

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, 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 year<sup>14</sup>. 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.

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<sup>14</sup> 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.

economically for an issuer to make itself known, even globally. An issuer can now instantaneously disseminate the contents of its annual reports, including financial 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 house<sup>22</sup>.

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

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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.

<sup>22</sup> 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.

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 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 fragmentation<sup>23</sup> 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 experience<sup>24</sup> 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 services<sup>25</sup> 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.

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<sup>23</sup> 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.

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

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



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 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 markets<sup>26</sup>.

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

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<sup>26</sup> 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.

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.

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 issuer<sup>27</sup>. 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,

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<sup>27</sup> 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.

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 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 registration<sup>28</sup>.

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

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<sup>28</sup> 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.

- 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.

#### 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 markets<sup>29</sup> or a call auction market. As the market develops within the same sub-space, however, the growing trading volume, and/or the

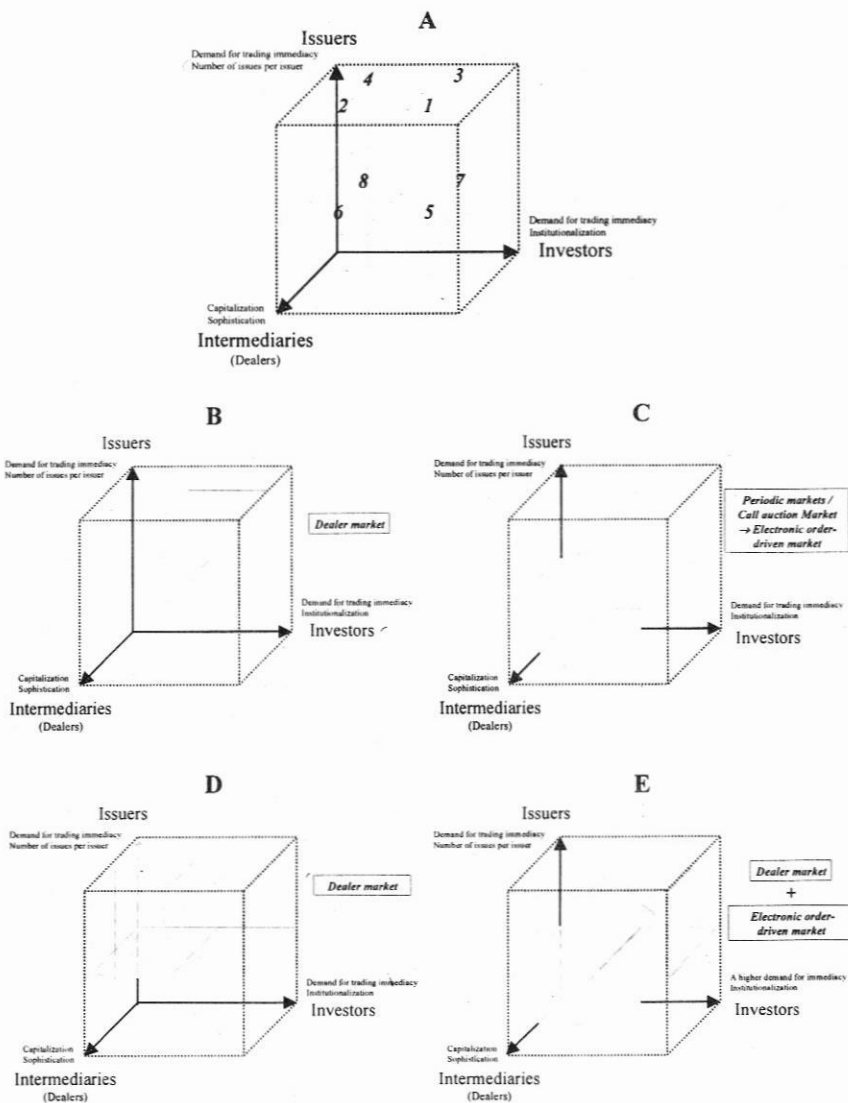
<sup>29</sup> In periodic markets, trading occurs at periodic (discrete) intervals. At the specified time of the call auction, accumulated orders are executed in a multilateral transaction (batch) at a uniform (single) price that balance demand with supply. (Dattels, 1995)



increasing needs for market efficiency and transparency will likely cause the market to

**Figure 7: Institutional Characteristics and Trading System**

S  
v  
C  
g  
r  
e  
A  
c  
t  
F  
r  
t  
c



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 bonds<sup>30</sup>, 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.

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<sup>30</sup> 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 general<sup>31</sup>. 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 currency<sup>32</sup>. If a country has substantial export power, and thus can

<sup>31</sup> 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 issuance 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)

<sup>32</sup> A macroeconomic identity that accounts for these relations is:

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

keep its current account in surplus, it can generally afford to run fiscal deficits financed 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 1998<sup>33</sup>. 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

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

the developing countries over the period from 1990 to 1997<sup>34</sup>. 10-20% of the project costs is estimated to be locally financed by debt in developing countries<sup>35</sup>.

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.

<sup>34</sup> IMF, *International Financial Statistical Yearbook 1998*

<sup>35</sup> 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.

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. 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)<sup>36</sup>. 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

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<sup>36</sup> 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.



total transaction cost<sup>37</sup> 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* 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

<sup>37</sup> 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).

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 issues<sup>38</sup>. Private bond insurance is also too costly:

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<sup>38</sup> 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).

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,
- 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 operations<sup>39</sup>. 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 Governance<sup>40</sup>;
- 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 programs<sup>41</sup>; and

<sup>39</sup> 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).

<sup>40</sup> See Footnote 20.

- 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 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 LIBOR<sup>42</sup>;
- 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

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<sup>41</sup> 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.

<sup>42</sup> Floating rate bonds are excluded from "straight bonds" in some cases.

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.

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-driven<sup>43</sup>, 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 cost<sup>44</sup>. 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

<sup>43</sup> "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.

<sup>44</sup> See Footnote 37.

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:

- 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 dealer<sup>45</sup> 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

<sup>45</sup> 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.

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 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)<sup>46</sup>. The influence of market markets 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

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<sup>46</sup> 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.

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;
- 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;
- the benchmark yield curve will be intolerably distorted;

**Table 10: Measures for Trading Environments Improvement**

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

- the market's ability to discover the right prices<sup>47</sup> 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 much more feasible to be instituted. Their benefits are too important to forego.

<sup>47</sup> They will conceivably be closer to their intrinsic values.

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.

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