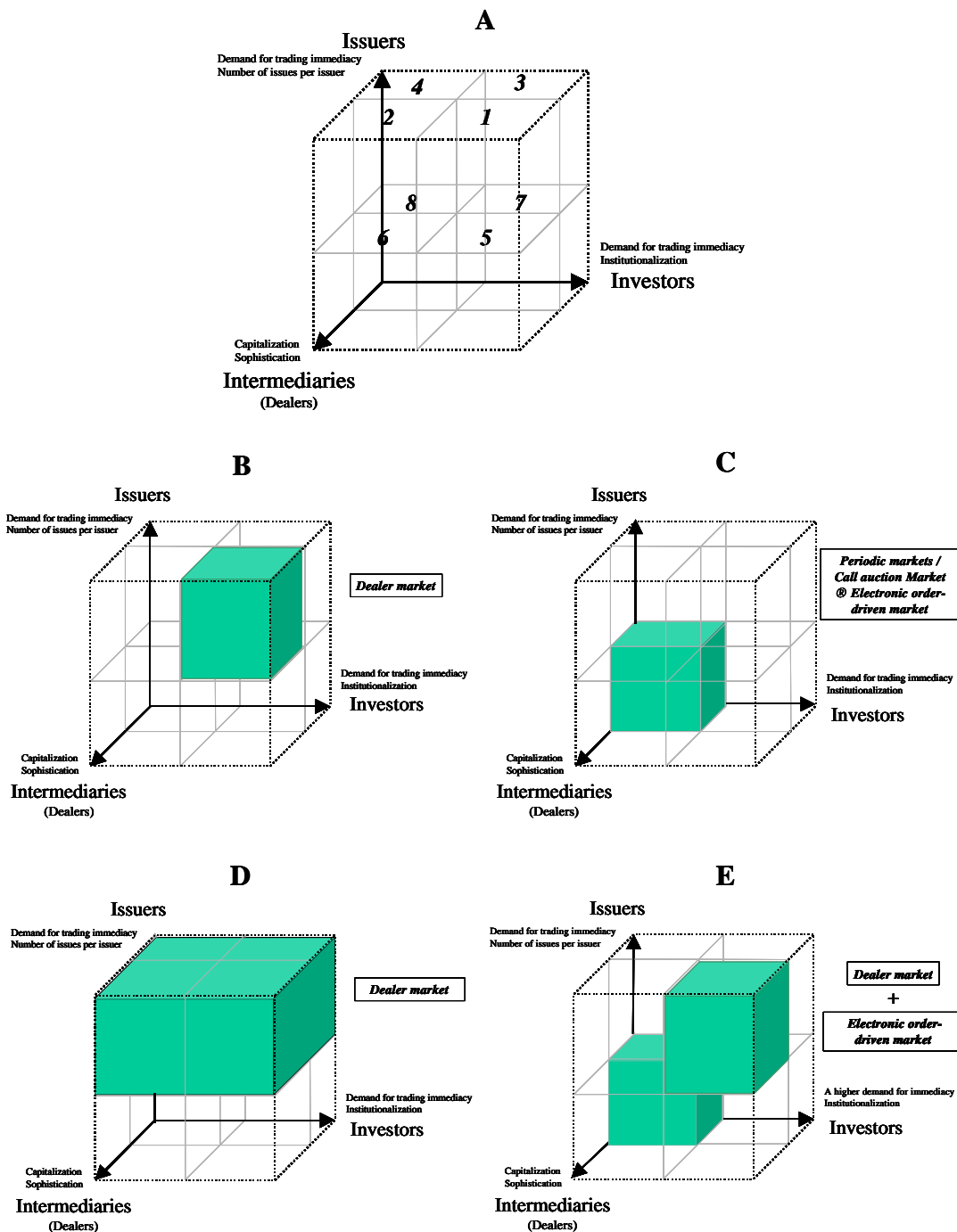
Sub-Space 8 represents a nascent market of either government or non-government debt securities (see Figure 7-C). In this kind of market, investors are scantily institutionalized and have a lesser demand for trading immediacy (patient or opportunistic traders), issuers also have a lesser demand for trading immediacy (patient or opportunistic traders) and a smaller number of issues, and market intermediaries are inadequately capitalized and sophisticated. A bond market in this sub-space may well start with a rudimentary form of market structure such as periodic markets²⁹ or a call auction market. As the market develops within the same sub-space, however, the growing trading volume, and/or the increasing needs for market efficiency and transparency, will likely cause the market to shift to an electronic order-driven market under today’s technological environments even within this sub-space.

Once the corporate bond market comes into play, the national market made up of the government and the corporate bond markets is expected to take the form of (i) a dealer market (a quote-driven market), or (ii) a dual market system of a dealer market and an electronic order-driven market.

After the highly liquid government bond market or the de facto benchmark major corporate issue market has established itself in the form of a dealer market, the corporate bond market will dovetail into the existing dealer market. Major corporate issues may be traded by virtue of market-making by selected dealers. Minor corporate bonds will be

²⁹ In periodic markets, trading occurs at periodic (discrete) intervals. At the specified time of the call auction, accumulated orders are executed in a multilateral transaction (batch) at a uniform (single) price that balance demand with supply. (Dattels, 1995)

Figure 7: Institutional Characteristics and Trading System



practically neglected for trading except in the primary market. As such, the national debt market will function as a dealer market under the institutional environments represented by Sub-Spaces 1 to 4 (see Figure 7-D). It is reasonable to assume that this market, though quote-driven, will be more and more electronically automated.

If the corporate bond market gets far larger, additional efforts to make the debt market more efficient may result in the polarization of the national debt market into Sub-Space 1 where highly liquid bonds are traded in a dealer market and Sub-Space 8 where relatively illiquid corporate bonds, probably together with subnational government bonds and privately placed bonds³⁰, are traded in an electronic order-driven market (see Figure 7-E). This dual market system will be a hybrid of the market structures suitable to the sets of institutional characteristics shown in Figures 7-B and 7-C.

In an economic situation where the institutional characteristics for the government or de facto benchmark bond market remain in Sub-Space 8, those for the corporate bond market will probably be much less favorable in the same sub-space. Corporate bonds will, in all likelihood, trade in an auction market only occasionally, if not at all.

³⁰ The distribution of privately place bonds is likely to be restricted.

7. A policy dilemma and an alternative solution

The macroeconomic constraints facing many developing countries do not permit the creation or maintenance of a large and liquid government bond market just to form a benchmark yield curve. One or more major corporate issuers may therefore emerge as a default benchmark issuer.

7.1. The dilemma

In developed economies, the most heavily traded government debt securities usually play the roll of benchmark. These securities may feature maturities ranging from as short as a week to as long as 30 years. They have the highest credit rating in the country, substantial liquidity, and an efficient and transparent issuing procedure. Their actual trade prices are used to calculate yields on the bonds, which in turn are used to construct the benchmark yield curve. This yield curve in turn allows for the pricing of other government or non-government bond issues of comparable maturities on both the primary and secondary markets.

There is no doubt that government bonds are the optimum instrument for the role of benchmark issue. Yet it is not clear that a developing country should issue a government bonds primarily with the aim of developing a benchmark yield curve.

Hong Kong and the Republic of Singapore began to actively issue government bonds in 1990 and 1985 respectively to develop benchmark yield curves and thus debt securities markets in general³¹. But this approach is likely not viable for developing countries in general, because both city-states undertook efforts to develop their debt securities markets after they had reached a formidable level of economic development.

A key macroeconomic policy question for developing countries is whether it is possible for an economy that lacks sustainable export power and domestic supply capacity to see a steady increase in government debt without a worsening of its current-account position or a depreciation of its currency³². If a country has substantial export power, and thus can keep its current account in surplus, it can generally afford to run fiscal deficits financed

³¹ In 1990, the Hong Kong Government launched its debt market development strategy by introducing a government debt program of Exchange Fund Bills and Notes, a robust and efficient clearing and settlement system, a market-making system to enhance secondary market liquidity, high quality, marketable debt issues by private sector, and tax concessions on profits arising from debt securities investments (Lee, 1999). The Republic of Singapore has been issuing her government bonds. However, most issues of the government bonds were, for many years, placed with its Central Provident Fund, the State contractual savings system. They were not intended to actively trade on the secondary market. The first attempt was made to create a risk-free yield curve with the largest ever issueance of the government bonds worth S\$30.3 billion in 1987. In early 1998, the Republic launched a series of financial sector reforms, including bond markets. Its bond market reforms included (i) increased government debt issues and announced a regular calendar of issues, (ii) issuance of 10-year Singapore Government Securities, and (iii) increased bond issues by its Statutory Boards. (The Monetary Authority of Singapore)

³² A macroeconomic identity that accounts for these relations is:

$$X + R - M \equiv S - I + T - G$$

where X = Export, R = Transfer, M = Import, S = Saving, T = Tax less domestic transfer and G = Government Spending.

by bonds. But without adequate domestic supply capacity, excessive government spending would likely cause uncontrollable inflation or would simply deteriorate the country's current-account position through inordinate demand for foreign goods and services. Either would likely put downward pressures on the country's currency, leading to external instability. Macroeconomic instability will certainly discourage investors, foreign and domestic alike, from investing in the country, especially on a long-term basis.

7.2. An alternative solution – an approximation of benchmark issues

Given the historical backgrounds of many developed countries, it has made sense to let government bond markets take the lead. Today, however, most developing countries have yet to gain sufficient export power, while many have adopted floating exchange rate regimes, therefore exposing themselves to the disciplines imposed by the international financial markets. Therefore, quite a few developing countries may not have the option of jump-starting their own debt markets massive issues of government bonds, as the developed countries of today did.

This again puts them in a chicken-and-egg situation, without the efficient government bond markets they need to develop, and without the level of development required for a functional government bond market.

How can a developing country get out of this dilemma? Government agency issues or major corporate issues may act as a substitute for government bonds with some limitations, forming a benchmark yield curve necessary for the development of a larger fixed income market.

Another possibility is substituting a “swap curve” for the benchmark yield curve of government bonds. Interest and currency swaps are usually quoted on the basis of average banks' implied rating of AA, and a swap curve is often employed as the benchmark for pricing corporate bonds in developed countries where the government bond benchmark yield curve is imperfect. However, this choice is barely practical in most developing countries, because few have an active, deep long-term credit market in place. Such a history is a definite prerequisite for a swap curve being used as a benchmark to price long-term bond issues, and the swap curve can be volatile in response to the funding and/or credit positions of a small number of swap-providing banks.

8. De facto benchmark issues

If a country's macroeconomic circumstances warrant such a policy choice, qualified major corporate bond issues can form an approximation of a benchmark. But if such an approach is used, likely candidates among major corporate issuers must be identified, while measures must be taken to ensure that the secondary market in such issues is liquid enough.

Most discussions on how to qualify major corporate issues for an approximation of benchmark issues are not limited to forming a benchmark. In fact, they are applicable to major corporate bond issues in general.

8.1. Likely candidates for major corporate issuers

Likely candidates for major corporate issuers in developing economies include:

- infrastructure and utility companies,
- housing finance companies, and,
- development finance companies (DFCs).

Common among these three kinds of companies is a tendency towards a regular, sizable and stable demand for long-term funds. They are therefore able to offer investors with a regular, sizable and stable supply of bonds of high quality and uniform characteristics through public offerings.

8.1.1. Infrastructure and utility companies

Infrastructure and utility companies include companies engaged in power generation and distribution, transportation (roads, railways, airlines, sea and airport facilities), telecommunications, water supply, and sanitation. Out of these, power and telecommunications companies are most likely candidates as major corporate issuers. Demand for infrastructure in developing countries is massive, both to boost productivity and improve standards of living. In addition, the overall quality of infrastructure in a country has been proven to be a key determinant in attracting foreign private investment flows. Meanwhile, development assistance for infrastructure development is on the decline, while many developing country governments are constrained in their ability to raise funds from the market as sovereigns.

More and more new projects are being left to the private sector. Private participation in infrastructure projects in developing countries increased at an average annual rate of 33.9% in real terms from 1990 to 1997. Even after a downfall of infrastructure investment in 1998 due to the Asian Financial Crisis in 1997, the real growth rate was 25.4% over the period from 1990 to 1998³³. The enormous rate of the demand growth is evident from these figures, as compared to the average real GDP growth rates of 6.4% for the developing countries over the period from 1990 to 1997³⁴. 10-20% of the project

³³ Calculated from The World Bank PPI Project Database (Roger, 1999)

³⁴ IMF, *International Financial Statistical Yearbook 1998*

costs is estimated to be locally financed by debt in developing countries³⁵.

Infrastructure and utility companies' operations are highly capital intensive and usually involve a large degree of financial leverage. And they are large, meaning that even if a financing round is sliced into a series of staggered bond issues, each is likely to be sizable. Since their funding demand is massive and continuous, they will tap the market on a regular basis. They generally cannot afford to be too opportunistic in terms of issue timing. Their funding needs range from short-term to long-term, while the investments in their production facilities are of a long-term nature. Their credit quality is generally high, because they are usually oligopolistic if not monopolistic, regulated and supervised, and often have direct or indirect support from their governments.

It should be noted that non- or limited-recourse financing, such as build-operate-transfer (BOT) or build-own-operate-transfer (BOOT), which are innovative and popular, does not fit in as a major corporate issue. This is because such financing is project-specific and stops short of satisfying the key criteria for being major corporate issues. Centralized financing and financing on a company's balance sheet are another two prerequisites.

8.1.2. Housing finance companies

Housing finance has the makings of the centerpiece of a fixed income market in a developing country, despite several technical hurdles. Housing needs are so basic to every individual that aggregate demand in any economy is huge. This is especially true in developing countries going through a rapid urbanization process. Housing investment is estimated to be 2% to 8% of GNP. House building creates an additional demand of 5% to 10% of GNP through its broad supporting industries. (World Bank, 1992; Lea 1999). Since a house or apartment usually constitutes a multiple of an individual's annual income, it inevitably induces a prospective homeowner to both borrow and save on a long-term basis. By collateralizing its bonds with the home mortgages underlying its loans, a housing finance company can issue bonds of high quality under a proper legal and regulatory framework.

Among several models available for housing finance, a centralized liquidity facility, which purchases house loans with recourse to their originators for its own portfolio and finances the purchase by issuing general obligation bonds of a simple bullet type, most probably works well as a major corporate issuer. It also appears suitable to a developing country with the housing finance industry in its initial stage (Lea 1998). There could be variations, depending on actual conditions that a country is in.

A strong legal framework and certain operation skills are required for the smooth functioning of a housing finance company on a national scale, even in a developing country. The needed legal framework includes a land registry system, an effective bankruptcy law, and efficient foreclosure procedures through a court system.

³⁵ According to the data on the 115 IFC-financed private infrastructure projects from 1967 to 1996 (Carter, 1996), the financial structure of the projects were as follows: debt:equity = 58%:42%; local:foreign =33%:67%. If the debt and equity shares were the same in the foreign and local shares, the local debt share would be 19.4% (58% x 33%). The actual shares of local debt (local commercial banks) and local equity in 1996 were 10% and 26%, respectively. The range of 10-20% was estimated from the 19.4% and 10% figures.

Standardized property appraisal, valuation procedures, mortgage loan underwriting and modern loan processing and servicing technologies are also needed.

8.1.3. Development finance companies

DFCs are by definition financial intermediaries specializing in long-term finance, primarily for industrial development. Compared with infrastructure and utility companies and housing finance companies, they are perhaps easier to shape into major corporate issuers.

In many developing countries, DFCs have been in operation for decades. Nonetheless, most have not been successful in their search for financial independence, and in general suffer from lackluster financial performance. This is not because they are fundamentally illegitimate, but because they have long been subjected to the policy mistakes and management failures of governments and multilateral development institutions. Learning from its own lending and investment activities on behalf of developing country DFCs, IFC identified several causes for their generally disappointing track records lowering their commercial standards for the sake of “development”, lack of cool-eyed assessment of their commercial viability, undue influence of governments on their lending, lack of their access to local currency long-term funding, and their dependence on external and/or government-guaranteed funding. (Berger, 1998).

IFC’s empirical analysis strongly indicates that DFCs need well-functioning corporate bond markets in order to play their initially intended roles as development institutions. High credit quality of their bond issues derives from commercial prudence in their lending operations.

8.2. Policy measures for *de facto* benchmark issues

De facto benchmark issues must have a liquid secondary market, optimally a market so deep and liquid that it can accommodate even the government’s open market operations at a reasonable cost to the government. Why does liquidity matter? It is because liquidity is an important determinant of the bid/ask spread of a bond (Chakravarty, 1999)³⁶. The more fluid the market is, the narrower the spread is and the smaller the market impact of any trade is. The commission or fee (if any) is also likely to be smaller. As a result, the total transaction cost³⁷ of a trade will be lower.

Various factors critically contributing to the liquidity of debt securities can be grouped into four categories: (i) the characteristics of a bond issue and its issuer, (ii) transaction modes, (iii) transaction environments, and (iv) portfolio investment demand.

Though all the four groups of factors are important for the liquidity of *de facto*

³⁶ The effect of the positions bought or sold on the price paid or received for a security. If an order lot is large relative to the actual liquidity, the order will be executed only at a price low or high enough to meet the required volume of demand for or supply of the security. The difference between the executed and initially quoted prices is called the market impact or price impact. Market impact is often the largest component of trading cost for a large transaction and for a large investor.

³⁷ The transaction costs include commissions and fees, market makers' bid/offer spreads and opportunity costs associated with not transacting when a trade is not executed at the initially quoted market price (the market impact).

benchmark issues, the fundamental source of liquidity is a critical mass of supply and demand. In that sense, “characteristics of a bond issue and its issuer” and “portfolio investment demand” matter first. “Transaction modes” and “transaction environments” consist of the microstructure of debt securities markets, which connects existing supply and demand but never generate the supply and the demand themselves.

8.2.1. Characteristics of a bond issue and its issuer

High credit quality

Credit quality, among others, is a key factor to the liquidity of a bond issue (Chakravarty, 1999). The salient characteristics of a bond issue to qualify as a *de facto* benchmark issue have been discussed above, by stipulating likely candidates for major corporate issuers. To be liquid on the secondary market, *de facto* benchmark issues must be of high credit quality, and their supply to the market must be regular, sizable, and stable. All these characteristics other than high credit quality are generally embedded in the three types of businesses that the potential benchmark issuers are engaged in, namely, infrastructure and utility, housing finance, and development finance. However, credit quality of a bond issue is issuer-specific (and more precisely issue-specific), but not industry-specific. It reflects creditworthiness of its issuer adjusted for the specific structure of individual issues.

Practically, *de facto* benchmark issues must enjoy the highest rating among local non-government bond issuers. A *de facto* benchmark corporate bond issue is different from a benchmark government bond issue in this respect. Government bonds denominated in the country’s currency have normally the least default risk in the country, because the government has ultimately taxation power and the ability to print currency to repay its debt, irrespective of its fiscal soundness.

What are the endogenous factors for the high credit quality of the issuer or its bond issues? The most fundamental is sustainable profitability of the issuer’s business operations. Thus, a first step is to build up and support the issuer’s highly credible financial position. In order to keep its operations sustainably profitable, the issuer must strictly adhere to market-based, commercially prudent operations, and must be free from “policy investments” that compromise its bottom line. Any one of the three likely candidates for major corporate issuers is susceptible to such commercially unjustifiable investments. This is more likely in the context of developing countries, because infrastructure-utility, housing and development finance directly affect the people’s welfare and involve substantial business interests. They are also usually given a monopolistic or quasi-monopolistic status and other preferences by the government.

Credit quality can be also exogenously reinforced in an implicit or explicit form.

Implicit forms of credit enhancement for fostering the benchmark issuer include government ownership and board representation. It would be preferable to limit government ownership or board representation to a minority, thus allowing issuers to maintain and develop a private sector culture. Such implicit forms of credit enhancement may be accompanied by additional arrangements including:

- a privileged status of the issuer to borrow directly from the government,

- participation in the monetary authority's open market operations,
- eligibility of the issues as an instrument for the open market operations and/or as a collateral for direct borrowing from the monetary authority,
- a preferential tax status of the issuer or its issues,
- exemption from the requirement of obtaining the central bank's approval, or
- exemption from normal securities registration requirements for the issuer's securities issuance,
- exemption from statutory reserve, or,
- recognition of the issues as liquid assets for the purpose of capital adequacy ratio calculation.

It should be noted that some of these preferential treatments for credit implications might adversely affect the liquidity of the securities. Examples are exemption from statutory reserve and recognition as liquidity assets for capital adequacy ratio purposes. This exemption will create demand for the bonds from banks that are subject to statutory reserve requirements or whose assets are subject to capital adequacy rules. The problem with this is that only banks will benefit from the preferential treatment and most of the issues will be sucked into banks' portfolio. This is how CAGAMAS bonds, which are issued under a highly successful housing finance scheme in Malaysia, failed to develop a liquid secondary market (Rhee, 1999).

Guarantees for bond issues from governments or multilateral institutions, or bond insurance from private sector insurers are explicit forms of credit enhancement. These guarantee schemes hardly work as credit enhancement tools for *de facto* benchmark issues. A potential threat posed by government guarantees is that an excessive governmental credit commitment would build up the government's contingent liabilities and consequently defeat the purpose of the government's fiscal consolidation. On the other hand, multilateral institutions' guarantees under the current scheme are too expensive to support a series of benchmark issues³⁸. Private bond insurance is also too costly.

The *de facto* benchmark bond issuer would be viewed as a "government-sponsored enterprise" (GSE) to the extent that it receives support with credit implications from the government. The protected nature of a GSE tends to pose some serious policy issues, potentially creating both a moral hazard and a direct threat to taxpayers. In order to minimize such risks, the following measures should be considered:

- keeping the issuer's preferential status at a minimal possible level;
- establishing a governmental oversight agency and/or legislative oversight;
- establishing regulatory standards such as minimal risk-based capital standards; and,

³⁸ IFC, as a multilateral institution, provided emerging market issuers with guarantees to encourage issuance of local currency, medium- and long-term bonds. "Since markets find IFC grantees expensive, this vehicle has been most successful in poorer, less stable markets where generous spreads can cover the costs of the guarantee." (Berger 1998).

- instituting “sunset provisions” to phase out the privileged status in the future.

Nevertheless, the mixed private/public nature of GSE status causes conflicts of interest on the part of the government as well as the issuer’s management. The tradeoff of public mission and costs to taxpayers should be well recognized, and a careful balance struck as the tradeoff changes over the time.

Issuer transparency

The second characteristic of a bond issue and its issuer that presumably contributes to a *de facto* benchmark issue’s liquidity is transparency of its issuer’s operations³⁹. This area of transparency is particularly important because the issuer is a corporation rather than the government. Not only should the issuer comply with disclosure requirements for public offering and listing of its bonds and shares, but also should more proactively make its operations know. This is especially important when foreign investors are part of liquidity source. Desirable transparency enhancement programs include:

- compliance with internationally accepted corporate governance rules, such as the OECD Principles of Corporate Governance⁴⁰;
- compliance with internationally accepted accounting principles;
- listing of its equity shares on a stock exchange in an international capital market;
- public relations through conventional mass media (press, radio and TV), international electronic media like Reuters and Bloomberg, and Internet websites;
- domestic as well as international regular investors relation programs⁴¹; and
- extensive roadshows on the occasions of its issuance of new securities.

These activities will help alleviate unnecessary skepticism about the issuer’s operations, increase the credibility of its management, and enhance investor confidence in its creditworthiness. It is worth noting that investors usually discount ambiguities surrounding an issuer or its securities by demanding a premium, which generally results in a higher rate of return, wider bid-ask price spreads and lower liquidity with respect to the issuer’s bonds.

Simplicity and consistency

The last characteristic contributing to a *de facto* benchmark issue’s liquidity is the simplicity and consistency of the issue’s obligations. Simplicity and consistency are

³⁹ There is a positive relationship between equity issuance in emerging markets and the level of accounting standards (Ayward, 1999). In developing markets, large firms become more leveraged as the stock market develops; and, stock trading on an exchange aggregates information about the prospect of the issuers and makes it publicly observable by the issuer’s creditors and investors (Demirgüç-Kunt, 1995). Legal and accounting reforms that strengthen creditor rights, contract enforcement, and accounting practices can boost financial intermediary development and thereby accelerate economic growth (Levine, Loayza & Beck, 1999).

⁴⁰ See Footnote 20.

⁴¹ Major companies with substantial global networks which render investor relations services are: Thomson Financial Investor Relations (New York), Hill and Knowlton (New York), Shandwick International (London), Burson-Marsteller (New York), The Carson Group (New York), to name but a few.

rewarded by investors, adding to an issues' liquidity. The simplest form of a bond is conventionally referred to as a "straight bond" or "plain vanilla." Detailed characteristics of a straight bond are as follows:

- no early redemption of the principal except for rare and material cases (a "bullet" maturity);
- redemption at par;
- conventionally accepted maturity terms, such as 1, 3, 5, 7 or 10 years;
- issue price at par or at a smallest possible premium or discount to par;
- constant fixed coupon rate or spread over an interest rate index like LIBOR⁴²;
- no change in seniority of bondholders' claim on the issuer's assets, and;
- uniform tax treatments for both interest and principal payments.

As will be discussed later, there are a wide variety of types of corporate bonds. Some are extremely sophisticated, using their complex structure to seize on a short-lived opportunity to aggressively achieve cost savings. But such should not be the case with a *de facto* benchmark issue, which above all needs liquidity.

8.2.2. Transaction modes

Transaction modes of bonds both on the primary and secondary markets are part of the microstructure of the country's overall debt market, and affect the liquidity of corporate bonds as well as market efficiency.

OTC markets versus exchanges

The majority of bonds are directly traded "over the counter" among dealers and institutional investors, rather than on an exchange, even if the securities are listed and the trades eventually recorded on the exchanges.

This is because bond trading involves certain negotiations before a trade can be executed. The investment parameters of mainstream, fixed-income institutional investors are generally too complex and diverse for exchange-based trading. This leads most institutional orders to the OTC market.

First of all, "security segmentation" is far greater in bonds than in stocks. There is a much greater number of bond issues outstanding in most markets than listed common stocks, since most bond issuers make multiple issues over the time. In picking up a particular issue of bonds or a particular portfolio of bonds for trade, the bond investor or trader essentially looks at the coupon, price, coupon payment dates, maturity, yield, liquidity, and credit risk, and often has flexibility in some of these parameters. In a typical case, the investor or trader has no strong reason to stick to a specific issue as long as his or her essential investment parameters are satisfied. Many different but comparable bonds are often interchangeable, subject to price adjustment for unsatisfied factors. They are "nearly perfect substitutes" for each other.

⁴² Floating rate bonds are excluded from "straight bonds" in some cases.

There are some countries where the statistics shows that the majority of publicly issued bonds are frequently traded on their exchanges. This may be misleading. It is not unusual that those trades recorded in the exchanges were mostly negotiated over the phone and then registered with the exchanges only for reporting and/or clearing purposes; and that very little order matching actually goes on in the exchanges.

Quote-driven markets versus order-driven markets

Bond transactions on the OTC market are quote-driven⁴³, while those on the exchange are usually order-driven. Automated trading systems for debt securities can be either quote-driven or order-driven. The execution costs for trading equity securities on the OTC market tend to be higher than on the quote-driven auction market, since dealer pricing is less transparent. It is inferred that the same tendency exists with respect to execution costs of debt securities (Chakravarty, 1999).

While this would appear to favor moving towards an exchange or a more cost-efficient automated trading system for a bond market, however, transactions on the OTC system are normally more economical in terms of the total transaction cost⁴⁴. The market impact of an institutional order, if executed in an order-driven market, would outweigh possible savings on an execution cost by a switchover from a quote-driven market. It is often the largest component of the total transaction cost. As long as dealers' flexibility in dealing with large and complex orders is of value to investors and provides much higher liquidity, the OTC market remains more cost-efficient to institutional investors.

However, it is reasonable to assume that the rapid advancement in technology will sooner or later make an order-driven automated trading system that is both intelligent as well as flexible, and that more and more complex orders will be automatically executable. This is more likely the case with highly homogeneous instruments like *de facto* benchmark bonds and other major corporate bonds. This trend will be contingent partly upon the degree of comprehensiveness and sophistication of the centralized clearance, settlement and depository systems for securities in a country.

Until then, one policy focus must be the effective regulation of the quote-driven or dealers' market, which while efficient is prone to unfairness or even collusion. Minor corporate bonds, if traded on the secondary market, are even more likely to suffer, as a smaller number of dealers will be willing to trade them.

Prevailing bid/offer spreads for trading fairly reflect the degree of market efficiency. An enhancement of pricing transparency has been empirically effective in narrowing bid/offer spreads. The following measures are suggested to enhance price transparency:

⁴³ "Quote-driven" means that the prices of securities are determined principally by bid/offer quotations that dealers in the securities make at their own risk. The dealers are "market makers" for the securities. A quote-driven market is also referred to as a "dealers' market." It includes NASDAQ in the United States, the London Stock Exchange, and the Bombay Stock Exchange in India. "Order-driven" means that bids, offers and prices (matched bid/offer prices) are determined principally by the terms of orders arriving at a central market place, and market makers such as "specialists" are secondary to the impact of orders arriving from the public. Most stock exchanges in the United States, most futures exchanges worldwide, the Tokyo Stock Exchange in Japan, the National Stock Exchange of India, are examples of order-driven markets.

⁴⁴ See Footnote 37.

- low entry barriers into bond dealership;
- reporting requirement for actual trading prices;
- establishment of an electronic database of trading prices;
- dissemination of trading price data to investors and the public by easy and affordable means; and,
- electronic surveillance of dealers' trading practices.

Such trading price reporting does not need to be on a real-time basis. Even *ex post facto* reporting such as a reporting at the end of the day will put significant pressure on dealers to be fair and honest to investors. The price reporting and trading practice surveillance systems may be linked to the centralized clearance, settlement and depository systems.

Dealers, market makers and primary dealers

A single firm can simultaneously be a dealer, a market maker and a primary dealer in the debt market. However, the three terms represent slightly different concepts. Generically, a dealer is a firm that professionally sells and buys securities for its own account, acting as a principal. A market maker is a dealer that is voluntarily or statutorily committed to making a market in specific securities. The primary dealer⁴⁵ is a market maker that is officially designated for government debt securities or, in this case, *de facto* benchmark issues.

The market maker's role as a liquidity provider in the bond market is well recognized. The trading volume of a cash securities market is considerably asymmetric: the volume swells and shrinks as the security prices rise and decline. By quoting bids or offers for specific debt securities against the prevailing market trend, it provides the specific debt securities with more liquidity and, as a result, makes their price movements orderly.

It is also known well that the dealer trades for its own account. It may bet simply on the direction of interest rate (bond price) movements, or on the widening or narrowing of different yield spreads. Or it may try to arbitrage anomalies in the market in a more sophisticated way.

It is important to realize that the dealer's role as an investment advisor and a portfolio assemble/dissembler for the investor offers a main source of liquidity in relatively developed debt markets. As has been discussed earlier, the investment needs of a debt investor, especially those of an institutional investor, are generally not issue-specific. Other parameters such as the coupon rate, price, coupon payment dates, maturity, yield, liquidity, and credit risk of bonds are more relevant to its investment decision. The institutional investor, unless betting on the direction of interest rate movements, usually trades to align its large portfolio to new cash flow needs or new market conditions.

The dealer advises the investor on the best ways to meet its investment objectives by discussing the current market conditions, and proposing investment strategies it believes best meet these objectives. The dealer then assembles a desired portfolio for the client by

⁴⁵ In Hong Kong's government bond market, for example, the registered dealer corresponds to the market maker in our terms here, and the market maker to the primary dealer.

picking up component bonds straight from its existing inventory or by buying them selectively from the market, and then sells the completed portfolio to the client. It finances its inventory using short-term funding including repurchase agreements (repos). When the investor wants to sell a sub-portfolio of specific bonds from its investment portfolio, the dealer's previous function is essentially reversed.

This role of the dealer in the debt market as an investment advisor and a portfolio assembler/dissembler is particularly important to generate liquidity in the corporate bond markets where a wide variety of bonds are outstanding.

These dealing activities impose a substantial financial burden on the dealer, and expose it to significant market risks. Therefore, the dealer must have sufficient capital to not only support its inventories but also cushion itself against fluctuations in the value of the bonds in its inventories. In order to mitigate these risks and lower its operating costs, the dealer also needs to possess highly sophisticated expertise in trading and risk management. It is desirable that financial tools like short-selling, interest or currency swaps, futures and options are available for the dealer's use.

The role of the market maker is relevant particularly in the context of primary issues of debt securities or their underwriting. Issuers, when appointing lead-underwriters (lead managers) for their bond issues, often demand their would-be lead-underwriters maintain "aftermarket trading" of their newly issued bonds. Thereby, the underwriters are required to make a market throughout the life of the issues, at least until they end up in the portfolios of investors likely to hold them to maturity.

Such a role is crucial to the issuer, because issuers whose bonds have a liquid secondary market will likely be able to achieve lower financing costs for their next issues.

The primary dealers are the designated group of government debt securities distributors or, in our case, *de facto* benchmark corporate debt securities distributors, which maintain a certain threshold of activity in the secondary market for the securities. They are usually among the best-capitalized securities dealers in the market, and are privileged to exclusively participate in auctions of the benchmark issuer's debt securities. No other dealers and investors are entitled to bid for the newly issued debt securities. As will be discussed in the following section, the benchmark issuer should issue its debt securities through auctions rather than underwritten placements to articulately reflect the actual demand and supply relationship of debt capital in the economy. However, a pure form of an auction, that is one open to the public, will subject the benchmark issuer to uncertainties not only in the price of the new securities but also in terms of volume. If the predetermined auction volume is maintained, the price will likely get more volatile. This is because it reflects only the snapshot relationship of demand and supply at the point of the auction. The ability of the well-capitalized primary dealers to hold part of the auctioned-off securities in their inventories and sell them off gradually in the secondary market smoothes out the demand and supply relationship over the intervals between regular auctions, and thus makes the price and/or volume less volatile.

It follows from this that the liquidity-providing function of dealers including market makers and primary dealers will be significantly constrained without the following conditions:

- a highly liquid money market, including a repo market;

- an upward-sloping yield curve;
- low transaction costs;
- risk/return-tradeoff-conscious institutional investors;
- availability of risk management tools;
- the ability to sell short; and,
- trading and risk management expertise.

Some developing countries have already instituted the above-described system of market makers or primary dealers. However, not all of them have seen market makers assist in the deepening of market liquidity (OICV-IOSCO, 1999)⁴⁶. The influence of market makers is disappointing in some countries probably because their markets lack some of the above conditions.

Auctions versus underwriting for new issues

Issuance of the *de facto* benchmark corporate bonds into the primary market on an auction basis is likely to be more appropriate for efficient pricing of new issues than syndicated underwriting. The latter is used where there is some uncertainty about the complete placement of bonds to be issued, underwriters in the syndication agreeing as part of their fee to take bonds unsold to investors for their accounts. Most corporate bonds are underwritten at an offering price that underwriters determine in reference to the actual yield of a benchmark issue of a comparable maturity, and other factors such as the credit risk of the issuer and the prevailing market conditions.

Since benchmark yields are inevitably referred to for the pricing of all other issues, benchmark issues cannot be benchmarks in a strict sense unless they are freely auctioned. However, an issuer with unchallenged authority, like the government, the central bank or the *de facto* benchmark issuer, can be tempted to have their issues underwritten by syndicates and/or to force captive investors to buy the bonds for their portfolios. This is likely to occur when the market of the benchmark issues is still in its infancy, or when the benchmark issuer attempts to issue more bonds than the market can absorb. The following dangers are associated with underwritten placements of benchmark issues:

- The benchmark yield curve will be distorted to an artificially lower level or will not be positively sloped;
- Capital losses arising from the sale of seasoned benchmark bonds prevent initial investors from selling them in the secondary market;
- A negative carry or an unreasonably thin spread between long- and short-term interest rates due to artificially lower yields on long-term bonds discourages market makers from carrying an inventory of the bonds for resale in the secondary market;
- The development of a liquid secondary market will be hindered;

⁴⁶ The International Organization of Securities Commissions conducted a survey on the influence of market makers in the creation of liquidity by sending a questionnaire to all its emerging market committee members. Replies were received from 18 jurisdictions.

- The accumulating balance of benchmark bonds underwritten or bought at an off-the-market yield will crowd out non-benchmark issuers from the debt market;
- Rational and efficient reallocation of the country's capital will be impeded;
- The country's major financial institutions, many of which are funded with short-term liabilities such as deposits, become unbearably vulnerable to external shocks; and,
- The country's financial system is left vulnerable to systemic shocks.

In order to reduce its financing costs in the long run, the *de facto* benchmark issuer is suggested to undertake auctions of its bond issues in the following manners:

- The bonds are issued on a regular basis by having a stable schedule for auctioning bonds with specific maturities, with the specifics of each auction announced publicly and well in advance;
- Auction volumes should be kept as stable as possible, and any unusual amounts, and the rationale for them, should be known to the market well in advance;
- The auction process should be designed to invite bids from as broad a spectrum of investors as possible (*e.g.* participation of foreign investors is preferable, and noncompetitive bids may be permitted to tap non-professional investors' demand); and,
- Detailed auction results should be promptly announced to the public.

8.2.3. Transaction environments

Trading environments for debt securities should be investor-friendly in order to enhance liquidity in the secondary market. Most issues involved in creating investor-friendly trading environments are common between government and corporate debt securities. They are summarized in Table 10.

There can be also tradeoffs between independently appropriate policy measures. For instance, the entry barriers into dealership should be kept low to encourage competition in the market. But to protect investors and the market from systemic risks, dealers must employ competent, qualified and ethical professionals, and have a strong capital base. A balance should be struck, and the balance may shift over time.

Among the policy measures stated above, the introduction of short-selling and futures and options often face strong resistance from policymakers and/or existing market participants, even though they are an integral part of an efficient debt market. More than just risk-management mechanisms or tools for speculation, they are essential "price discovery" tools. In a market without these means, market participants can make profits only by buying low and then selling high, and no market participants can initiate paired transactions by selling high and then buying low or be economically motivated to correct the overpricing of individual securities. As a result,

- one or two specific issues will be overpriced and the rest oversold;
- liquidity will disproportionately concentrate on the specific issues;

Table 10: Measures for Trading Environments Improvement

| Objectives | Specific measures |
|--|---|
| Reduction of transaction costs | <ul style="list-style-type: none"> • Lower entry barriers into dealership (more competition) • An electronic bond information dissemination system • Abolition of or exemption from the withholding tax and the stamp duty • Book-entry, registered form of bond (dematerializaion) |
| Enhancement of reliability of transactions | <ul style="list-style-type: none"> • Book-entry, registered form of bond (dematerializaion) • A single automated depository, clearing and settlement system • A single combined system for cash and securities settlement |
| Avoidance of market segmentation or fragmentation | <ul style="list-style-type: none"> • Harmonization of tax treatments across provincial states/ subdivisions and investor categories • Reduction of investment restrictions on different categories of institutional investors |
| Efficient and rational price discovery mechanism | <ul style="list-style-type: none"> • Short-selling • Securities lending • Futures and options • Interest rate and currency swap |
| Availability of risk management tools | <ul style="list-style-type: none"> • Short-selling • Securities lending • Futures and options • Interest rate and currency swap |
| Ease of inventory funding | <ul style="list-style-type: none"> • Money market including a repo market • Upward-sloping yield curve • Dealers' access to the discount window • A group of dealers with a strong capital base |
| Generation of demand for debt securities | <ul style="list-style-type: none"> • Institutional investors • Capital account convertibility |
| Enhancement of investors' confidence and trust in the market | <ul style="list-style-type: none"> • Well-coded regulations • Competent, corruption-free and well-motivated regulators • Enforcement ability of regulators |

- the benchmark yield curve will be intolerably distorted;
- the market's ability to discover the right prices⁴⁷ of individual debt securities will be crippled; and,
- more market participants will be financially damaged to a greater extent.

The ability of the debt market to act as an efficient and rational mechanism for capital reallocation will be significantly defeated.

The resistance to short-selling, futures and other financial instruments is not necessarily baseless. In fact, fixed-income futures and options markets are extremely difficult to develop in the developing country environments. However, short-selling facilities are

⁴⁷ They will conceivably be closer to their intrinsic values.

much more feasible to be instituted. Their benefits are too important to forego. Policymakers should rather pay more attentions and devote more resources to preventive measures against risks associated with them.

8.2.4. Portfolio investment demand

Institutional investors such as pension funds, mutual funds, insurance companies and foreign portfolio investors are unquestionably a key to the development of a debt market and to the mobilizing of long-term capital. But while they invest in corporate bonds they are unlikely to trade them in the secondary market. This is even more true of minor corporate bonds.

As we saw earlier, institutional investors in general do not need to keep their entire investment portfolios liquid at all times, the cash that flows into and out of the portfolio generally being marginal when compared to the investor's entire holdings. Most institutions will therefore invest a substantial amount of funds in minor, higher-yielding corporate bonds at the expense of liquidity, and hold them to maturity.

Demographic trends in developing economies tend to weaken investment disciplines. New money flows into investment portfolios under the management of institutional investors in developing countries where population and per capita income are growing. Moreover, the populations are younger, which translates into less demand for cash outflows from the portfolios. These demographic trends common to most developing economies help mask the true investment performance of the portfolios, and have led institutional investor to forego the aggressive management of the larger, illiquid portions of their portfolios.

In order to alleviate this situation, the following policy measures should be considered:

- Privatization of the asset management industry, thereby introducing competition into the industry;
- Making the performance of institutional investors and/or their fund managers transparent to the public; and,
- Setting up performance measures controlling for demographic factors.

Bibliography

- Adler, Michael, 1999, "Emerging Market Investment: Problems and Prospects", in *Financial Markets & Development*, edited by Alison Harwood and others, Brookings Institution Press, Washington, D.C.
- Aylward, Anthony, and Jack Glen, 1999, "Primary Securities Markets: Cross Country Findings", Discussion Paper Number 39, International Finance Corporation
- Barry, John S., 1996, "Why Congress Should Privatize Fannie Mae and Freddie Mac -- A Special Report to the House Banking and Financial Services Committee", Committee Brief, The Heritage Foundation
- Beers, David T., and Marie Cavanaugh, 1998, "Sovereign Credit Ratings: A Premier", Standard & Poor's
- Berger, Teresa C., 1998, "Financial Institutions" (Lessons of Experience; No. 6), International Finance Corporation
- Bossone, Biagio, 1998, "Circuit theory of finance and the role of Incentives in Financial Sector Reform", Policy Research Working Paper 2026, The World Bank
- Chakravarty, Sugato, and Asani Sarkar, 1999, "Liquidity in U.S. Fixed Income markets: A Comparison of the Bid-Ask Spread in Corporate, Government and Municipal Bond Markets"
- Chiquier, Loïc, 1999, "Secondary Mortgage Facility: Case Study of Cagamas Berhad in Malaysia", Study for the World Bank Capital Markets Development Department
- Dattels, Peter, 1995, "The Microstructure of Government Securities Markets", IMF Working Paper WP/95/117, International Monetary Fund
- Demirgüç-Kunt, Asli, and Vojilav Maksimovic, 1995, "Stock Market Development and Firm Financing choices", Policy Research Paper 1461, The World Bank
- Hakansson, Nils H., 1999, "The Role of a Corporate Bond Market in an Economy --- and in Avoiding Crises", Working Papers RPF-287, Institute of Business and Economic Research (IBER), University of California at Berkeley
- Gatti, James F. and Ronald W. Spahr, The year unknown, "The Burden of Government-sponsored Enterprises: The Case of the Federal Home Loan Mortgage Corporation", CATO, http://www2.thebooktree.com/usp/lr/articles/gov_enterprise.htm
- Hong, Gwangheon, and Arthur Warga, 1998, "An Empirical Study of Bond Market Transactions", The Bond Markets Association
- Inoue, Hiroshi, 1999, "G7 Shokoku no Kokusai Shijou --- Shijou Ryudousei no Kantan kara Mita Nihon Shijou no Tokuchouten", Working Paper Series 99-J-2, The Bank of Japan
- Klock, Mark, and D. Timothy McCormick, 1998, "The Impact of Market Maker Competition o Nasdaq Spreads", NASD Working Paper 98-04, National Association of Securities Dealers
- Kriz, John, Devid Levey, and Vincent Truglia, 1998, "Rating Methodology: Government-Sponsored Enterprises (GSEs)", *Global Credit Research*, Moody's Investors Service

- Lea, Michael J, 1998, "Models of Secondary Mortgage Market Development", in *New Directions in Asian Housing Finance: Linking capital markets and housing finance*, edited by Masakazu Watanabe, International Finance Corporation, Washington, D.C.
- Lea, Michael J, and Loïc Chiquier, 1999, "Providing Long-term Financing for Housing: The Role of Secondary Markets", United Nations Development Programme
- Lee, Esmond K. Y., 1999, "Debt Market Development in Hong Kong", Presentation to The World Bank Group
- Levine, Ross, and Sara Zervos, 1996, "Stock Market Development and Long-Run Growth", Policy Research Paper 1582, The World Bank
- Miyanoya, Atsushi, Hitotaka Inoue, and Hideaki Higo, 1999, "Nihon no Kokusai Shijou no Microstructure to Shiou Ryuudousei", Working Paper Series 99-J-1, The Bank of Japan
- Orabutt, Chuck J., 1999, "A New Framework for Capital Adequacy --- Preliminary Comments", (written in response to the BIS proposal on capital adequacy guidelines published in May 1999), Duff & Phelps Credit Rating Co.
- OICV-IOSCO, 1999, "The Influence of Market Makers in the Creation of Liquidity", Report by the Emerging Markets Committee of the International Organization of Securities Commissions
- Pinkers, Kenneth, 1997, "The Function of Ratings In Capital Markets", *Global Credit Research*, Moody's Investors Service
- Rhee, S. Gho, 1998, Institutional Impediments to the Development of Fixed-Income Securities markets: An Asian Perspective", OECD/World Bank Workshop on the Development Of Fixed-Income Securities Markets in Emerging Market Economies
- Schinasi, Garry J., and R. Todd Smith, 1998, "Fixed-Income Markets in the United States, Europe, and Japan: Some Lessons for Emerging Markets", IMF Working Paper WP/98/173, International Monetary Fund
- Shah, Pradip, 1991, "The CRISIL Experience: Building a Rating Agency in a Developing Country", a presentation note at the US SEC's International Institute for Securities Market Development in Washington, DC, The Credit Rating Information Services of India Limited
- Shah, Pradip, 1993, "Introducing and Establishing a Credit Rating System: The Case Study of India", a presentation note at the Asian Credit Rating Conference in Denpasar, Bali, Indonesia, The Credit Rating Information Services of India Limited
- Taylor, Peter, 2000, "Review of IFC Investments in Credit Rating Agencies", IFC Working Document
- U.S. Securities and Exchange Commission, 1997, "Report to Congress: The Impact of Recent Technological Advances on the Securities Markets"
- Wong, Nancy L., 1996, "Easing down the merit-disclosure continuum: a case study of Malaysia and Taiwan", *Law and Policy in International Business*, Fall/1996

5/10/01