

THE DEVELOPMENT OF CORPORATE BOND MARKETS IN EMERGING MARKET COUNTRIES



The Emerging Markets Committee of the
International Organization of Securities Commissions

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Chapter 1 : Objective of this paper

This paper was prepared under a mandate from the Emerging Markets Committee (EMC) of the International Organization of Securities Commissions (IOSCO), given to the EMC Working Group on Secondary Market Regulation (Working Group 2), to examine issues concerning the development of domestic bond markets in emerging market jurisdictions. The mandate was driven by several considerations. First, the financial and economic events during 1997–98 drew attention to the over-dependence of several EMC member economies on their respective domestic banking systems as a source of financing. In many cases, this implied the need for broader and deeper capital markets, in particular, the further development of their domestic bond markets.

A second consideration is that information on bond markets in EMC jurisdictions is not as readily available as information on other market segments, notably the equity market. There is, therefore, also substantial scope for compiling fundamental information about the current state of bond market development across these jurisdictions. In the last decade or so, major structural changes have taken place in the organizational and regulatory framework of domestic bond markets in many EMC jurisdictions. The mandate seeks to collate this information and provide a brief analysis with regards to the overall development of domestic bond markets in these jurisdictions.

A third, and related, consideration is that there is substantial scope for further research on less developed bond markets, especially in terms of issues raised by the experience of EMC jurisdictions themselves.¹ Among other things, the mandate will identify current impediments in respective EMC jurisdictions and discuss their implications on bond market development.

A project team comprising selected members of WG2 was formed and a survey was conducted of all EMC member countries in relation to the issues above. A questionnaire was sent out to all EMC members, of which 22 responded. The survey findings were consolidated, reviewed and analyzed by the project team for jurisdictional trends and other relationships, as well as for broader issues and implications concerning the development of corporate bond markets in EMC member countries.

This paper draws extensively from the survey, which was able to provide not only a comprehensive set of quantitative information but also insightful qualitative information by tapping knowledge and recording observations directly from regulatory authorities themselves. A key strength of this paper therefore is that it contains valuable first-hand

¹ The prevailing literature has tended to focus on the development and practices extant in more developed economies, such as the United States and Japan. Bond market literature on the emerging economies, on the other hand, is scarce in comparison, given the relative underdevelopment of bond markets in these economies, both against those of industrialised countries and against other forms of domestic financing.

information and direct insights on issues of concern to bond market regulators in EMC jurisdictions. It is organized as follows. Chapter 2 discusses the motivational factors behind the development of domestic bond markets. Chapter 3 describes the survey approach and analyses the results and findings in some detail. Chapter 4 leads a discussion on the issues highlighted by the survey findings and their implications for the development of emerging market bond markets.

Chapter 2 : Rationale for developing a domestic bond market

Since the Asian financial crisis of 1997-98, attention has increasingly focused on the relative roles of the banking sector and of the capital market in developing economies. In many instances, the domestic bond market, where it exists, is generally under-developed, in both breadth and depth, compared to the banking system and the equity market. In light of the experience of the crisis, many commentators and studies have made a case for developing the domestic bond market as an alternative source of debt financing not only in the crisis-hit economies, but for all emerging markets where general shortcomings are observed in terms of the variety of debt financing.² The following is a summary of some of the main arguments that have been put forward.³

2.1 An alternative source of domestic debt finance

It has been argued that over-reliance on bank lending for debt financing exposes an economy to the risk of a failure in the banking system.⁴ The implication is that a banking crisis can therefore affect economic activity suddenly and adversely because companies would find themselves credit-constrained and be forced to abandon investment spending, culminating in a reduction of aggregate demand through the multiplier effect.

The presence of an active and efficient domestic capital market, in particular, the bond market, would give corporations an alternative means of raising debt capital in the event that banks were unable to do so, thus ameliorating any potential adverse effect that a bank-credit crunch may have on the economy. It is also argued that a bond market can help accelerate the resolution of a banking crisis, by allowing the banking system to re-capitalize its balance sheets through securitization (i.e. the issuance of bonds backed by non-performing loans).

² See “The Case of the Missing Market: The Bond Market and Why It Matters for Financial Development” by Richard J. Herring and Natporn Chaturisritak, ADB Institute Working Paper, July 2000.

³ The discussion is not meant to suggest that bond markets are a panacea for debt financing. For instance bank loan financing is arguably more appropriate for the effective financing of small and medium enterprises (SMEs). Because credit information on SMEs is highly idiosyncratic, the non-negotiable, standardized and inflexible terms common to most bond contracts may be inadequate to finance such ventures. Hence, the financing of SMEs would likely still be done via bank loans, a financing system based on mutual trust generated through repetitive transactions.

⁴ Ibid.

2.2 Lower cost of capital

Companies can incur greater financing costs through bank loans than through bond financing. Banks charge administrative costs that arise from arranging loans, in processing information about borrowers and monitoring them.

A domestic corporate bond market helps corporations reduce their financing costs in two ways. First, it allows corporations, through bond issuance, to borrow directly from investors, bypassing the major intermediary role of a commercial bank (a process known as disintermediation). Although corporations still go through underwriters, brokers and dealers to raise debt finance, competition among these intermediaries is more intense compared to that between commercial banks, pushing down their intermediation costs. As a result, borrowing firms enjoy a lower cost of debt financing.

Corporate bond markets can help borrowers reduce their financing costs in two ways. First, they facilitate bank disintermediation by allowing direct access to investors, thus removing the “middleman” and related costs. Second, by issuing corporate bonds, firms may tailor their asset and liability profiles to reduce the risk of maturity and currency mismatch on their balance sheet, thus reducing the overall cost of capital.

2.3 Reduced risks associated with maturity and currency mismatch

The problem of information asymmetry between lenders and borrowers result in banks relying on short-term credit to limit the time opportunistic borrowers can exploit lenders without being in default. Consequently, corporate borrowers that undertake long-term investment commitments⁵ may face the difficulty of matching the long-term cash inflows from their investment assets against the short-term cash outflows from bank loans in a bank-reliant financial system. This maturity mismatch may threaten corporate solvency in the event that long-term cash inflows from investment assets do not materialize simultaneously to offset the short-term cash obligations arising from bank loans. The desire to avoid this maturity mismatch may encourage firms to stay away from long-term investments or entrepreneurial ventures that have a long-term payoff. In the long run, this may result in a decline in the economy’s productive capacity, since most capital investments are of a long-term nature.

Corporate bond markets allow firms to mitigate this problem.⁶ For instance, if a firm observes a lengthening of the maturity of its assets, it may issue corporate bonds with

⁵ This is particularly relevant in emerging markets where such investments in infrastructure, public utilities, housing and capital-intensive industries are paramount for economic development.

⁶ Banks face the problem of information asymmetry where they may not fully possess all the information necessary to evaluate the long-term viability of a loan. As a result, banks rely on short-term credit to limit the time opportunistic borrowers can exploit its lenders without being in default. Corporate borrowers, on the other hand, usually undertake long-term investment commitments.

similar or longer maturities and use the issuance proceeds to retire shorter maturity debt, such as short-term bank loans. Similarly, the existence of a domestic corporate bond market allows domestic firms who have revenues denominated predominantly in domestic currency to issue local currency bonds, thus alleviating the currency mismatch problem by matching their currencies of their cash inflows and cash outflows.⁷

2.4 Broadening of capital markets

Without a well-functioning bond market, savers face a relatively limited array of asset choices and as a result they are likely to hold substitute assets such as bank deposits, and to a lesser extent, equity. In extreme circumstances, savers may also acquire more non-financial assets such as property that ultimately reduce the supply of savings that can be mobilized for productive investment. In the long run, this could result in a lower level of economic welfare.

An active and efficient bond market would broaden capital markets by offering savers opportunities to invest in a wider range of assets. This allows them to meet their risk profiles better and to make more optimal asset allocation decisions. In addition, the presence of a viable bond market allows financial institutions to better manage the maturity structure of their balance sheets, especially those with long-term liabilities such as life insurance companies and pension funds, which may otherwise be forced to charge their policyholders a higher premium to offset risks arising from maturity mismatch.

2.5 Efficient pricing of credit risk

In economies without a bond market, bank-determined interest rates may not be competitively determined and thus may not reflect the true opportunity cost of capital. For instance, banks may collude to set interest rates or may fix them at government-mandated levels. It has also been argued that banks may not assess credit risk as well as bond investors.⁸ The lack of a clear measure of the opportunity cost of capital may result in firms inefficiently allocating capital, leading to a reduction in economic welfare in the long term.

The existence of a well-functioning bond market can lead to the efficient pricing of credit risk since expectations of all bond market participants are incorporated into bond prices. In other words, by promoting the use of price signals, a developed bond market ensures

⁷ To illustrate, if a firm has most of its revenues denominated in local currency and if most of its borrowing is in US dollars; a depreciation of the domestic currency against the dollar would threaten its solvency. This is because the firm's local currency denominated revenues may not be able to offset its increased domestic currency outflows necessary to service its ballooning US dollar bond obligation.

⁸See "The Role of Corporate Bond Markets in an Economy – and in Avoiding Crises" by Nils H. Hakansson, University of California, Berkeley, June 1998, which forwards this argument, citing the example of banking institutions' generous credit extension to Long Term Capital Management (LTCM), the highly leveraged hedge fund that collapsed in 1998.

that firms are guided by an accurate cost of capital in making investment decisions, contributing to an efficient allocation of capital in the economy

2.6 Promotes financial stability

As stated earlier, in the absence of a corporate bond market, a significant proportion of debt funding for corporations would come from the banking sector. By extending loans to corporations, however, banking institutions assume a considerable amount of risk, mainly due to the maturity mismatch between liquid short-term assets (i.e. deposits, which can be withdrawn on demand) and relatively illiquid long-term assets (i.e. loans). Banks cannot transfer credit risk to depositors and this difficulty is further compounded by the highly idiosyncratic and asymmetric information banks possess about borrowers. In addition, in emerging markets, because a few banks account for the bulk of lending activity, there is a concentration of credit risk within the banking sector, and this leads to an increased level of systemic risk in an economy that heavily relies on bank loan financing.⁹

A bond market can promote financial stability by contributing to a more diverse financial system. For instance, since a large number of public investors are generally involved in taking up new issues of corporate bonds, the burden of credit risks in the economy can be spread among the various investors, thus reducing the credit risks borne by the banking sector.

⁹ See “The Role of Corporate Bond Markets in an Economy – and in Avoiding Crises” by Nils H. Hakansson, University of California, Berkeley, June 1998.

Chapter 3 : The survey

3.1 Background

A comprehensive questionnaire was sent out to all members of the Emerging Markets Committee to facilitate the examination of issues concerning the development of domestic bond markets in emerging market jurisdictions. 22 jurisdictions, from a diversity of geographical and economic backgrounds, submitted detailed responses.¹⁰

The questionnaire formed the basis of a survey of facts and issues for the purpose of this paper, although where necessary for the preparation of this report, responses were supplemented by data, including some market statistics, from additional sources, subject to verification by the survey respondents.¹¹ Questions covered the following areas:

- a) **Overview of financial structures in the economy, focusing on domestic bond market**, including: relative amounts of debt securities (both public and private) outstanding relative to bank loans and equity markets within the economy; comparison of the total amount of debt securities issued on-shore and off-shore; and a general breakdown of the proportions of different asset classes held by savers.
- b) **Regulatory structures and issues pertaining to the bond market**, including a review of regulatory impediments (including tax issues).
- c) **Benchmark securities and yield curves**, including: the existence, characteristics and issuance process of such securities and possible alternatives; and the role of government bond markets.
- d) **Macroeconomic environment**, including the issues concerning bond market development and macroeconomic policy, as well as the use of policy tools.
- e) **Secondary markets and trading activity** in corporate bonds as well as in benchmark securities, with a focus on issues concerning market liquidity, including: derivative instruments, trading venues, market access, fiscal and other factors that affect liquidity.
- f) **Demand and supply conditions**, including issuer and investor profiles, preferred types of bonds, issuing processes and mechanisms available to reduce the cost of issuance, and external credit assessment mechanisms, such as credit ratings and bank guarantees.

¹⁰ Jurisdictions that responded were Argentina, Brazil, Bangladesh, Chinese Taipei, El Salvador, Hungary, India, Indonesia, Kenya, Korea, Lithuania, Malaysia, Mauritius, Pakistan, Peru, Singapore, Slovenia, South Africa, Thailand, Trinidad & Tobago, Tunisia and Turkey.

¹¹ The survey contained a variety of questions requiring Yes/No, quantitative and descriptive responses, or a combination of all three.

- g) **Market structures**, including clearing and settlement systems, trading platforms and transaction costs, as well as further relevant tax issues.
- h) **Other issues**, including issues concerning the historical development of financial markets in general, previous measures taken to promote bond market development, and impediments to bond market development.

3.2 Survey findings

This section presents the key findings from the responses to the questionnaire. The exercise of conducting the survey and collating its results highlights the challenges of trying to compile a comprehensive set of information and data on bond markets in developing economies. In addition to the issue of data availability, the different stages of development of EMC member markets, as well as the different ways in which they have evolved, mean that in many cases it is possible only to achieve a selected coverage of areas, depending on their relevance to a particular jurisdiction. Nevertheless, the significant effort of respondents in answering the questionnaire has provided useful qualitative information on the overall state of bond market development among EMC jurisdictions.¹²

3.2.1 Financial and economic development

The development of the domestic bond market hinges on, among other things, a number of macroeconomic factors. These include the necessity for sufficiently strong economic growth that could generate appropriate issuers and investors, as well as a stable and sufficiently low interest rate environment that could facilitate investment, especially in fixed-income instruments.¹³ In addition, an adequate level of investable funds in the economy—which to some extent is reflected by the rates of savings and investments—has also been identified as a crucial element that could ensure strong investor participation in supporting domestic bond market development.

Economic performance

The macroeconomic environment can affect the development of a bond market in a number of ways. Rising economic activity can lead to a greater need for fund raising while rising income can breed greater demand for assets, including bonds, as savings increase. When inflation is stable, the fixed income structure of bonds can be particularly attractive to certain investors whose risk profiles demand a steady real rate of return.

¹² Presenting the information clearly and succinctly has required, among other things, a substantial pooling and averaging of data. Unless mentioned otherwise, averages across time are generally taken for the period of 1990-2000. Where data for the entire period are not available at the time of the survey, averages are taken of what is available. In addition, it is important to note that the averages are merely indicative, and not necessarily fully representative of the current situation.

¹³ See among others, “Building Local Bond Markets”, *Building Local Bond Markets: An Asian Perspective* edited by Alison Harwood, International Finance Corporation, 2001.

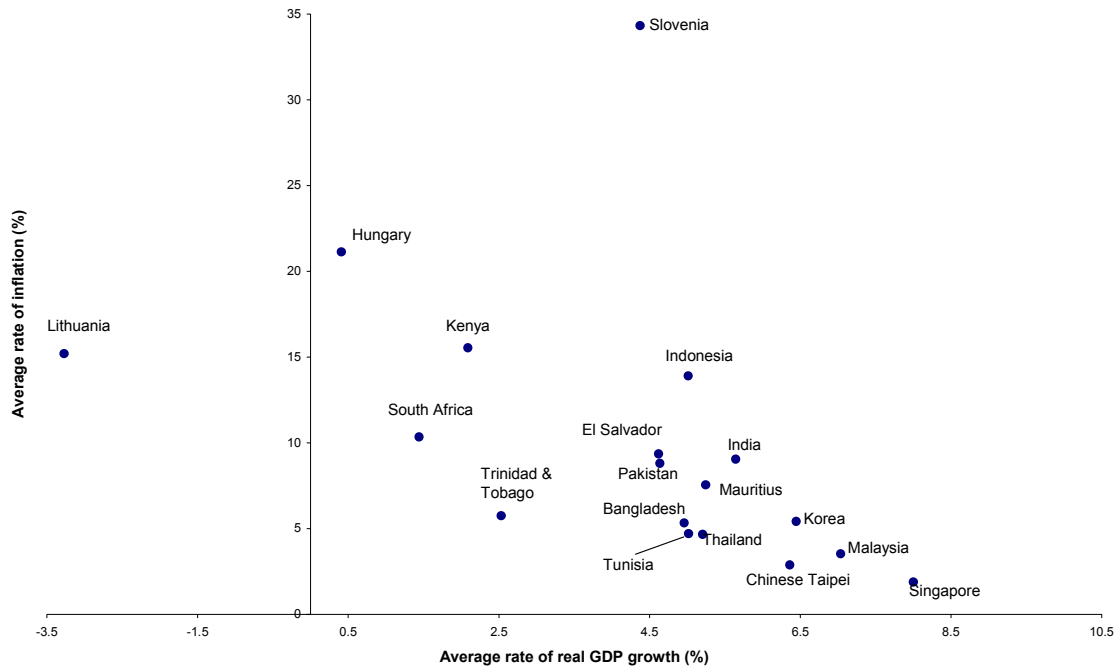
Economic growth can also encourage firms to turn to the capital market for debt financing or for capital restructuring, given the right fiscal incentives and favorable monetary conditions.

Taking annual real economic growth and consumer price inflation as two indicators of economic performance, the survey results reveal a negative relationship in general between growth and inflation during 1990-2000 (see Figure 3.2-1). Given the arguments above, countries that exhibit higher rates of economic growth and moderate inflation might therefore be expected to be associated with relatively more developed bond markets.¹⁴

In the survey responses, certain jurisdictions have identified macroeconomic factors as among the major obstacles to the growth and success of the domestic bond market. Brazil for instance, reported that the high level of domestic interest rates resulted in higher corporate bond issuance costs as investors demanded yields to compensate them for the risk of holding corporate bonds. Turkey, on the other hand, cited an unstable macroeconomic environment characterized by high and volatile inflation rates as the main impediment to bond market development.

¹⁴ Current views on the relationship between finance and growth also argue that financial development in itself is important for growth, i.e. economic performance improves with greater financial depth. For an overview, see *Finance for Growth: Policy Choices in a Volatile World*, by the World Bank, Oxford University Press, May 2001.

Figure 3.2-1: Average real GDP growth and consumer price inflation (1990-2000)



Note: Data have been supplemented by information from the International Monetary Fund. In cases where data are lacking from one or more years of the period 1990-2000, the average has been derived only from available data. For ease of presentation, Argentina, Brazil, Peru and Turkey have been excluded due to extreme average values of inflation in these countries (222.4% in Argentina, 773.1% in Brazil, 722.0% in Peru and 75.1% in Turkey)

Sources of domestic financing

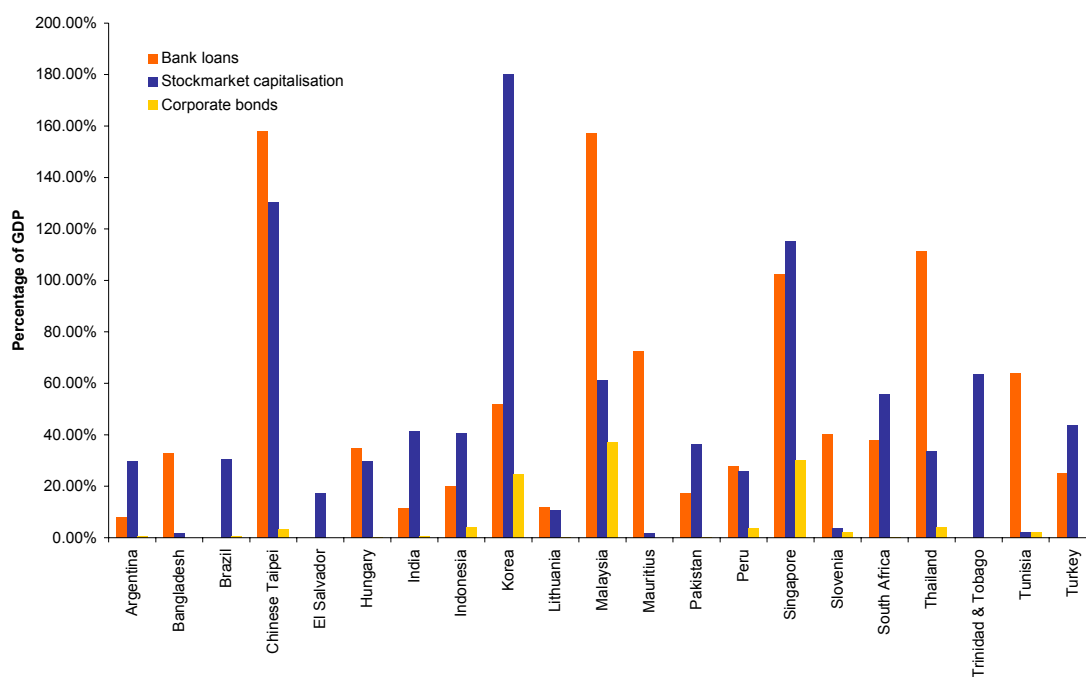
The sources of financing in a particular economy provide an indicator for both the stage of financial development in the respective jurisdictions and the subsequent need for developing bond markets. Economies that have a high reliance on the banking sector as a source of finance are likely to face a more pressing need to develop their bond markets. This is due to the maturity mismatch involved in bank loan financing, wherein short-term bank loans are used to finance long-term investment projects that make an economy especially prone to the adverse effects of a banking crisis. In addition, where a particular surveyed jurisdiction is dependent on a single source of financing, there may be a need to review the financial structure and develop alternative sources of financing, such as bond markets. This is to ensure that borrowers are provided with financing alternatives best suited to their needs.

The survey looks at the extent of the development of the financial system and the variety of sources of financing in participating countries. In the questionnaire, survey participants have been invited to provide information that could shed some light on the role and importance of the banking sector and the capital market as sources of financing in the economy.

In order to examine this issue further, the survey looks at the extent of the development of the financial system and the variety of sources of financing in participating countries. In the questionnaire, survey participants were asked about the role and importance of the banking sector and the capital market as sources of financing in the economy.

The results suggest a heavy reliance on loans from the banking sector compared to other forms of debt finance. The degree of reliance varies a great deal. The annual value of outstanding bank loans as a percentage of gross domestic product as at end-1999 ranged from 8% to 158%. In many cases, bank loans outweigh corporate debt financing both in absolute value and relative to GDP, and are sometimes greater than the combined funds raised from the entire capital market (See Figure 3.2-2.)

Figure 3.2-2: Financing instruments outstanding in emerging markets as at end-1999



Note: Information has been supplemented by data from the World Bank, Bank of International Settlements, International Monetary Fund, Federation of International Stock Exchanges, Thomson Financial Datastream, Standard & Poor's Emerging Markets Fact Book and respective central banks. Information on corporate bonds for Bangladesh, Brazil and Trinidad & Tobago is not available. Information on outstanding bank loans for Brazil, El Salvador and Trinidad & Tobago is also not available.

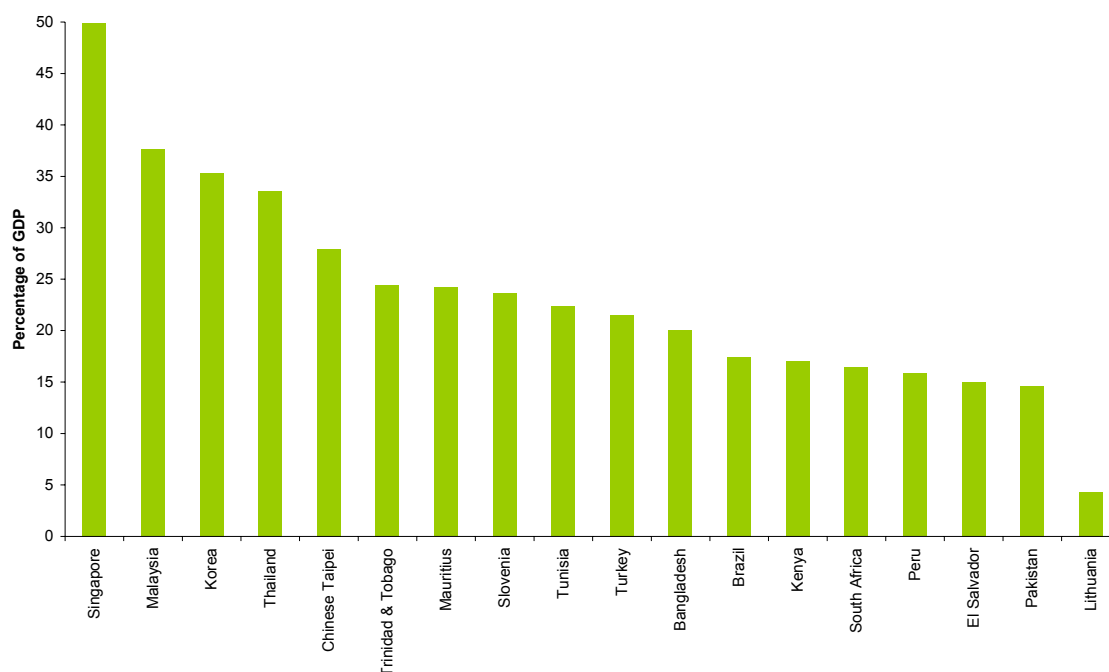
This imbalance can have important implications for economic stability and development. Capital structures that are dominated by bank loans may introduce significant maturity mismatches into corporate balance sheets, especially if these loans are primarily used in long-term financing. Such mismatches can unduly expose the corporate sector, and in turn the banking sector, to financial shocks, as was shown in many developing economies

during the crisis of 1997-98. The development of a bond market, it is argued, can introduce greater diversity in the financial systems of many developing economies.

National savings rate

A high rate of savings, and therefore an increase in the availability of portfolio funds, could contribute towards supporting bond market development by driving greater demand for these securities. Average national savings rates across the survey sample differ greatly, ranging from 4.3% to 49.9% of GDP, again reflecting the economic diversity of the sample set (See Figure 3.2-3). Most, however, fall within 10%–30% with four economies recording rates more than that.

Figure 3.2-3: Average national saving rates (1990-2000)



Note: In the case of Turkey and the figures for Malaysia for 1990 and 1991, the national saving rate figures reflect savings as a percentage of Gross National Product (GNP). In the case of other countries, saving rates are given as a percentage of Gross Domestic Product (GDP).

Issuance of debt securities in domestic and international markets

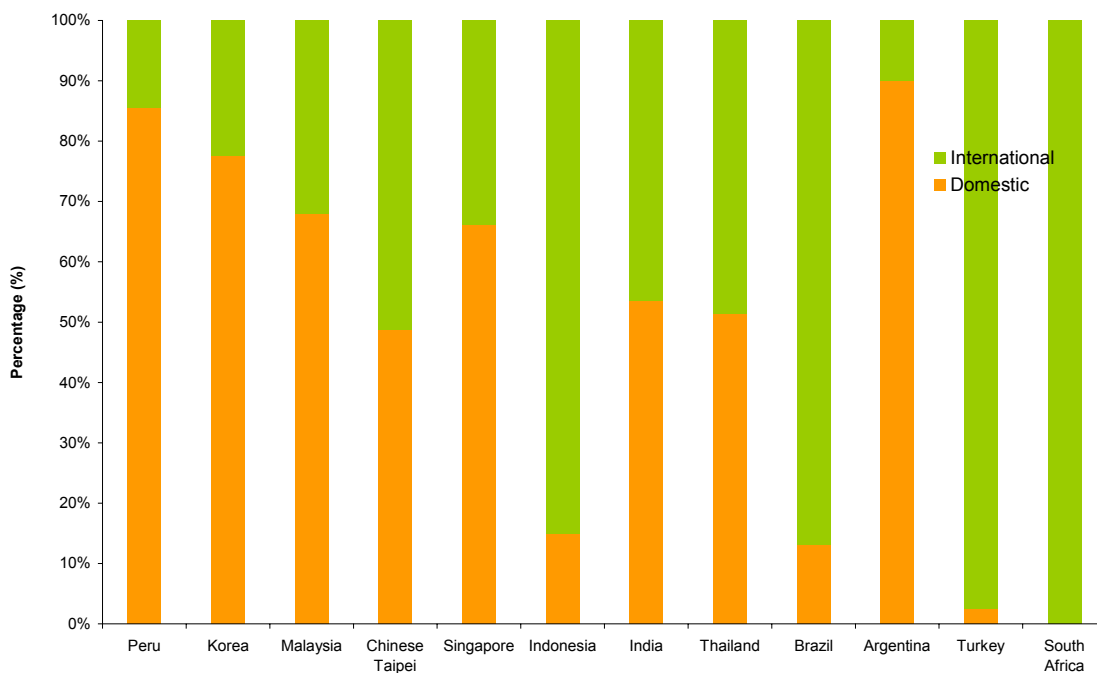
Countries where a domestic bond market is already in existence, but where corporates rely heavily on issuance of bonds offshore typically reflect relatively high domestic cost of funds, and may thus imply greater potential scope for bond market development.

However, too heavy a reliance on international bond financing may pose a host of risks comparable to those arising from an over-concentration of sources of financing in the domestic financial system—especially if the ability to manage those risks is constrained

or unavailable. These include foreign-exchange risk in cases where the bond issuer’s cash inflows (e.g. sales revenue) and outflows (coupon and principal repayments) are in different currencies.

From the survey results, it is apparent that all the respondent countries have had private companies which have tapped the international bond market. The degree to which these companies rely on the international market as a source of financing ranges from one jurisdiction with almost all of its outstanding corporate bonds as at end-1999 in international markets, to another where with less than 10% of its total corporate debt outstanding in these markets (see Figure 3.2-4). A more detailed observation however, suggests that in general a majority of the jurisdictions rely less on international bond markets as a source of financing than they do domestic bond markets (only a third of jurisdictions on which information is available reported more than 50% of outstanding corporate debt in international markets.)

Figure 3.2-4: Outstanding amount of corporate bonds in domestic and international bond markets as at end-1999



Source: Bank of International Settlements

Note: The figures are presented as a percentage of the total corporate bonds issued by the corporate sector of the respective countries. Information on other countries is not compiled by Bank of International Settlements

3.2.2 Bond market size, structure and liquidity

This section examines certain key attributes of bond markets to provide some indication of the relative state of market development across the jurisdictions surveyed. It should be

emphasized that the information below is only indicative, and not conclusive, of the relative degree of development of bond markets among EMC jurisdictions, and will be used as a source of reference for the sections that follow.

Corporate bond market

Market size (relative to that of the economy) is a common indicator of bond market development, and one that happens to be most readily available across the survey sample. More focused efforts at corporate restructuring, as well as the impact of bank rehabilitation on the availability of loans in recent years have led to an increase in bond supply—and hence market size—in a number of sampled jurisdictions.

In some of the larger markets, growth has been relatively steady through the 1990s with a slight acceleration following the crisis of 1997-98. In other, smaller markets, growth has either been more volatile, exhibiting a sharp increase towards the middle and end of the last decade, or simply lacking (see Figure 3.2-5 and Figure 3.2-6).

Figure 3.2-5: The growth of the corporate bond market in emerging markets I

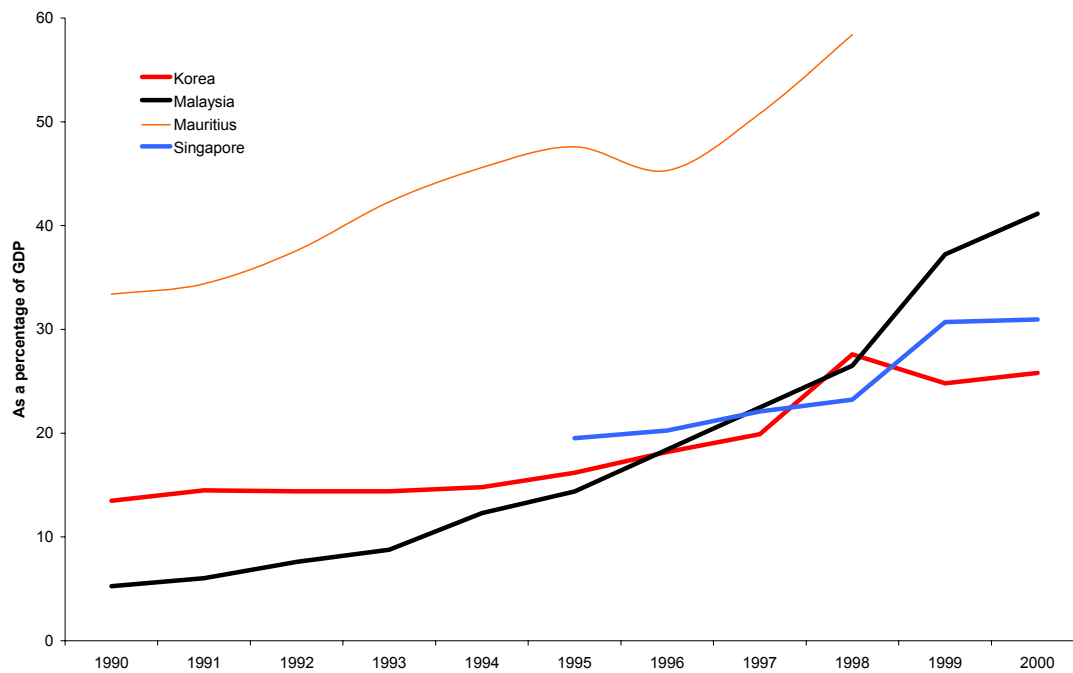
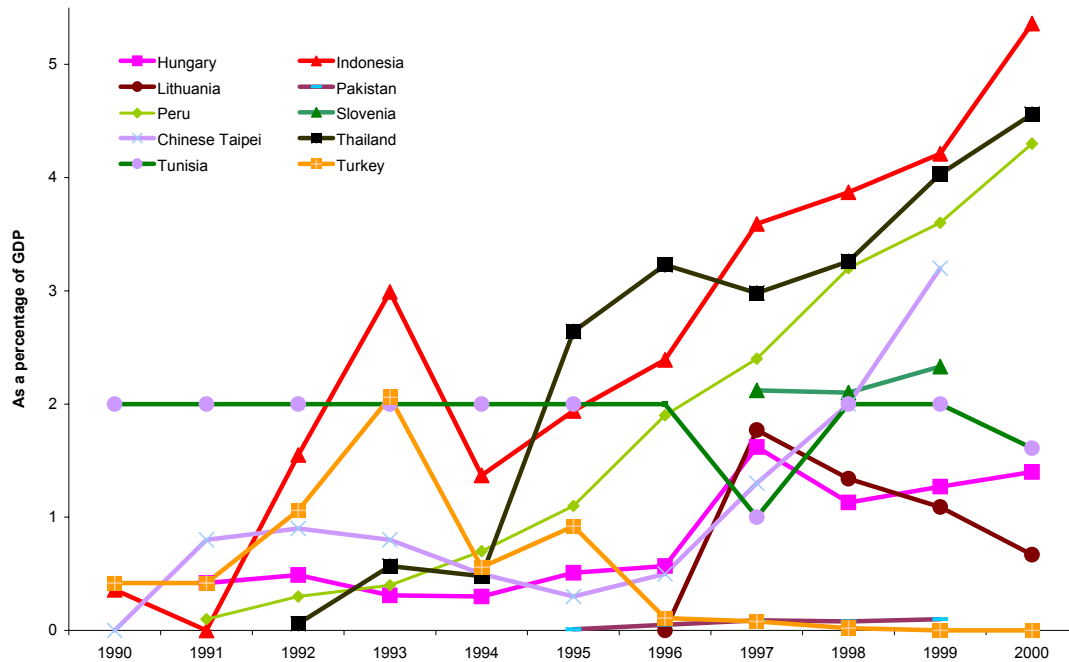


Figure 3.2-6: The growth of the corporate bond market in emerging markets II



An examination of the average size of each market relative to the economy during 1990-2000 shows that over two-thirds of market sampled amount to less than 3% of GDP, with five recording a market value of less than 1%. The remaining one-fifth generally fall within 15%-25% of GDP. (See Table 3.2-1)

Table 3.2-1: Average outstanding amount of corporate bonds (1990-2000)

Country	Average Outstanding Amount of Corporate Bonds as a percentage of GDP
Argentina	0.60
Bangladesh	N.A.
Brazil	N.A.
El Salvador	N.A.
Hungary	0.80
India	N.A.
Indonesia	2.51
Kenya	N.A.
Korea	18.55
Lithuania	0.97
Malaysia	18.19
Mauritius	43.93
Pakistan	0.07
Peru	1.80

Table 3.2-1: Average outstanding amount of corporate bonds (1990-2000)

Country	Average Outstanding Amount of Corporate Bonds as a percentage of GDP
Singapore	24.47
Slovenia	2.18
South Africa	N.A.
Chinese Taipei	1.03
Thailand	2.42
Trinidad & Tobago	N.A.
Tunisia	1.87
Turkey	0.51

Note: Average has been taken for data over the period 1990-2000. Nevertheless, in cases where data are not available for the whole of this period, averages are taken out of available data only. The figure of Argentina is that for 1999.

Government bond market

The government has been recognized as a key player in the initial stage of bond market development in its role as an issuer, regulator, promoter and catalyst.¹⁵ Given the direct relationship between fiscal deficits and significant issuances of government debt securities, the development of the bond market is inextricably linked to the direction and management of fiscal policy. The extent to which fiscal spending is financed via the sale of government bonds in open competitive markets, and the degree to which this sustains a critical level of supply of government debt securities have important implications for the development of the corporate bond market, for instance in the context of developing benchmark securities for investors and issuers.

Where government bond markets are sizeable and work efficiently, market participants often use the yields on certain “benchmark” issues to construct a term structure of risk-free returns. These risk-free rates are used in the pricing of a wide range of financial instruments, including and especially corporate bonds. Investors and issuers are thus more likely to participate in the bond market, knowing that they can price instruments efficiently.¹⁶ Jurisdictions with larger and more active government bond markets may therefore be expected to have more developed corporate bond market as well.

A survey of the value of outstanding government issues during 1990-2000 revealed that in spite of marked differences across the survey sample, markets have generally experienced an upward trend over the last decade (See Figure 3.2-7 and Figure 3.2-8). This compares against corporate bond markets, whose growth patterns has been more varied across the survey sample (see above).

¹⁵ See “Compendium of Sound Practices Guidelines to Facilitate the Development of Domestic Bond Markets in APEC Member Economies”, *APEC Collaborative Initiative on Development of Domestic Bond Markets*, September 1999.

¹⁶ These issues are discussed in further detail in the following sections.

Figure 3.2-7: The growth of the government bond market in emerging markets I

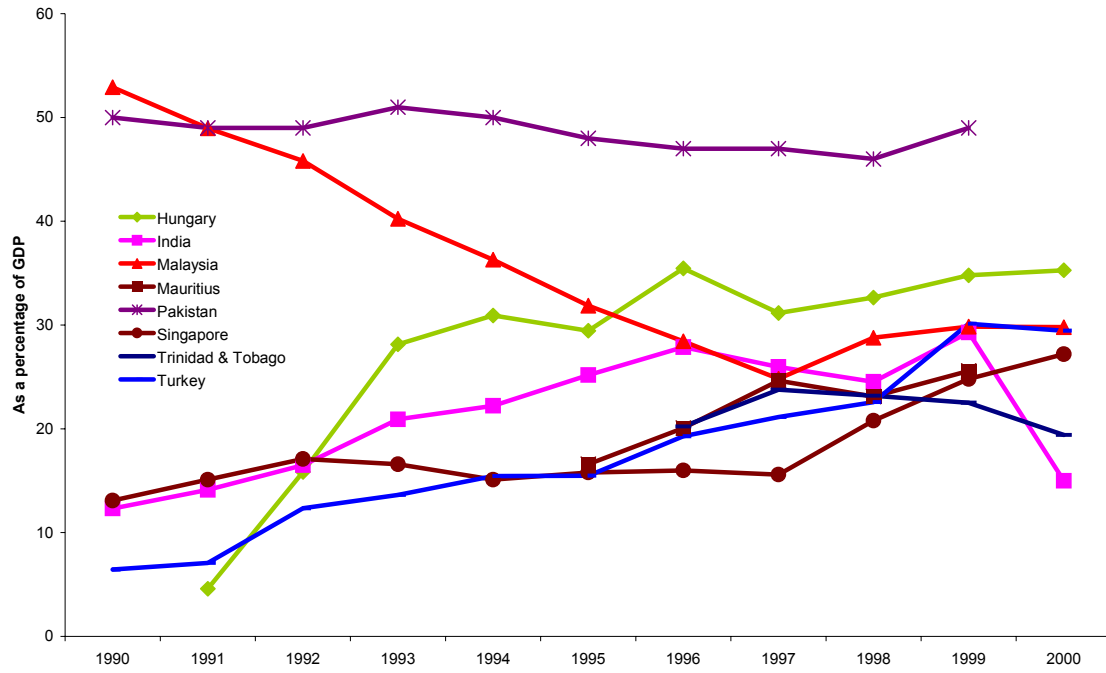
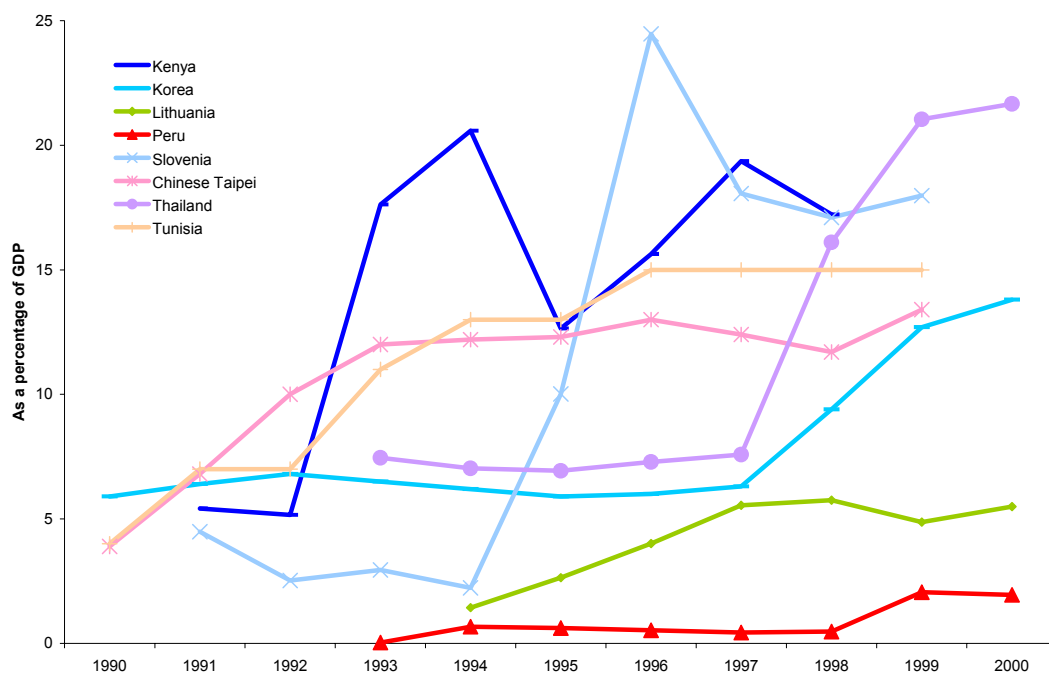


Figure 3.2-8: The growth of the government bond market in emerging markets II



An examination of the average size of each market relative to the economy during 1990-1999 shows the wide dispersion clearly, with values ranging from less than 1% of GDP to nearly 50% (see Table 3.2-2). Nearly half of the sample fall between 10% and 20% of GDP, with another third falling within 20%-40%.

Table 3.2-2: Average outstanding amount of government debt securities (1990-2000)

Country	Average Outstanding Amount of Government Debt Securities as a percentage of GDP
Argentina	N.A.
Bangladesh	N.A.
Brazil	N.A.
El Salvador	N.A.
Hungary	27.84
India	21.27
Indonesia	31.33
Kenya	14.20
Korea	7.81
Lithuania	4.25
Malaysia	36.16
Mauritius	22.00

Table 3.2-2: Average outstanding amount of government debt securities (1990-2000)

Country	Average Outstanding Amount of Government Debt Securities as a percentage of GDP
Pakistan	48.60
Peru	0.85
Singapore	17.93
Slovenia	11.09
South Africa	N.A.
Chinese Taipei	10.77
Thailand	16.30
Trinidad & Tobago	21.82
Tunisia	11.50
Turkey	17.55

Note:

Most of the averages have been derived from data for the period 1990-2000. Nevertheless, in certain cases, information is not available for the whole of this period and the averages have had to be derived only from available information. In the case of Trinidad & Tobago, the average has been derived from data for the years 1995 and 1996 only while in the case of Mauritius, the average has been derived from the data for the five-year period 1995-1999 and takes into account Treasury Bills, Treasury Certificates, Bearer Bonds, Republic Bonds and Independence Bonds.

Secondary bond market liquidity

Liquidity is a hallmark of an efficient and active market, and hence a useful indicator of market development.¹⁷ It is normally reflected in a high level of turnover relative to market size, and general price stability.¹⁸ The more liquid a market is, the more information-efficient are secondary-market prices likely to be.

Liquidity is usually considered paramount in the government bond market, if the ensuing yield curve derived from benchmark issues is to be reflective of an efficient risk-free rate of return. However, given the diversity and lack of uniformity in corporate bond issues, liquidity of the entire market is thought to be less of an issue for corporate bond markets as a whole. Instead, liquidity may only be important for certain classes of bonds or specific issues, depending on the needs of investors in those particular market segments.¹⁹

A survey of turnover ratios across a selection of government bond markets in the survey sample, based on available information from the questionnaire for 1995-2000, indicate a stark difference in the level of liquidity between two groups of markets.²⁰ One group, exhibited average turnover of between two and four times the size of the market. The second group, which consisted of half of the available sample, experienced turnover of less than market size.

¹⁷ Liquidity can be defined as the ability of a market to support trading with the least impact on prices.

¹⁸ Other measures of liquidity include bid-ask spreads and price volatility.

¹⁹ These issues are discussed in further detail in the following sections.

²⁰ Turnover ratio has been calculated by using the formula: Turnover ratio = Annual trading value/Amount outstanding.

An examination of available data and information for corporate bond markets across the sample set shows that in most emerging markets, the level of corporate bond market liquidity is low, especially compared to the levels recorded in the government bond market. Almost half of the jurisdictions surveyed reported that trading in the secondary corporate bond market, if any, has mainly been concentrated in a few large issues.²¹ Korea reported that certain corporate bond issues with better credit ratings have also tended to see relatively more trading activity than other issues.

3.2.3 Benchmark securities

The importance of benchmark securities to the development of the domestic bond market centers on their function in providing reference yields for the pricing of corporate bonds across a range of different terms to maturity. A number of characteristics have been identified as pre-requisites for benchmarks and these include: a well-understood and consistent risk profile; simple and consistent synchronicity with the term structure of existing corporate bonds; adequate breadth in terms of tenure variety; and sufficient depth in terms of secondary market liquidity.²²

The role of government bonds as benchmark securities

Several types of interest-bearing assets can be used as benchmarks for the corporate bond market. They include not only government bond securities, quasi-sovereign bonds, near risk-free corporate issues, swap curves, but also bonds of foreign supranational organizations and foreign companies issued in the domestic market. The current situation in most developed markets, however, indicates a general preference for government bonds as benchmark securities.²³ The popularity of government bonds has been mainly attributed to the notion of it being a risk-free asset that displays a reliable and consistent risk profile.²⁴ This risk-free characteristic also provides an opportunity for the authorities of emerging market countries to introduce investors to fixed-income products, given that investor confidence is more likely to be assured in a product with negligible credit risk.

An overwhelming majority of the survey sample reported at least some form of a benchmark instrument, and of these, a significant number reported the use of government securities as benchmark securities for the domestic corporate bond market (see Figure 3.2-9). This appears to be partly because of active efforts by authorities in many countries to develop government bonds as benchmarks, though it is interesting to note that in Turkey, for instance, government bonds are perceived by market participants as benchmarks despite the lack of official government engagement to assert such a status.

²¹ For instance, in Brazil, during the period 1998-2000, five of the most actively traded corporate bond issues accounted for 40% or more of total corporate bond secondary market. Peru reported a similar situation where 10 out of 95 issues traded accounted for more than 40.0% of total trading.

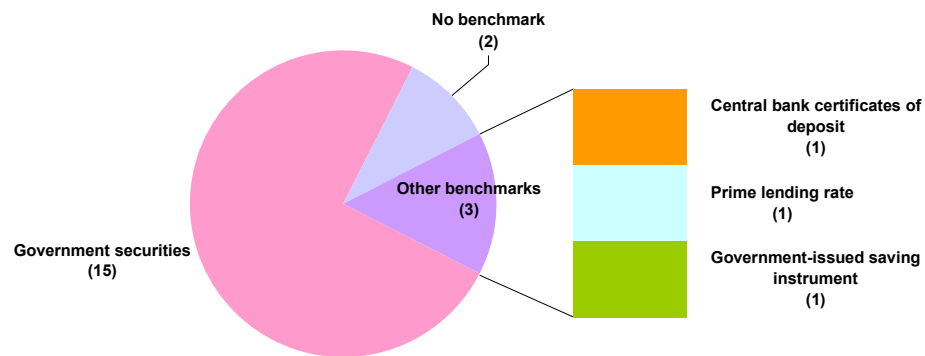
²² See “The Emerging Asian Bond Market”, The World Bank East Asia & Pacific Region, June 1995.

²³ See “Fixed-income markets in the United States, Europe, and Japan: Some Lessons for Emerging Markets” by Garry J. Schinasi and R. Todd Smith, IMF Working Paper, December 1998.

²⁴ See “The Emerging Asian Bond Market”, The World Bank East Asia & Pacific Region, June 1995.

In jurisdictions where other instruments and interest rates are considered as benchmarks, these include the prime-lending rate, rates on the certificates of deposit issued by the central bank and government-issued saving instrument rates. These jurisdictions cited heterogeneous and irregular issuance of government bonds, as well as a lack of market liquidity for these securities as the main factors that resulted in government bonds not being used as benchmarks. For instance, in Peru, a long-held practice of issuing government bonds through private placement was cited as a major reason for an illiquid government bond market. Even when the Peruvian government started to place its sovereign bonds in the public securities market in 2001 through the Lima Stock Exchange (through a Dutch auction), the total issuances for the whole year only came up to 10. This situation, in tandem with a very illiquid private debt securities market, is said to have resulted in wide discrepancies in the pricing of the same debt securities by institutional investors.

Figure 3.2-9: Types of benchmark securities used in survey jurisdictions



Note: “No benchmark” consists of Lithuania and El Salvador that reported that government bonds are not used as benchmarks and did not report any other alternative instruments that are used as benchmarks. Information on Brazil and India is not available.

Despite the wide adoption of government securities as benchmarks, the degree of success in establishing an efficient and comprehensive benchmark yield curve seems to be rather limited among survey countries. Many respondents reported difficulties in establishing an effective benchmark yield curve, especially in deriving pricing references for the longer end of the maturity spectrum, though two countries—Korea and Slovenia—reported the opposite situation where the shorter end of the curve is less effective compared to the longer end. Contributory factors appear to include a lack of market depth (i.e. secondary market liquidity) and breadth (i.e. the variety of tenors) in government bond issues.

Benchmark issuance: the use of open auction and a pre-announced issuance calendar

The method by which benchmark securities are issued can be an important determinant of their viability as a reference instrument for securities pricing. In the case of government bonds, the use of open auctions (i.e. the free bidding of prices by dealers) is generally acknowledged as an effective means of allowing market-determined—and hence more efficient—pricing of new issues.²⁵ The effectiveness of such auctions is supported by the use of a pre-announced issuance calendar (containing the amount and dates of issuance of government bonds) which allows dealers sufficient information and lead-time to prepare their bids at open auctions, thus fostering liquidity in government bond markets.²⁶

Survey results show that a majority of respondents use open auctions in the issuance of benchmark securities. There were similar findings on the use of pre-announced calendars, with some being recently introduced as in the case of Malaysia. However, the amount and type of information provided by these calendars differ from jurisdiction to jurisdiction. In some cases, the calendar provides the date of issuance and the length of tenors without revealing the size of issuance, while in others, the monthly and quarterly government borrowing programmes contain a redemption schedule as well as valuations of the total amount of bonds to be issued. The pre-announced issuance schedule is typically released and determined by the central bank or the ministry of finance, although Korea reported that the revisions to the pre-announced calendar involves a certain degree of market participation through consultation.

Issues Pertaining to Fiscal Budget Policy

The responses given to the queries on the use of government bonds as benchmark securities have also yielded a number of varying experiences in relation to the impact of government budget policy on the efforts to promote government bonds as benchmarks. In Thailand, for instance, it has been reported that the government generally targets a balanced budget and that surplus government funds are usually used to redeem outstanding government debt.²⁷ Thailand also reported that the law stipulates that government bonds are only to be issued when the government runs into a fiscal deficit, and this has been identified as one of the major elements that hamper the regular issuance of government bonds.

²⁵ See “An analytical framework for the development of a corporate bond market in Asia” by Masaru Yoshitomi and Sayuri Shirai, 2001.

²⁶ In the United States, the predictability of government bond issuance through the use of a pre-announced calendar has given rise to the *when-issued* market for government securities. In the when-issued market, investors begin trading the yet-to-be-issued security (i.e. *before* the actual issuance) and transactions consist of agreements to exchange securities and funds on the day the new securities are issued. The when-issued market allows new government securities issues to be efficiently distributed to investors and provides useful information to potential bidders about the prices that may be accepted at the auction. This further contributes towards the efficiency of the pricing mechanism for government securities.

²⁷ It has been reported that the government usually targets a balanced budget or budget deficit fiscal policy at the beginning of each fiscal year. Surplus funds are also utilised to purchase foreign currencies to cover the amount of debt repayment in the coming 2–3 years.

However, other survey responses suggest that a commitment to a budget surplus/balance policy does not necessarily hamper the promotion of government bonds as benchmark securities. Singapore, for example, whose government operates on a balanced budget policy and has recorded continuous fiscal surpluses over the last few years, nevertheless continues to issue government paper with the express aim of establishing a benchmark yield curve and developing the bond market. Furthermore, a number of efforts have been undertaken to reconcile and streamline bond market development policies with government budget commitments in several jurisdictions. These have included the establishment of a separate body responsible for managing government debt as in the case of Thailand and Hungary.²⁸

Captive Government Securities Market

The survey participants have also made certain remarks in reference to captive government bond markets. Reserve and capital adequacy requirements can discourage trading in certain bonds if such instruments are included—as they often are—within a schedule of eligible assets.²⁹ This lack of trading is further exacerbated by instances where demand for government bonds outstrips supply, which ultimately further encourages investors who have these securities to hold on to them. A captive market may also arise in the absence of mandatory mark-to-market pricing, where investors may be discouraged from active trading for fear of realizing losses in the value of their portfolios. Such captive demand, especially in the case of government bonds, can hamper the development of a viable benchmark securities market (and indeed other markets as well).

A number of survey respondents recognized the captive demand problem as one of the main reasons for the low level of liquidity in the government bond market and the success of their respective domestic bond markets. Survey results indicated that a number of factors (including prudential regulations, investor preference and prolonged yield-differentials) have been identified in a majority of survey respondents to be among the main elements that could potentially give rise to—or in certain cases, exacerbate—the problem of market captivity. Nonetheless, the incidence of a captive government bond market does not appear to be significant or widespread across the survey sample, and is limited to certain countries. The principal factor behind the captive market situation is the existence of mandatory investment arrangements for certain institutional investors such as the national pension fund in Malaysia and financial institutions in Thailand.

²⁸ The Government Debt Management Agency (GDMA) in Hungary and the Public Debt Management Office (PDMO) in Thailand.

²⁹ Given their low level of risk, government-issued securities can also be popular as a long-term investment instrument, and due to their high desirability, are considered to be among the most liquid assets after cash. Many financial institutions—such as insurance companies, pension funds and banks—invest in government debt securities as part of their strategy to diversify their asset portfolio, but at the same time retaining adequate levels of liquid assets. In many countries, these financial institutions are required by law to hold a specified proportion of their assets in the form of government bonds.

Derivatives Markets

It has been argued that the liquidity in bond markets will be greater with the availability of facilities and instruments that market participants could use to conduct interest rate risk management.³⁰ In general, the development of organized and active derivatives markets is thought to foster efficient price discovery in the secondary market for underlying instruments, which can in turn lead to improved liquidity. This issue is of particular significance for the government bond market, where overall liquidity of the market is important for it to be a viable benchmark security. Indeed, given the relative liquidity and depth of the government bond market, most derivatives markets in bonds are likely to be based on government bonds rather than corporate papers. The range of instruments in this case includes futures and options in government bonds as well as interest rate swaps and repos.

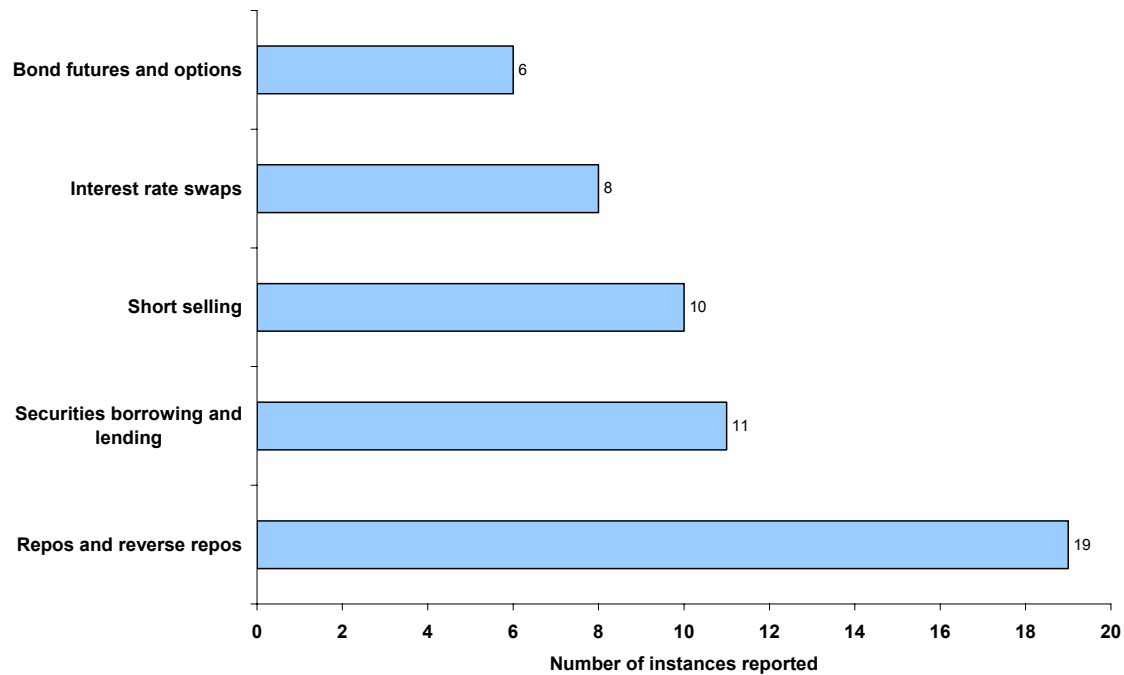
Derivatives of one form or another appear to be available across the range of markets surveyed (see Figure 3.2-10 and Figure 3.2-11). Findings indicated the widespread availability of repos and reverse repos, short-selling and securities borrowing and lending in many jurisdictions as well as interest rate swaps and bond futures and options, though the last three are less prevalent. However, in many cases, the extent of active trading in these related markets is reported to vary depending on the jurisdiction and the type of product involved. In certain markets, repos are very actively used and take up a substantial proportion of bond trading; In a couple of cases, the share of repo trading is even said to exceed that of the underlying instrument, as in the case of Chinese Taipei where the repo market takes up 90% of domestic bond market trading and South Africa where it takes up 59.4%.³¹ Nevertheless, many reported that despite the availability and the legal consent to use such instruments and facilities, the derivatives and related markets for bonds are generally underdeveloped and do not see much activity. Reasons are said to include disincentives implied by the tax treatment of derivative activities and the limitation of the breadth of products in certain jurisdictions. In Thailand, for instance, private repo transactions are reportedly not widely used by traders because they are perceived to be riskier and more complex than repos with the Bank of Thailand.

Several jurisdictions cite the underdeveloped state of the derivatives market as among the principal reasons behind the low liquidity in the bond market. In Malaysia, for instance, the limited range of hedging instruments prevented bond investors from reducing interest rate exposure and has been the main explanation for primary dealers and market makers' reluctance to quote two-way bond prices.

³⁰ See "Compendium of Sound Practices: Guidelines to Facilitate the Development of Domestic Bond Markets in APEC Member Countries", *APEC Collaborative Initiative on Development of Domestic Bond Markets*, September 1999.

³¹ In South Africa, spot trading takes up 40.3%, while the remainder of bond trading is taken up by the exercise of options.

Figure 3.2-10: The use of related instruments to increase liquidity



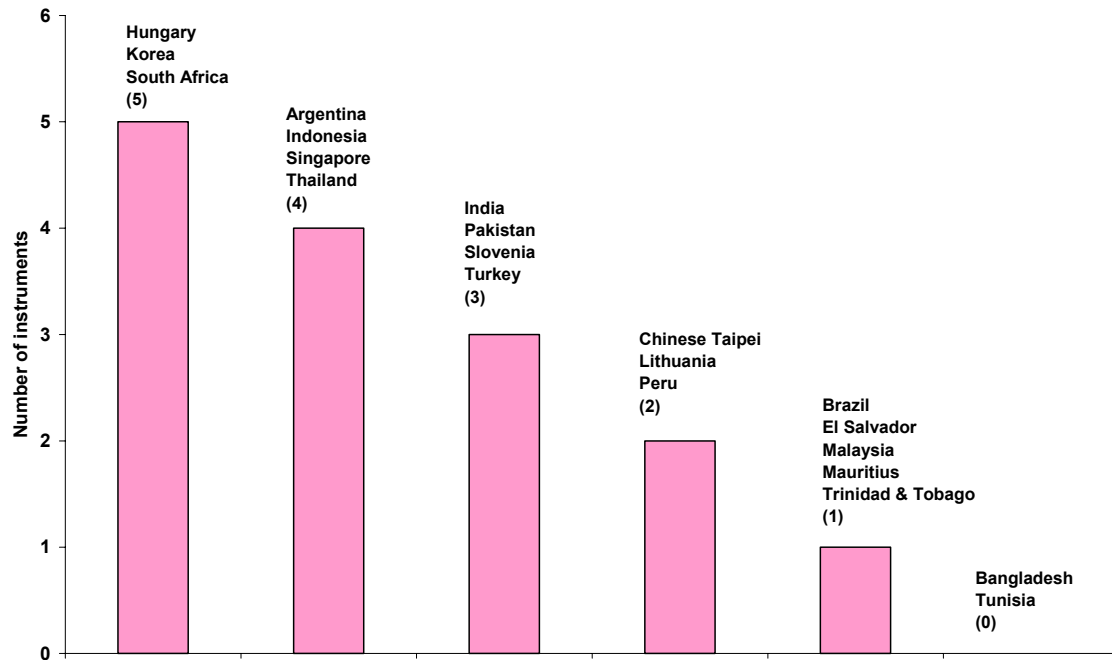
Note: The figures depicted by the chart show the number of jurisdictions where these instruments have been reported to be in general use among the survey participants.

Hence, the impact of derivatives on bond market liquidity in many of the markets surveyed remains unclear. While certain more “derivatives-advanced” jurisdictions have reported a relatively high level of liquidity in their bond markets, there are also a number of other countries that exhibit similar levels of liquidity but do not have active derivatives trading. Nevertheless, survey results do indicate that further efforts are being taken to foster the growth of derivatives and related markets for bonds. These include the development of repo markets for short- and medium-term government bonds, and the introduction of medium-term government bond futures.³² Some jurisdictions have reported that they intend to adopt certain international standards with regard to certain derivatives transactions.³³ Certain obstacles posed by tax systems have also been removed such as the double taxation levied on repo transactions in Thailand, based on the distinction that repos represent a borrowing activity rather than outright sales of bonds.

³² In Argentina and Malaysia, respectively.

³³ E.g. the International Securities Market Association’s “master repurchase agreement” in Thailand.

Figure 3.2-11: Number instruments used to increase liquidity by country



3.2.4 Regulatory and tax framework for the corporate bond market

The legal, regulatory and tax framework that governs the bond market provides an important basis for the bond market to operate and develop given the deep impact this framework has on the extent of activity and interest among issuers and investors in the bond market. In the context of emerging bond markets, the existent legal, regulatory and tax framework needs to be facilitative and supportive of on-going efforts to develop the domestic bond market.

Centralization of regulatory oversight and developmental authority

Whether regulation is centralized or fragmented can have important implications for the further development of nascent bond markets, given that in many developing economies authorities also tend to assume responsibility for national economic and financial strategy. The more centralized the authority, the more coherent and systematic development strategies could arguably be. However, in the case of the bond market, the significance and direct implications of other factors beyond the capital market, such as

monetary and fiscal policy, might provide some justification for more shared responsibility over market development among the different relevant authorities.³⁴

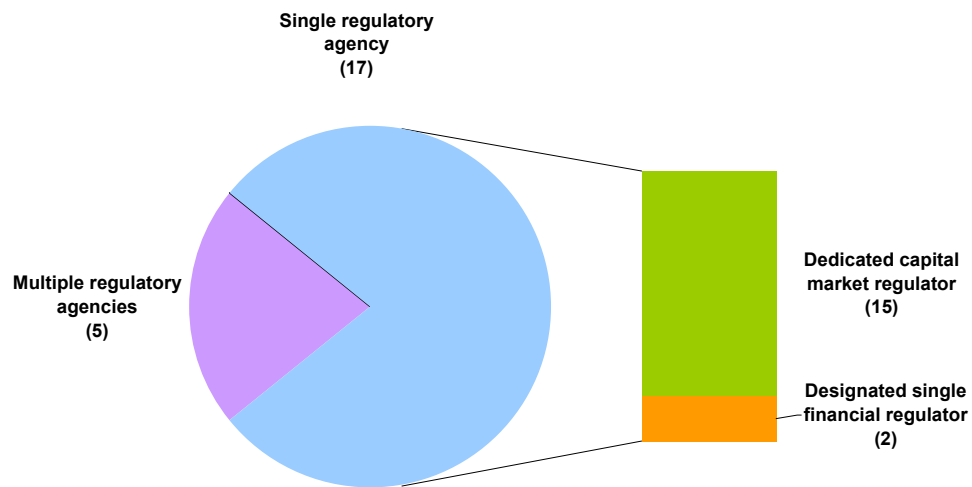
The questionnaire responses indicate three broad approaches to bond market regulation within the jurisdictions surveyed. One involves an integrated approach to regulation, with a dedicated single agency responsible for the supervision of the entire financial sector, including the capital market.³⁵ Another approach involves a dedicated regulator for the capital market, though in some cases this may not necessarily preclude the involvement, to varying degrees, of other agencies in the supervision of the bond market. A third approach involves the custody of the bond market being split among several regulatory bodies. Despite these three broad approaches to bond market regulation, the survey responses suggest that there is a general preference for a more streamlined regulation of the bond market, with the regulation of the primary market concentrated in a single agency in a majority of jurisdictions surveyed (see Figure 3.2-12). Most jurisdictions also reported the centralization of the regulatory authority over both the primary and secondary markets in a single regulatory body.³⁶

³⁴ In addition, the involvement of market participants is also a major consideration.

³⁵ Under this arrangement, central banks are typically responsible for monetary policy and, in many cases, financial stability.

³⁶ A number of jurisdictions around the world (including Britain, Japan, Chinese Taipei, Korea, Germany and Sweden) have established a single regulatory body for the capital market in recent years. In many cases, this has reflected a general shift towards more integrated regulation and the pursuit of regulatory cost-effectiveness.

Figure 3.2-12: Regulation of the corporate bond market

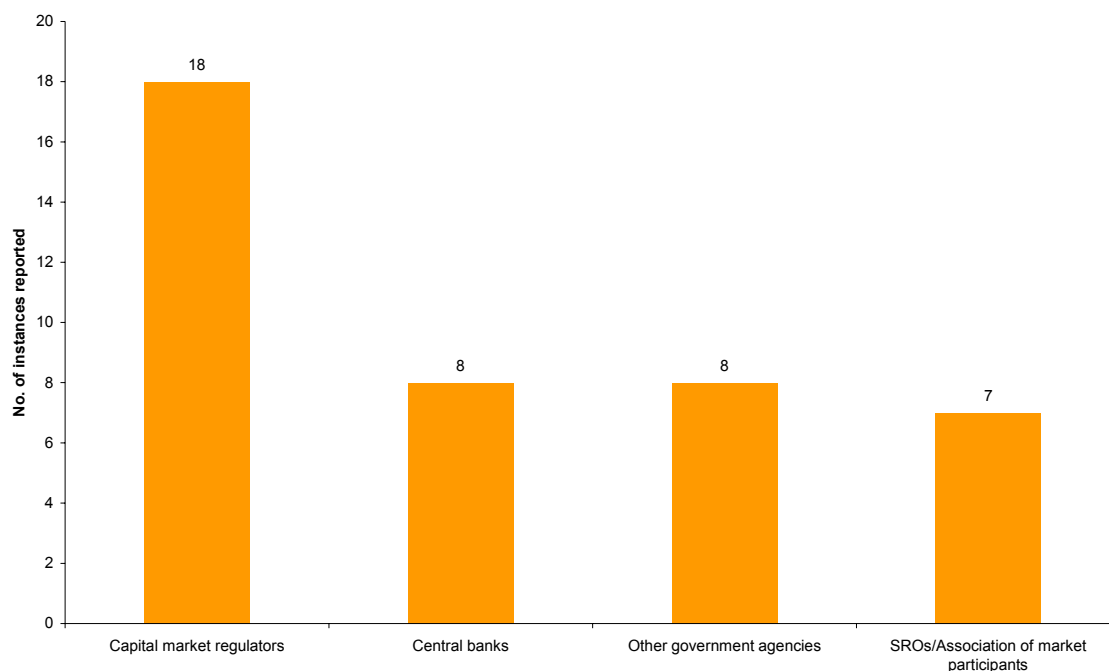


Note: (#) refers to the number of countries.

In relation to the responsibility for driving bond market development, many jurisdictions reported the involvement of various regulatory authorities (including the capital market regulator, the central bank, the finance ministry or government debt management agency and self-regulatory organizations) even when one agency has a clear mandate to oversee the market (see Figure 3.2-13). Certain jurisdictions also reported the setting-up of a joint working group with representation from relevant authorities as well as market participants to facilitate co-ordination of bond market development efforts.³⁷

³⁷ For instance, the Debt Market Committee of Singapore and the National Bond Market Committee of Malaysia. A similar arrangement has also been reported in Thailand.

Figure 3.2-13: Organizations involved in bond market development efforts



Note: The chart indicates the number jurisdictions in which these entities have been reported to be involved in bond market developmental efforts in the survey responses. “Other government agencies” includes the respective ministries of finance. In Singapore, the capital market regulator is the Monetary Authority of Singapore, which also functions as the central bank. In Thailand and South Africa, dedicated bond exchanges are involved in developing the bond market.

The role of self-regulating organizations

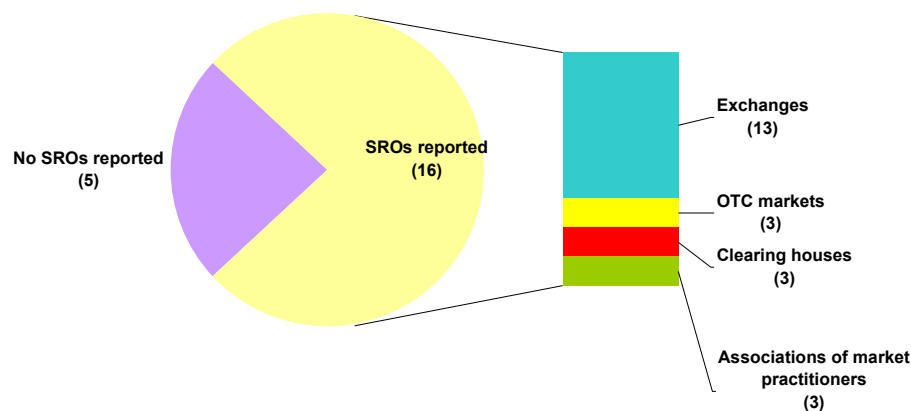
The statutory delegation of regulatory authority and responsibility to self-regulatory organizations (SROs) has been associated with a number of advantages for the effective regulation of the capital market.³⁸

The implementation of a self-regulatory system with regard to the bond market appears to be quite widespread, with SROs reported to be operating in more than half of those jurisdictions surveyed. In the majority of cases SROs consisted of the exchanges on which debt securities are listed and traded, or the clearing institutions through which they cleared. In some markets, over-the-counter (OTC) market operators were also considered to be SROs while in others, associations of bond market practitioners were also reported to play the role of SROs. Figure 3.2-14 indicates the main types of self-regulatory organizations identified by the survey questionnaire (for specific details, please refer to the Appendix).

³⁸ See for instance “IOSCO Objectives and Principles of Securities Regulation”, International Organisation of Securities Commissions, February 2002.

SROs are said to be fairly active and appear to have been successful in supporting bond market development efforts. These include setting codes of conduct together with standards and conventions pertinent to bond trading and offering as well as disseminating information on dealers and market makers to the public as in the examples of the Thai Bond Dealing Center (Thai BDC), the Singapore Investment Bankers' Association (SIBA) and Brazil's Association of Open Market Institution (ANDIMA). ANDIMA had even gone further and became the prime mover behind the establishment and running of the national clearing, settlement and registration systems for corporate bonds in Brazil.³⁹

Figure 3.2-14: The involvement of SROs in the regulation of the corporate bond market



Note: Bangladesh, Kenya, Lithuania, Mauritius and Tunisia reported no SROs in the regulation of the corporate bond market. Information on India is not available. The total of the SROs depicted in the column exceeds 16 because certain countries reported more than one kind of SRO.

Primary issuance of corporate bonds

In evaluating the process of corporate bond issuance, certain elements that are linked to an efficient and facilitative primary market approval framework are examined such as the use of a merit- and disclosure-based approach to the approval of primary bond offerings. A merit-based approval process involves an evaluation of the merits and suitability of a

³⁹ The importance of the National Private Bond System (SND) in Brazil is such that it has been reported that most corporate bond issues are registered with the SND even when there is no legal obligation to do so. Registration with the SND is said to lend more credibility and transparency to the bond issue. The SND is responsible for the registration and settlement of most corporate bonds in Brazil.

bond offer.⁴⁰ While the process hands more control to the regulator in determining the profile of bond issuance in the market, its implied higher costs and time-consuming nature can reduce the efficiency of the issuance process and increase the financing cost for issuers. A disclosure-based assessment, on the other hand, leaves the evaluation of issue quality to the market and instead focuses on the timeliness and quality of the information provided by the issuer, as well as the extent of disclosure demonstrated in the offer documents, to ensure that all relevant material information is available to the market. Hence, a disclosure-based issuance process tends to be less time-consuming and simpler, allowing for a relatively more cost-effective issuance process.

Apart from issues related to merit and disclosure assessments, certain restrictions on bond issues, for instance, in terms of issue size, issuance frequency and issuer capital may also have implications for the efficiency and level of activity in primary corporate bond offerings.

A significant number of the survey respondents report the adoption of corporate bond issuance legal framework incorporating elements of disclosure by the issuer, with some having only recently adopted it. In a number of jurisdictions, the approval framework for primary bond offering has shifted to a full disclosure-based regime where regulatory approval mainly consists of the vetting of the prospectus, for example in Malaysia and Singapore. Disclosure requirements tend to apply to public issues; private placements and bond issuance with very short tenors are usually exempt from such rules in certain jurisdictions.

A time limit is typically also set for the completion of the approval process by the primary market regulator. The regulatory approval timeframes vary from as short as five days for secured and guaranteed bonds in Korea to 45 days in Indonesia with other countries reporting regulatory approval time between these two extremes. Several jurisdictions—such as Malaysia and Peru—reported that the approval process tends to be completed within a shorter time-frame than is specified by the respective regulations on the issuance of corporate bonds.

Issuers are also reported to be aware of the importance of transparency and a disclosure-based approach to issuance, so much so that in some cases they themselves take the initiative to maintain high standards of transparency. In Brazil, for instance, it is common practice for issuers to register their issues with the National Private Bond System (SND)—which itself is the result of a private sector initiative—even when there is no legal obligation to do so. Such registration is said to increase the level of transparency for an issue and to lend it more credibility.

⁴⁰ This may entail an analysis of the business and financial aspects of the bond issue to evaluate its quality in terms of risk, rate of return and price. The process of ascertaining the suitability of a bond offering often involves re-assessing in detail the assumptions and calculations made by the issuer and in many instances may entail a negotiated agreement on the final form of the offer to enable the views and requirements of the regulator to be incorporated and met by the issuer.

The extent of limitations on bond offerings tended to vary. While a considerable number of jurisdictions do not impose restrictions on the frequency, timing and size of issuances by a particular issuer, certain limits, for instance, on the total amount of bonds issued by a particular company relative to the value of its assets, or simply a floor on the size of the issue still apply in some countries.⁴¹ Certain jurisdictions also imposed restrictions on the history and status of the issuer, which may limit corporate bond issuance to listed companies, for example. In Brazil the legal stipulation that only public companies are allowed to issue bonds has led to the interesting phenomenon where many companies become public in the process of issuing bonds to the public. Other jurisdictions also reported certain restrictions on the utilisation of proceeds from bond issuance.

A number of survey respondents recognized that the existent legal framework for primary bond offering may impede the growth of the primary market. Some jurisdictions have identified problems posed by lengthy, costly and complicated primary issuance framework in their jurisdictions. By and large, however, restrictions in terms of capital and reserves requirement, as well as on the history, status and profit track record have been removed and the survey responses suggest that many jurisdictions are undertaking efforts to further remove or relax restrictions that may hamper the growth of the primary market.

Standardization of offer documents

The standardization of offer documents for bond primary offerings is important, especially when seen in the context of a disclosure-based approval framework. Standardization in content and format facilitates the preparation of offer documents by issuers, as well as increases the ease of access of potential investors to material information on the issue and the issuer. The standardization of offer documents, for instance in the case of bond contracts, is also said to increase the transferability of corporate bonds among market players and could support secondary market liquidity.

While a number of jurisdictions have imposed a standardized format for prospectuses, with some having even gone as far as standardizing the format of bonds, a majority of the survey respondents reported that most offer documents are not standardized, and this is reportedly more pronounced in the case of contracts between bond issuers and other legal or individual persons, which are often tailored to suit the needs of relevant parties. Despite the relative lack of standardization in format, many jurisdictions surveyed reported a certain degree of standardization in content, a result of mandatory minimum disclosure requirements for offer documents. Survey responses also suggest a shift towards the standardization of offer documents. Interestingly, while the move towards greater standardization is mostly driven by market regulators in some jurisdictions, the initiative is undertaken by industry and market participants, as in the cases of Singapore and Brazil, to name a few.

⁴¹ In Kenya, for instance, the value of the issue must be at least KSh50 million while the issue lots must have a minimum value of KSh100,000. In Pakistan the minimum amount of issue is set at Rs30 million.

The availability of a formal framework for the issuance of asset-backed securities (ABS)

Asset securitization represents a financing alternative for companies with good assets such as mortgage loans, trade receivables, car-loan receivables and hire-purchase contracts.⁴² The securitization of receivables and cash flows allows private entities to free up more capital and financial resources that in turn could be channeled elsewhere to optimize their capital structure. In the case of banking institutions for instance, the sale of securitized loans transforms illiquid assets into marketable debt securities and provides a more flexible approach to asset and liability management.

In addition, since asset securitization is typically backed by cash flows that are ring-fenced through a special purpose vehicle, it helps to retain interest among investors who would otherwise be unwilling to buy certain issues due to concerns over the credit standing of the issuer. Securitization, in particular, the issuance of asset-backed securities (ABS), has also proven useful to borrowers without a well-established track record to raise funds through the bond market, and may be particularly relevant to emerging market companies which are largely second-tier companies that are new to the bond market and do not have a high credit profile.⁴³ In short, the availability of an ABS issuance framework could help foster corporate bond market development.

Many jurisdictions appear to have adopted a formal ABS issuance framework, several within the last five years. This has often been accompanied by amendments to the tax framework in order to facilitate further the process of ABS issuance. One such example that reflects this development is the case of South Africa, where the Bond Exchange has in consultation with the industry and by studying international practice, developed customized rules for South Africa that conform to international best practice. In Singapore, guidelines on asset securitization, which define the roles, responsibilities and risks that banks retain or undertake when they participate in a securitization transaction, have been introduced to provide greater clarity in the market place.

The experience with a formal ABS framework seems somewhat mixed. Thailand reported that following the introduction of the framework in the late 1990s, virtually no securitization transaction has been observed. It is believed that certain problems involving the securitization of non-performing loans of banks as well as some unresolved issues regarding the tax and accounting framework have contributed to this situation. Argentina, by contrast, has seen strong growth in ABS issuance following the introduction of securitization facilities, with ABS issues growing by six times over the period 1998–2000.

⁴² See Capital Market Masterplan, Malaysia, Securities Commission, February 2001.

⁴³ See “Study on the Use and Provision of Credit Guarantee Facilities in Asia”, HKMA Research Team, March 2001.

Shelf-registration facility

Shelf-registration facilities can facilitate corporate bond issuers' access to the market by making it more timely and cost-effective. The benefits include reduced costs for frequent issuers; a reduction in the amount of work relating to issuance required from an issuer at time of any issue; minimization of the time taken to process documentation relating to a particular issue as well as; the prospects of providing investors with shorter and more focused offer documents at the time of the issue. The availability of shelf-registration can therefore help to foster the growth of corporate bond issuance.

Around half of the jurisdictions sampled reported the availability of shelf-registration in their respective markets. Even in countries where a formal shelf-registration framework does not exist, the principles underlying shelf-registration are practiced in different forms. In Singapore, bonds that have been given exemptions from prospectus requirements under the law are given the opportunity to make multiple issuances over a period of time as determined by the issuer. In India, a form of shelf-registration is allowed in the guise of an umbrella prospectus, whereby a company files one consolidated offer document with the securities market regulator for the entire amount that it proposes to raise in the next 12 months. The company is then allowed to make more than one offering within the stipulated period.⁴⁴

The survey responses also revealed the interesting experience of Peru, where apart from a shelf-registration facility, a corporate bond issuance proposal by a frequent issuer—i.e. one that has issued the same type of bonds within the previous 12 months⁴⁵—is provided with an expedited approval by the regulator.⁴⁶ Peru also reported a positive response from market participants to the introduction of a shelf-registration facility, with shelf-registered corporate bond issues recording strong growth in recent years.⁴⁷ On the other hand, Chinese Taipei reported that because issuers seeking to use the shelf-registration facility in its jurisdiction are required to meet more specific conditions and requirements than they would have to normally, this facility has not been very popular. In fact only one large reputable issuer has used this facility in the last three years.

The role of credit rating agencies

The presence of reputable credit rating agencies are recognized as an important factor in the success of a bond market. The major benefits of an explicit credit rating system include the consistent measurement of relative risk of bond issues; incentives for bond issuers to improve their financial standing; the enhancement of information quality and quantity on issuers. The main purpose of credit ratings is to provide investors with objective and impartial opinions of relative credit risk of bond issues. A well-functioning

⁴⁴ This facility, however, is only available to specially designated financial institutions.

⁴⁵ The frequent issuer should also not have been subject to major sanctions for misconducts.

⁴⁶ This approval is provided within seven days as compared to non-frequent issuers, where the time allotted to the regulator to complete the approval process is 30 working days.

⁴⁷ In Peru, the total amount of issuance programmes registered on shelf in 2000 rose by 56.0% in 2000 to US\$1.015 billion, compared to the preceding year.

credit rating system increases the transferability of corporate bonds, either in the primary or in the secondary market, and helps to foster growth of depth and liquidity in the corporate bond market.⁴⁸

The establishment of domestic credit rating agencies is believed to be useful for developing domestic rating scales for corporate credit risk. This results in a system that provides sharper differentiation of credit risks within the domestic market, which in turn offers greater information value for investors.⁴⁹ This is particularly relevant for countries where the ceiling implied by the sovereign credit rating is relatively low compared to developed markets, as the case may be for many emerging markets. Domestic rating agencies are also essential to help bridge the information asymmetry between investors and issuers, especially in the context of bond markets that are not sufficiently large to support the entry and viable operation of an international credit rating agency. Furthermore, domestic credit rating agencies also tend to assume the additional responsibility of promoting the bond market via education, information dissemination and research undertakings.⁵⁰

Many domestic credit rating agencies in certain emerging markets began their operations with some form of technical arrangement or joint partnership with global credit rating providers. Links and co-operation between domestic and international credit rating service providers are expected to intensify as bond markets in emerging markets grow in size and become more liberalized.⁵¹ International networking may take the form of subsidiaries, franchising or joint-venture and can contribute towards achieving economies of scale in rating, accelerating transfer of technology⁵² and winning foreign investors' confidence and interest in the domestic bond market.

In some countries, domestic credit rating agencies are established under the initiative of the government, the stock exchange or the securities market regulator. Credit rating requirements are accompanied, at times, by a minimum investment grade requirement to ascertain the quality of public bond issues, though in developed markets, such minimum credit requirements are not mandated by securities market regulations in order to allow investors to choose from as wide a range of products as possible to cater for a variety of risk-return profiles.

The availability of credit rating facilities appear to be widespread, with many markets having their own domestic credit rating agencies for the bond markets, though most jurisdictions reported that at least some of their domestic credit rating agencies are linked

⁴⁸ See "Corporate Bond Markets Development" by Tadashi Endo, *Bond Market Development in Asia: Finance and Investment*, Organisation of Economic Co-operation and Development Proceedings, 2001.

⁴⁹ See "Development of Regional Standards for Asian Credit Rating Agencies: Issues, Challenges and Strategic Options", prepared for Asian Bankers Association by RAM Consultancy Services Sdn. Bhd., October 2000.

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² See "Corporate Bond Markets Development" by Tadashi Endo, *Bond Market Development in Asia: Finance and Investment*, Organisation of Economic Co-operation and Development Proceedings, 2001.

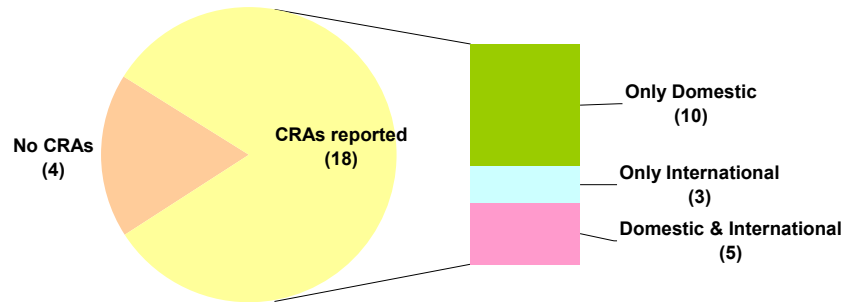
to global credit rating providers via partial ownerships or affiliation (see Figure 3.2-15).⁵³ Many of these jurisdictions explicitly prohibit or do not recognize international rating agencies in their bond markets. Several jurisdictions have liberalized their domestic markets by allowing international credit rating agencies to rate issues. Indeed, Singapore and Kenya reported the complete reliance on global agencies for credit rating services for their bond markets respectively.

In many of the jurisdictions surveyed, credit rating is not a mandatory requirement for the purposes of issuance, though in at least five jurisdictions credit rating is compulsory. In certain cases, the mandatory requirement for credit rating has been imposed with the objective of encouraging the growth of the credit rating industry. This is especially true in the case of Thailand, where the mandatory requirement for credit rating had even been extended to bonds issued via private placement, as part of the efforts to support the domestic credit rating industry. The survey responses also indicate that many jurisdictions do not impose minimum credit ratings on new public issues, and recent policy changes suggest a move towards removing such requirements. In some cases, such as Chinese Taipei, the minimum rating requirement is implemented only for issues that use the shelf-registration facility.

Some initiatives have been taken to institutionalize the role of credit rating agencies beyond the process of primary offering. In Peru, for instance, issuers are required to enter into an agreement with two separate credit rating agencies that will undertake periodical rating of the debt securities.

⁵³ The global credit rating providers concerned include Fitch-IBCA, Standard & Poor's, Moody's and Duff and Phelps.

Figure 3.2-15: The availability of credit rating agencies (CRAs)



Note: Bangladesh, Lithuania, Mauritius and Trinidad & Tobago reported no CRAs in their jurisdictions. Korea did not report any international CRA in its jurisdiction.

Tax issues

The imposition of tax on bond transactions, whether in the primary or secondary markets has been identified as one of the major factors that could impede liquidity and discourage the primary issuance of corporate bonds. In the past, the imposition of such taxes have been identified as an obstacle to bond market development in the developed countries and in many cases these taxes have been subsequently removed.⁵⁴ Taxes may come in the form of transaction taxes and stamp duties, as well as taxes on capital gains and withholding tax. Transaction taxes are an explicit cost of trading and normally decrease market liquidity. Typically the liquidity-impairing effects of these taxes outweigh the benefits from the revenue they might raise or their role as a market volatility controlling mechanism.⁵⁵ Withholding taxes on the interest of marketable assets also tend to increase transaction costs such as the need to calculate and adjust for accrued interest and may therefore deter investors from trading.

⁵⁴ See “Fixed income markets in the United States, Europe and Japan: Some Lessons for Emerging Markets” by Garry J. Schinasi and R. Todd Smith, IMF Working Paper, December 1998.

⁵⁵ See “Schwert, G. William and Paul J. Seguin, 1993, “Transaction Taxes: An Overview of Costs, Benefits and Unresolved Questions”, Financial Analysts Journal 27-35.

In the context of emerging markets, the tax regime is often imposed by an arm of the government that is more focused and interested in maximizing government revenue, and in many cases tax policies may not take into account the aspects and issues of bond market development. While the bond market does not need preferential treatment to grow, the implementation of a tax framework that disadvantages it as an investment instrument has been identified as a potential factor that could hamper its development.⁵⁶

Around half of the jurisdictions surveyed, reported that a form of tax—typically stamp duty—is applicable to bond market transactions in the secondary market. The implementation of these taxes, however, varies across the sample. For instance, in some markets, investors must pay special transaction taxes on the gains made from bond trading. Given that tax deduction for capital losses is not allowed, the business tax implies higher transaction costs, and thus this is seen as a major impediment to market liquidity. Chinese Taipei, for instance reported that although there were no specific taxes applied to its bond market, uncertainty over the future revision by the Department of Taxation of bond interest according to withholding tax law might hinder the development of their bond markets.

The survey participants also reported certain taxes being levied on primary market issuance and purchases. For instance, in Thailand, first buyers of discount bonds are taxed up front on the discount, which is treated as interest income. The tax regulations are such that the tax paid will not be in line with the actual income received by the investor in the event of a sale prior to maturity, and this is seen as one of the main factors that encourage investors to hold onto bonds until maturity instead of trading them in the market. This also has been identified as a factor that could hamper liquidity.⁵⁷ In certain jurisdictions, the impediments posed by the tax framework is not only limited to the bond market, but is said to extend all types of capital markets as in the case of Slovenia.

3.2.5 Corporate bonds: Issuers and investors

Issuer base

Corporate bond markets around the world generally tend to be the domain of large, highly rated issuers. The reason that markets for low-rated corporate paper typically do not exist in many emerging markets, as in some developed markets, is attributable to a combination of regulation (a minimum investment grade is usually required for bonds being issued in these jurisdictions), the underdeveloped state of many domestic corporate bonds markets⁵⁸ and a general lack of interest on the part of investors in low-grade bonds.

⁵⁶ See “Building Local Bond Markets”; *Building Local Bond Markets: An Asian Perspective* edited by Alison Harwood, International Finance Corporation, 2001.

⁵⁷ The Thai SEC reported however, that many issuers circumvent this rule by issuing coupon bonds with compounded interest paid at maturity instead of issuing at discount.

⁵⁸ It is more difficult to assess the creditworthiness (and therefore determining a reasonable borrowing rate) as well as monitor the actions of a disperse pool of borrowers, which ultimately may make bank lending a preferred source of financing for lesser-known companies with low credit ratings in underdeveloped markets.

The lack of a credit rating culture, in general, may also limit the issuer base since investors would then be unable to assess the relative merits of new and emerging issuers compared to long-established issuers.

However, in the United States, the market for sub-investment grade bonds is very well developed and this increases the accessibility to corporate bond markets because it provides an alternative to bank financing for all but very small companies. The importance of this high-yield bond market as a substitute for bank financing is reflected in the fact that as the U.S. domestic market grew, the average credit rating fell. In effect, the size of the market attracted issuers of low credit rating.⁵⁹

Another aspect of the issuer base of many emerging bond markets, which may be related to the issue of credit quality and accessibility is the predominance of certain industry sectors as primary issuers of corporate bonds. However this trend is not restricted to emerging markets only but can be found in many developed markets (ex US), where the issuance in domestic bond markets has overwhelmingly been by large financial institutions.⁶⁰

Looking at the profile of major bond issuers as yielded by survey responses, major bond issuers typically consist of banking institutions, which are reported to be the principal corporate bond issuers in several markets. The importance of the banking sector is such that in Argentina, for example, 90% of corporate bond issuers were reported to be banking institutions as at the time of the survey. Utility companies are also reported to be among the major issuers in many of the jurisdictions surveyed with the implementation of major privatization programmes in the respective economies and the capital-intensive nature of the projects that were undertaken by the private sector in leading economic development under these programs, cited to be among the main reasons behind the prominent role of utility companies as corporate bond issuers.

Manufacturing companies have also been reported to be major issuers of corporate bonds, but are rarely stated as the principal issuer. Apart from these three categories of issuers, leasing companies, infrastructure and telecommunications companies⁶¹ as well as non-bank financial enterprises also appear to be among the most active issuers of corporate bonds. Other specific types of issuers are also reported in several countries. These include statutory bodies and non-resident entities, trading companies and leasing companies. Figure 3.2-16 depicts the broad picture with regards to corporate bond issuer profile in emerging markets.

In the survey responses, certain jurisdictions described factors that limit the issuer base in their respective markets. Several reported that the bond markets are only accessible as a

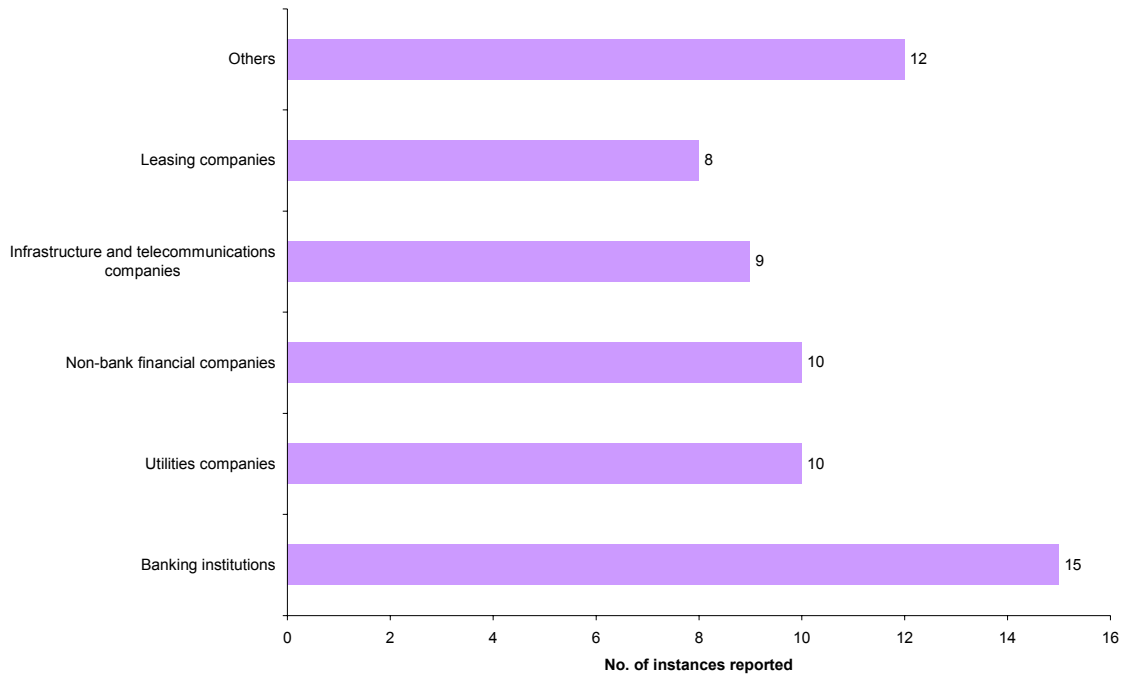
⁵⁹ See "Markets for Corporate Debt Securities" by R. Todd Smith, IMF Working Paper, July 1995.

⁶⁰ See "Fixed-Income Markets in the United States, Europe and Japan: Some Lessons for Emerging Markets" by Gary J. Schinasi and R. Todd Smith, IMF Working Paper, December 1998.

⁶¹ Please note that the prominence of infrastructure and telco companies as issuers of corporate bonds could be due to the privatisation programs mentioned above.

fund-raising avenue for a limited number of large and well-established corporations. Malaysia, for example, has observed that the high administrative costs typically associated with prospectus compilation act as a disincentive for smaller companies to issue bonds, at least via public issuance. An illiquid secondary market also seems to discourage small offerings by corporations given that institutional investors who are principal buyers of such issues are reluctant to purchase them because of the difficulty in subsequently disposing them.

Figure 3.2-16: Corporate bonds: Issuer base



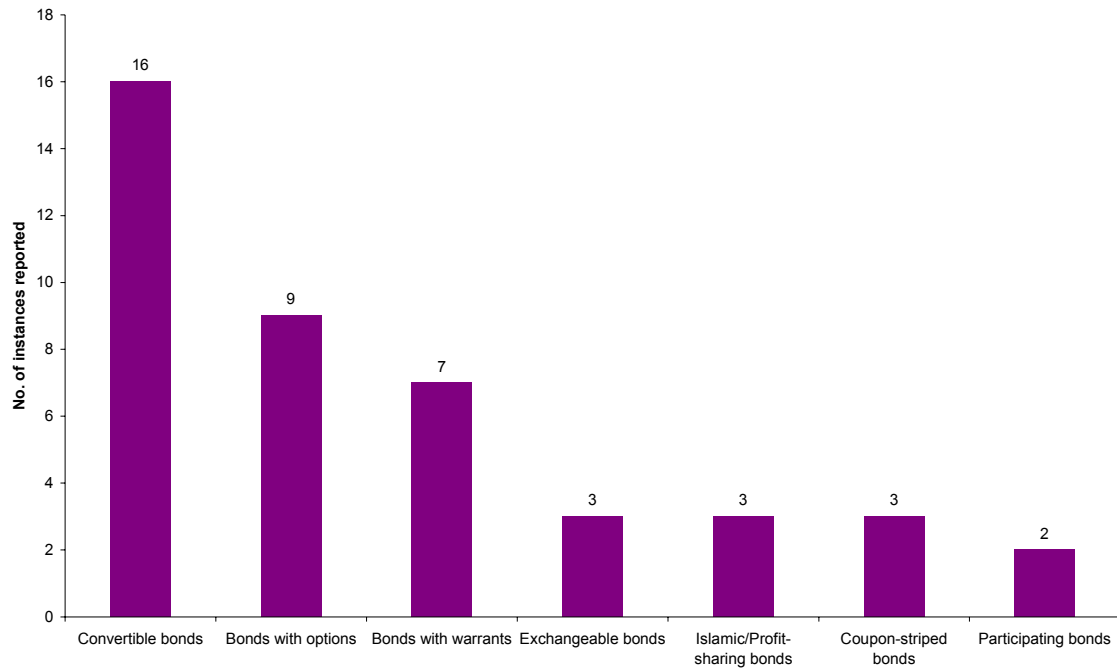
Note: “Others” includes trading companies, state-related bodies, as well manufacturing companies. Manufacturing companies have been cited as a major issuer in at least six jurisdictions.

The variety of corporate bonds issued in the primary market

Hybrid bonds play a useful role in making corporate bonds a more appealing investment option and which therefore may have an effect on the cost of funds for issuers. Typically, where a jurisdiction has a relatively better developed equity market and investors’ knowledge and preference lie in equity-type securities, hybrid instruments such as bonds with attached warrants and convertible bonds which combine the characteristics of debt and equity, may attract a greater interest from potential investors. Furthermore, the development of hybrid bonds in a particular jurisdiction also adds breadth to the primary corporate bond market and may be seen to provide greater sophistication to the marketplace.

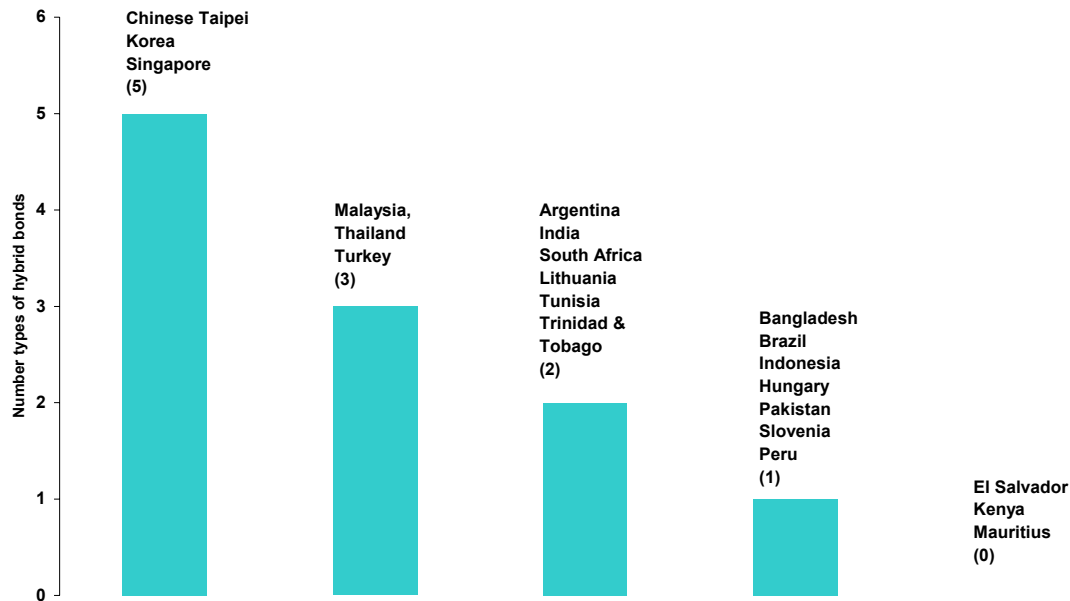
An examination of hybrid bonds issued reveals some variety overall, with seven major types of hybrids being offered across the whole sample of markets (see Figure 3.2-17). In general, the popularity of the different kinds of hybrids differs from jurisdiction to jurisdiction. Nonetheless, convertible bonds have emerged as the most widely issued hybrid, far ahead of the next most popular, bonds with warrants. Other types of hybrids are only favored in specific countries. Most markets however, appeared to have only a limited number of hybrids (see Figure 3.2-18).

Figure 3.2-17: The variety of hybrid bonds in emerging markets



Note: Bonds with options include callable/redeemable bonds.

Figure 3.2-18: Variety of hybrid bonds in emerging markets: Country profile

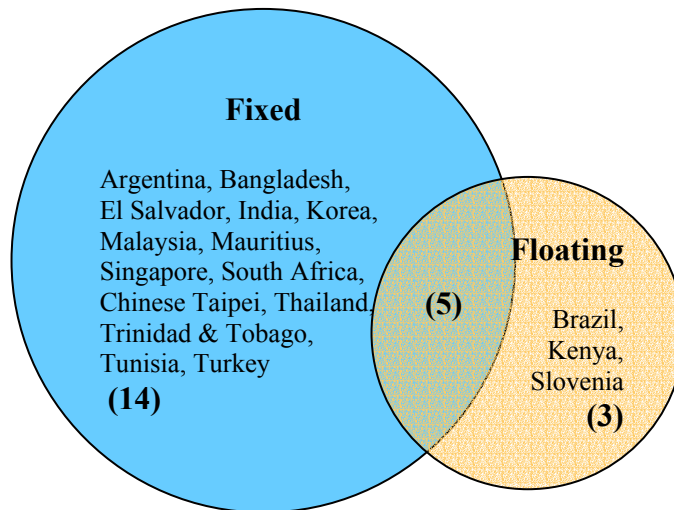


The use of floating and fixed coupon rates

The relative popularity of floating versus fixed coupon rate corporate bonds may depend on a variety of factors. These include, amongst others, typical investor preference, tenor of the majority of the bonds issued and interest, and inflation rate volatility. The preference for floating coupon rates is thought to be particularly prevalent where the macroeconomic environment is perceived to be unstable and investors and issuers are less willing to commit themselves to fixed rates. In essence, the use of floating or fixed coupon rate bonds by issuers of a certain jurisdiction may provide a partial insight on the current economic climate and subsequent investor preference of that particular country.

The majority of respondents reported a general preference for fixed coupon rates in their respective markets and among these, several reported the use of both fixed and floating bonds. (See Figure 3.2-19.)

Figure 3.2-19: Fixed or floating coupon rates on corporate bond issues



Note: The figure indicates the type of coupon rates on bonds issued commonly used in survey participants. Hungary, Indonesia, Lithuania, Pakistan and Peru reported that both fixed and floating rates are used. Please refer to the Appendix for further details.

Where fixed coupon rates are preferred, investors appear to want to safeguard against interest rate falls and fix their financing costs. They also tended to be institutional investors, like pension funds, who prefer fixed income streams. Nevertheless, Korea reported that the number of bond issues with floating rates has been on the increase over the last three years, though bonds with fixed coupon rates still form a large part of the market. Preference for fixed coupon rates has also been reported, with the use of floating coupon rates limited mainly to short-term maturity bonds—of three years or less—as in the case of South Africa.

Where floating coupon rates are generally preferred, inflation appears to be very volatile as is exemplified by the situation in Brazil and Peru, though it is useful to note that in the case of Turkey—which also reported volatile inflation rates in the last decade—fixed interest rates are the norm though these tend to be limited to bonds with very short maturities. In Slovenia, index-linked bonds are generally issued to raise funds.

Where both floating and fixed coupon rates are generally used, divergent views on the future direction of interest rates and inflation were said to be an underlying factor. Lithuania interestingly reported that there is a preference among issuers for allocating fixed coupon rates to bonds issued in the domestic market and floating rates to those issued internationally.

The use of third-party credit enhancement by issuers

Third-party credit enhancement,⁶² or the provision of credit guarantee by a third party for bond issues provides an important avenue for entities with non-investment grade credit

⁶² As opposed to structural credit enhancement and originator credit enhancement.

ratings to access the corporate bond market.⁶³ From the point of view of the issuer, credit guarantees would help lower funding costs as well as broaden market access and the investor base. From the investors' perspective, credit guarantee provides additional comfort or protection against default risk and can also contribute towards enhancing liquidity in the secondary market. Credit guarantees basically play an important role in enhancing the efficiency of financial intermediation by bridging the gap between borrowers—especially those with inadequate credit ratings—and certain investors who would only be allowed or interested in investing in bonds with higher credit ratings.⁶⁴

In more developed markets, credit guarantee services tend to be provided by specialized credit guarantee companies.⁶⁵ In countries where there is a limited credit guarantee market, banks and other financial institutions, are common providers of credit enhancement mechanisms. Widespread use of bank guarantees to enhance non-investment grade issues is generally thought to negate the financial disintermediation role of the corporate bond market and distort the efficient risk allocation of credit risks among the various sectors and markets. In addition, extensive reliance on bank guarantee of corporate bond issuance can hamper the availability of a wider range of instruments with varying risk-return profile that is vital for the creation of an active and transparent corporate bond market.⁶⁶

From the survey results, it can be seen that in more than half of the sample jurisdictions, credit guarantee facilities are available for the primary issuance of corporate bonds and of these over half reported that corporate bond issuers generally seek third-party credit enhancement prior to issuing bonds (see Figure 3.2-20).⁶⁷ A number of jurisdictions reported the unavailability or limited use of credit rating for primary bond offerings. Slovenia and Lithuania reported that one of the main reasons behind the lack of credit guarantee of primary bond issuance is the fact that most bond issuers already have a generally high credit standing to carry out a primary offering successfully.⁶⁸ It is also interesting to note, that in the case of Korea, though credit guarantees (usually provided by banks and credit guarantee companies) for corporate bond issues were rather common prior to 1997, in the wake of the East Asian crisis, most primary corporate issuances are not guaranteed. One other interesting remark came from Bangladesh, where primary bond issues are at times accompanied by the personal guarantee of the directors of the holding company.

⁶³ See “Profile of Private Debt Securities (PDS) Market in Malaysia” by Rating Agency Malaysia, 1995.

⁶⁴ See “Study on Credit Guarantee Facilities in Asia”, HKMA Research Team, March 2001.

⁶⁵ In the US, credit guarantee facilities are mainly provided by four major credit guarantee companies, called the “monolines” and the credit guarantee market has been recording substantial growth in the US, and to a lesser extent, in Europe, in the last two decades.

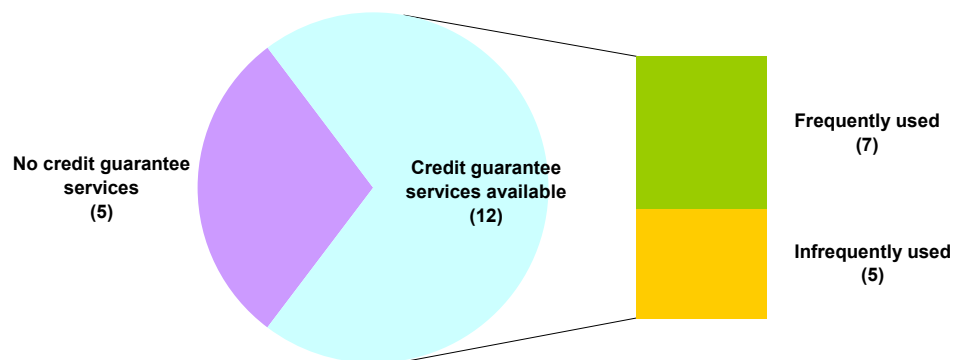
⁶⁶ See “Profile of Private Debt Securities (PDS) Market in Malaysia” by Rating Agency Malaysia, 1995.

⁶⁷ Nevertheless, in these countries, guarantees are occasionally provided by the government, especially in the case South Africa and Trinidad & Tobago, where these guarantees are usually provide for government related issuers

⁶⁸ In Slovenia, the issuers also tend to consist of banking institutions that already have sufficient know-how and experience in public bond offering.

Among the jurisdictions where issuers more frequently tend to opt for third-party credit enhancement, only one jurisdiction (Tunisia) reported a mandatory requirement for credit guarantees, and even then, only for the case of un-rated bonds. Banks appeared to be the main providers of credit guarantees, although in several cases holding companies of the issuing entities also act as guarantors.

Figure 3.2-20: Third-party credit enhancement services for bond issuers



Note: Information on Brazil, Indonesia, Lithuania, Mauritius and Pakistan is not available.

Investor base

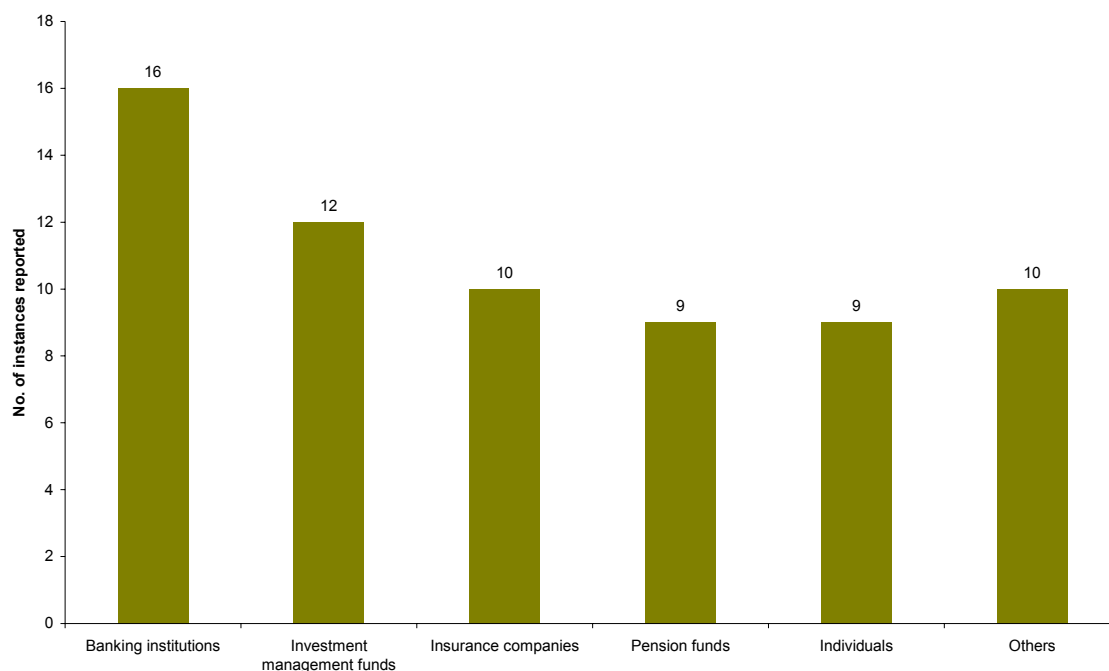
The investor base of corporate bond markets in developed economies has become increasingly dominated by institutional investors. In Japanese and European bond markets for example, institutional investors such as insurance companies, pension funds and unit trusts, have steadily displaced banks, individuals, and non-financial firms as investors. In the US, although the share of corporate bonds held by households remains fairly sizeable, the share held by mutual funds has shown a much more dramatic increase over the last few years.

In addition, products such as bond funds and hybrid (i.e. bond and equity) funds tend to be “total return-oriented” and thus their managers tend to be more active in trading their positions more frequently than “buy and hold” investors, thereby adding to market liquidity and depth to the pricing of risk in the bond market.

Survey results suggest that banks are the foremost investors in corporate bonds within the markets sampled, followed by investment management companies, pension funds, insurance companies and individuals. Apart from these, certain respondents also reported some involvement of non-bank financial companies and securities companies (see Figure 3.2-21) and limited retail participation. The dominance of banks in the investor base of many of these markets appears to reflect a natural progression in the development of corporate bond markets, also seen in the evolution of more developed markets, where banks initially played a relatively more important role than institutional funds such as unit trusts/mutual funds and pension funds.

Many of the jurisdictions surveyed reported that a narrow investor base is among the main impediments to bond market development in their jurisdictions. In relatively small bond markets, the lack of investment in bonds is simply attributed to the lack of knowledge about the investment opportunities presented by bonds among investors. In Brazil, on the other hand, the high yields offered by government bonds are cited to be the main factor behind the lack of interest in investing in relatively risky corporate bonds, especially among retail investors. Other factors that were identified to impact on investor participation include risk aversion, currency devaluation risk as well as worries over the credit-worthiness of issuers undergoing large-scale restructuring, especially in the countries hit by the East Asian financial crisis of 1997-98. Certain Latin American jurisdictions also cited the perceived high investment risk in selected emerging markets as among the main factors that hinder efforts to widen the investor base for the bond market.

Figure 3.2-21: Corporate bonds: Investor base



Note: “Others” include non-bank financial companies, securities firms and other types of non-financial companies. Information for Brazil and Trinidad & Tobago is not available. The figures indicate the number of countries in which these entities have been reported to be a major investor in corporate bonds.

Legal Protection for Investors of Bonds

A crucial aspect of a well-functioning corporate bond market is the provision of a set of laws that clearly define the limit of public investors’ legal liability to force bankrupt issuers to repay their obligations and the procedures for going to that limit.⁶⁹ In essence these laws should not only define creditors’ rights but also provide a mechanism for fair and efficient reorganization in the case of default or bankruptcy. Such a mechanism, similar to Chapter XI of the Bankruptcy Code in the U.S., gives a company that is in financial distress protection from its creditors while it works out a plan for rehabilitation or liquidation, either under court supervision or through a voluntary reorganization. As a result, investors are able to rationally assess the risk of investing in bonds and the likelihood of a partial restoration in cash or securities with little delay.

Questionnaire responses reveal some areas for improvement in existing procedures with regards to bankruptcy in certain emerging markets. Some jurisdictions have even reported that existing bankruptcy legislation does not specifically cover issues related to bankruptcy or foreclosure of bond transactions between issuer and bondholders, and have

⁶⁹ See “Corporate Bond Markets Development” by Tadashi Endo, *Bond Market Development in Asia: Finance and Investment*, Organization of Economic Co-operation and Development Proceedings, 2001.

identified that inadequate legal protection of bondholders' rights as among the major problems faced in their jurisdictions. There have also been instances in which bondholders are given less priority than other creditors and stakeholders. Lithuania, for instance, reported that bondholders' claims are ranked third in importance, trailing employees' claims—e.g. employment compensation—and claims by the state, for example, taxes and health insurance contribution. In this case, any claims made by bondholders would only be entertained after the demands of the top two classes of creditors, i.e. employees and the state, have been met. Even in countries where there are bankruptcy laws that meaningfully provide for the resolution of the interests of creditors and debtors, certain deficiencies in the judicial process are said to impose problems with regards to the effective enforcement of bankruptcy laws and the protection of creditor rights cannot be implemented or are very protracted. It is also reported that this is sometimes exacerbated by inadequate corporate governance standards.

In addition, a number of respondents also stated that the rehabilitation framework of troubled companies need to be better defined to make operational procedures speedier and more effective. Lastly one jurisdiction surveyed stated that in the absence of effective bankruptcy procedures, debtors remain recalcitrant in undertaking negotiations with creditors.

Nevertheless, many markets have undertaken efforts to establish robust bankruptcy provisions that recognize and uphold investor protection. While not all of these may specifically cater to the bond market, they nevertheless provide for the event of issuer default. In several cases, bondholders are given at least equal rights as other creditors in the event of a bankruptcy.

3.2.6 The impact of macroeconomic policies on bond market development

The types of monetary policy tools generally in use

Successful bond markets, and in particular government bond markets, have typically been associated with an environment in which credit allocation and nominal interest rate levels are set primarily by the market and are free to reflect market expectations. Such an environment is fostered by the use of indirect instruments of monetary policy.^{70, 71} It has been argued that the adoption of such instruments—especially open-market operations—can encourage more active secondary markets in bonds. Central-bank open-market sale

⁷⁰ Indirect monetary instruments operate through financial markets by influencing underlying supply and demand conditions, and include reserve requirements, rediscount and Lombard windows, public sector deposits, credit auctions and open market operations. Direct instruments, on the other hand, set or limit either interest rates or credit through regulations and include interest rate controls, bank-by-bank credit ceilings, statutory liquidity ratios, directed credits and bank-by-bank rediscount quotas.

⁷¹ The generation of market-determined interest rates needs to be supported by auctions and sufficient supply of government bonds, as well as the availability of repos and reverse repos to facilitate the entry into, and exit from the market and to allow the market to influence interest rates.

and purchases can lead to higher market turnover as well as provide the market with information about the direction of monetary policy, which in turn can generate further trading activity.⁷²

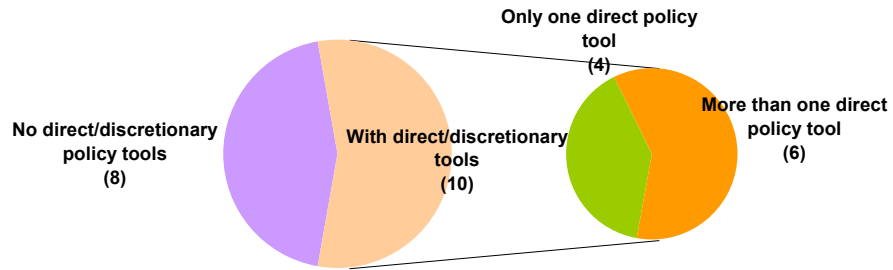
Hong Kong is one example of a market that has given up direct monetary instruments in favor of open-market operations—specifically, repurchase and reverse repurchases of Exchange Monetary Fund Notes (EFNs) through the Hong Kong Monetary Authority’s liquidity adjustment facility (discount window) and, to a lesser extent, outright purchase and sale of EFNs in the secondary market by the monetary authority.⁷³ This has led to an active market in EFNs with the consequential development of an effective benchmark yield curve for the Hong Kong bond market.

In a review of the types of monetary instruments among survey jurisdictions, all respondents reported the availability of indirect instruments, including reserve requirements, as well as repos and reverse repos. In particular, every one reported the use of open market operations. Chinese Taipei for example, reports that its Central Bank frequently uses open market operations to fine tune bank reserves and controlling money stock. Nevertheless, the use of these tools in the majority of the surveyed jurisdictions appears to be limited for various reasons, including a reported lack of properly designed treasury securities, absence of very short-term money markets, and a continued reliance by many monetary authorities on credit controls. Indeed, direct instruments are also concurrently being used in around half of the jurisdictions that responded. Statutory liquidity ratios and other similar mechanisms are most common, followed by directed credit. (see Figure 3.2-22, Figure 3.2-23 and Figure 3.2-24).

⁷² See “Transformation of Markets and Policy Instruments for Open Market Operations” by Stephen Axilrod, IMF Working Paper WP/95/146, International Monetary Fund, page 11, December 1995 and “The Effects of Open Market Operations on the Price Discovery Process in the Japanese Government Securities Market: An Empirical Study” by Hirotaka Inoue, research paper for report on market liquidity, Bank of International Settlements, May 1999.

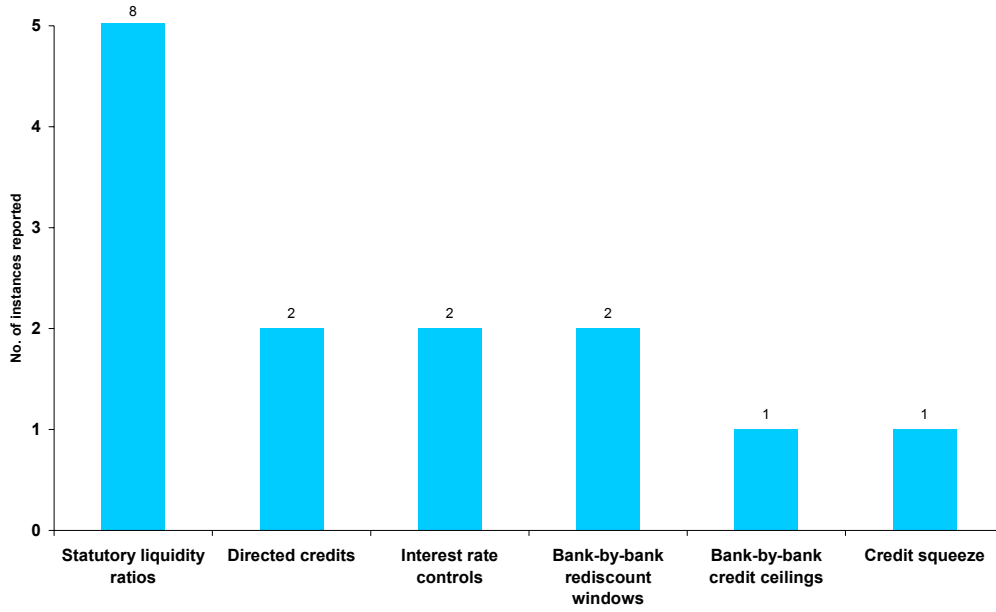
⁷³ Previously the main monetary instrument was a form of statutory reserve requirement (SRR).

Figure 3.2-22: Emerging markets: The use of “direct”/”discretionary” monetary policy tools and instruments



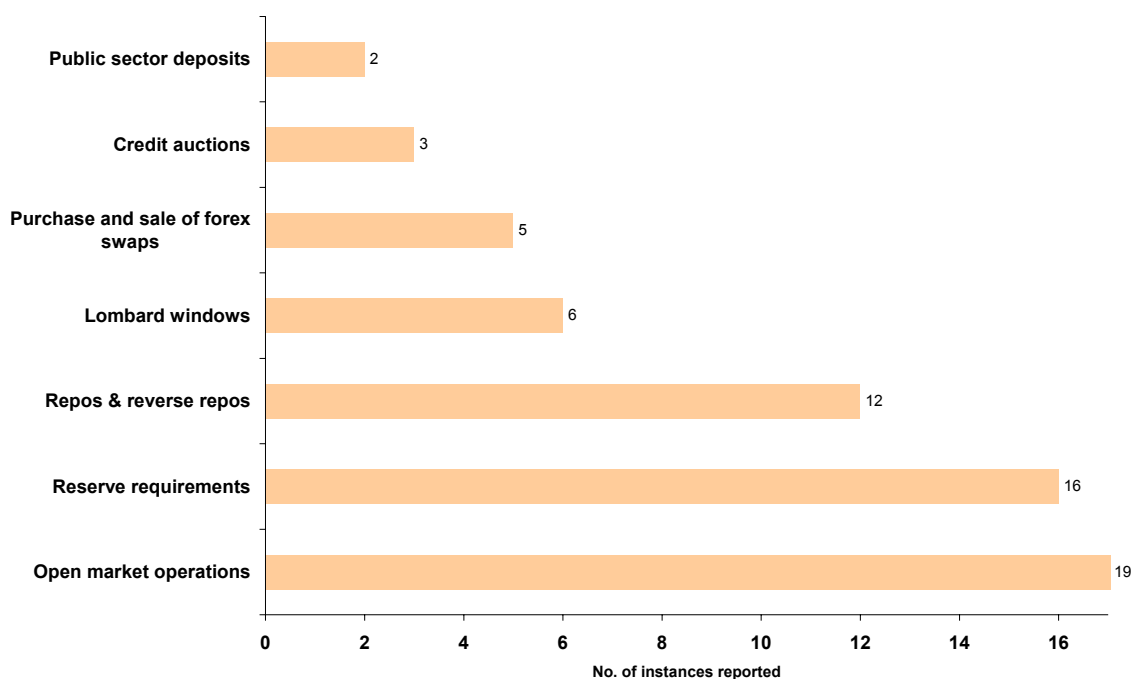
Note: Information on El Salvador, India, Indonesia and Mauritius is not available.

Figure 3.2-23: The variety of “direct”/“discretionary” monetary policy tools and instruments



Note: Information on certain jurisdictions is either not complete or unavailable. Please refer to the Appendix.

Figure 3.2-24: The variety of “indirect” monetary policy tools and instruments



Note: Information on Brazil, India and Indonesia is not available. The chart indicates the number of countries where the respective instruments are reported to be in use. Information on certain jurisdictions is either incomplete or unavailable.

Implementation of capital controls

Capital controls are a device employed by policy makers to monitor and manage the inflow and outflow of capital into the economy and may play an important role in the effective management of national monetary policy in a number of countries.⁷⁴ However, such controls can also, over the longer term, limit capital market development if they discourage international issuers and investors. In the case of the stock market, there is empirical evidence that liberalization is associated with a reduction in the cost of equity capital.⁷⁵

The past experiences of more developed economies suggests that capital controls have had an adverse impact on the development of domestic corporate bond markets. In the US, capital controls imposed during the 1960s contributed significantly to the development of the euro dollar market. The Interest Equalisation Tax of 1964⁷⁶, for

⁷⁴ See “Country Experiences with the Use and Liberalization of Capital Controls”, International Monetary Fund, December 1999.

⁷⁵ See “Stock Market Liberalization, Economic Reform, and Emerging Market Equity Prices.” by P.B. Henry, *Journal of Finance*, Vol. IV, No.2, April 2000.

⁷⁶ The Interest Equalisation Tax is classified as a form of capital control in extant literature. See “Fixed-Income Markets in the United States, Europe, and Japan: Some Lessons for Emerging Markets” by Garry J. Schinasi and R. Todd Smith, IMF Working Paper, December 1998.

example, raised the cost of bond issuance by non-US residents in the US bond market, and provided strong incentives for the development of the international US dollar bond market.⁷⁷

The use of capital controls is not widespread among the jurisdictions surveyed. Approximately one third of those surveyed reported some form of restrictions on capital movement in their jurisdiction, although the degree and form of these controls vary.⁷⁸ Bangladesh and Thailand, for instance, reported that free currency convertibility is limited to the current account and that certain restrictions in the capital account apply. In other countries where capital controls are practiced, restrictions on capital movement are fairly limited. In some countries, these restrictions only apply to certain short-term investment transactions while in others this may involve certain procedural requirements with regard to borrowing and investing activities by non-residents.

Many of the jurisdictions surveyed recognize that the implementation of capital controls could potentially hamper the development of the domestic bond market and this has resulted in the liberalization of barriers to free capital movements in many countries. Slovenia, for instance, reported significant measures to bring capital control regulations in line with practices in more developed countries, specifically those in the European Union. In countries where some form of capital controls is still deemed necessary, certain measures have been introduced to mitigate its potentially deleterious effect on bond market development. Singapore, for instance, despite reservations about non-residents borrowing certain amounts of money for uses unrelated to the domestic economy, allows non-residents to issue Singapore dollar-denominated bonds on condition that they swap or convert the Singapore dollar proceeds into foreign currency.

3.2.7 Market microstructure

An effective market microstructure can promote market integrity and improve the efficiency of prices. Robust and efficient trading, clearing and settlement and depository systems can lead to lower trading costs and price volatility, reduce market fragmentation, facilitate order flow, improve price discovery and ensure wide information dissemination. It can also help to reduce systemic risk. Ultimately these promote investor confidence and can greater market liquidity.

OTC vs. exchange-traded bonds

To ensure greater secondary market liquidity in bonds, one of the major goals must be to ensure that there is a more organized marketplace for the trading of bonds, i.e. one with clear and efficient rules and procedures and effective price dissemination. In both international and domestic bond markets, it is common for bonds to be listed on an exchange but traded in the over-the-counter market. Bonds can differ greatly from one issue to another depending on their diversity of features, including maturity, duration, coupons, credit risk and so on. This characteristic of bonds means that—especially for the

⁷⁷ These regulations were eliminated in 1974.

⁷⁸ As of end-2000.

wholesale market—trading can be more effective through a quote-driven system than the order-driven arrangements that are typically found in many exchanges, which do not normally allow for negotiated trading.

For example, eurobonds are by and large listed in London or Luxembourg but practically all the trading occurs on the OTC market. For another, despite there being thousands of bonds listed on the New York Stock Exchange, trading in the OTC market eclipses that of exchanges. The same is true of domestic bond markets in Japan, the United Kingdom and Germany as well.⁷⁹

Nevertheless, the listing of bond issues on an exchange does serve an important function. In the case of the NYSE, it provides a safeguard to small investors⁸⁰ and facilitates the information flow and price-discovery process.⁸¹ Furthermore, the mandate of some institutional investors limits their holdings to only exchange-traded securities.

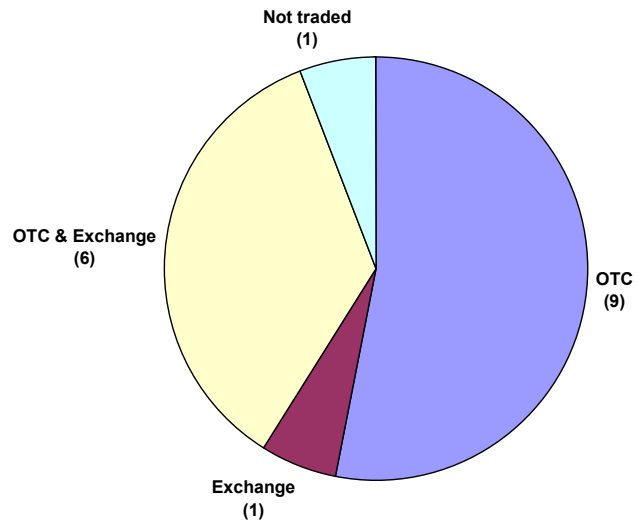
Where bond trading occurs among the jurisdictions surveyed (in some there is none), corporate bonds tend to be traded on the OTC market. While in a significant number of cases corporate bonds are reported to be traded on both OTC and on exchanges, a significant number of these reported that trading in corporate bonds primarily occurs on the OTC market. Benchmark securities, to a certain degree reflect the trend in corporate bonds with most survey respondents reporting a general preference to trade benchmark securities on OTC markets, with a comparable number of markets reporting trading activity on both exchange and OTC. Not many markets report the exclusive use of exchanges for bond trading either in the case of benchmarks or corporate bonds (see Figure 3.2-25 and Figure 3.2-26).

⁷⁹ See “Fixed-Income Markets in the United States, Europe, and Japan: Some Lessons for Emerging Markets” by Garry J. Schinasi and R. Todd Smith, IMF Working Paper, December 1998.

⁸⁰ Small customer orders must be executed through the exchange unless a better price can be obtained off the floor.

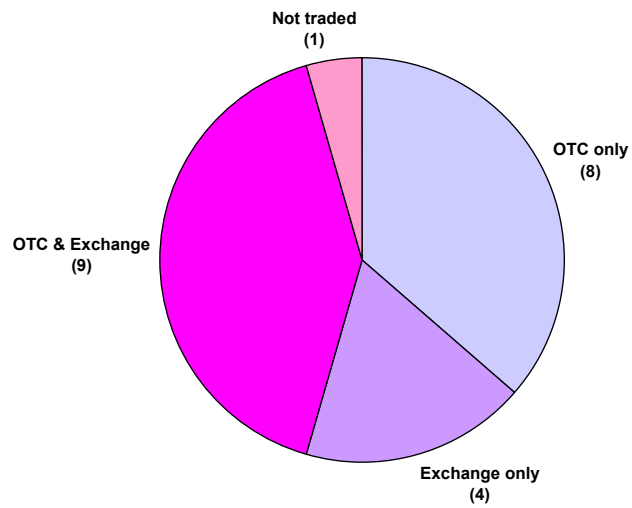
⁸¹ The Automated Bond System provides quotes on all listed issues to broker-dealer firms that subscribe to the service.

Figure 3.2-25: Secondary trading of benchmark securities: OTC vs. Exchanges



Note: Information on Brazil and Indonesia is not available. In Trinidad & Tobago, the prime lending rate has been reported to be used as the benchmark. No benchmark has been reported in the case of Lithuania and El Salvador.

Figure 3.2-26: Secondary trading of corporate bonds: OTC vs. Exchanges



A significant number of jurisdictions are trying to encourage more exchange-based trading of bonds, primarily through fiscal incentives—through tax exemptions for example, as in the case of Mauritius—and the relaxation of certain trading restrictions on the exchange. Some have even developed a separate exchange for bonds, specifically to promote the listing and trading of both government and corporate bonds, with major endeavors in this area undertaken by South Africa in the establishment of the Bond Exchange. Exchange-trading is generally viewed as being better regulated, having more effective price-discovery systems and allowing retail or smaller investors better access to the bond market. Nevertheless, the survey responses suggest that for as long as bond markets typically remain a wholesale market, OTC arrangements—for the reasons pointed out earlier—may continue to be as popular as, if not more popular than, exchange-based trading.

Some jurisdictions have clearly acknowledged this and have taken steps to formalize OTC activities, with a view to achieving some of the benefits of exchange-based trading within an OTC setting. Thailand, which has achieved a fair degree of success in this respect, has established a self-regulatory organization to oversee the OTC bond market in the form of Thai BDC, and with whom all licensed bond dealers’ representatives (traders) are registered. The SRO sets up codes of conduct as well as standards and conventions for trading, and also acts as an information centre by collecting trade data from dealers/market makers and distributes this information to the public. A similar arrangement also exists in Chinese Taipei, where the ROC Over-the-counter Securities Exchange was established as the regulatory authority responsible for both exchange- and OTC-traded debt securities.

Market-makers

Liquidity in secondary markets is often promoted by conferring privileges on some market participants—often referred to in bond markets as “primary dealers”—in return for an obligation for them to make markets.⁸² Primary dealer systems in government bond markets in some of the more established bond markets confer privileged access to new issues, information dissemination systems and bond lending facilities in exchange for the obligation to “make markets”. In corporate bond markets this approach can be more complicated as there is no monopoly issuer of corporate bonds (as there is in the case of government bonds). Nonetheless certain market operators do confer certain market-making privileges, such as exclusive access to information dissemination systems or portals to market makers in corporate bond markets.⁸³

Markets that were surveyed fell into one of three broad categories with regard to market making. More than half of the survey respondents use a primary dealer system for the government bond market but not for the corporate bond market while around a quarter reported no system of primary dealers in either the government bond or corporate bond

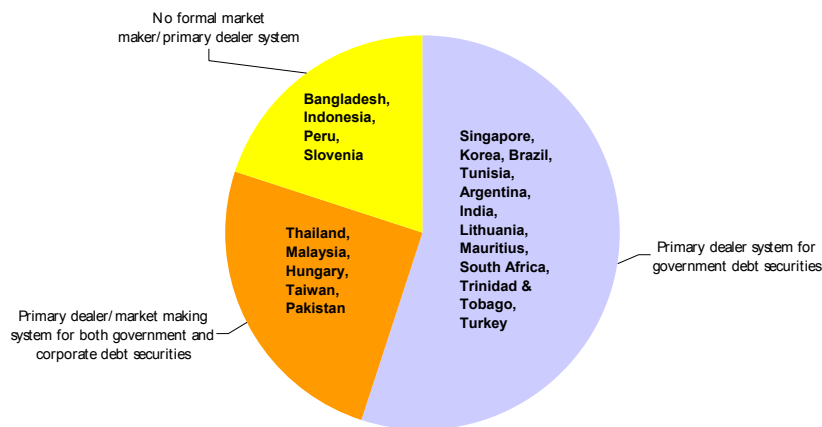
⁸² It should be noted that even within such a system, arrangements that may limit competition—for instance, restrictions on the diversity or range of market makers—can lead to pricing and other market inefficiencies.

⁸³ Such as recognised dealers of ISMA in the Eurobond market.

markets. These were jurisdictions whose trading systems have typically not been formally set up or are strictly traded on an order-driven exchange. Another five have market makers in both government bond and corporate bond markets. (see to Figure 3.2-27). The development of a market making system for corporate bonds in several of the jurisdictions, however, is reported to have been substantially limited by the characteristics and corresponding lack of liquidity in the secondary markets for these securities. One such jurisdiction, namely Thailand, reported that although a regulatory framework for a market making system in the corporate bond market has been developed by the regulator, the active use of such a system in practice, would have to be initiated and driven by the issuers themselves. As corporate issuers in Thailand do not exercise the same power over their underwriters—as the government issuer does over its designated set of primary dealers—market making activity in the corporate bond market is typically voluntary and not as high as that found in their government bond markets.

Nonetheless, the survey results show that in almost all cases, the bond markets (government or corporate) that have some form of a primary dealer or market making system in place are also those that reported higher liquidity levels in their respective secondary markets.

Figure 3.2-27: Secondary market: Primary dealers, market makers



Notes:

Information on El Salvador and Kenya is not available.

In the case of Brazil, while market participants are allowed to act as primary dealers, no formal market-making system has been reported to exist.

In Hungary, market makers who are primary dealers are described as “inter-dealer brokers”.

In Pakistan and Thailand, while a framework has been set up to allow market making in corporate bonds, the use of this facility has been limited.

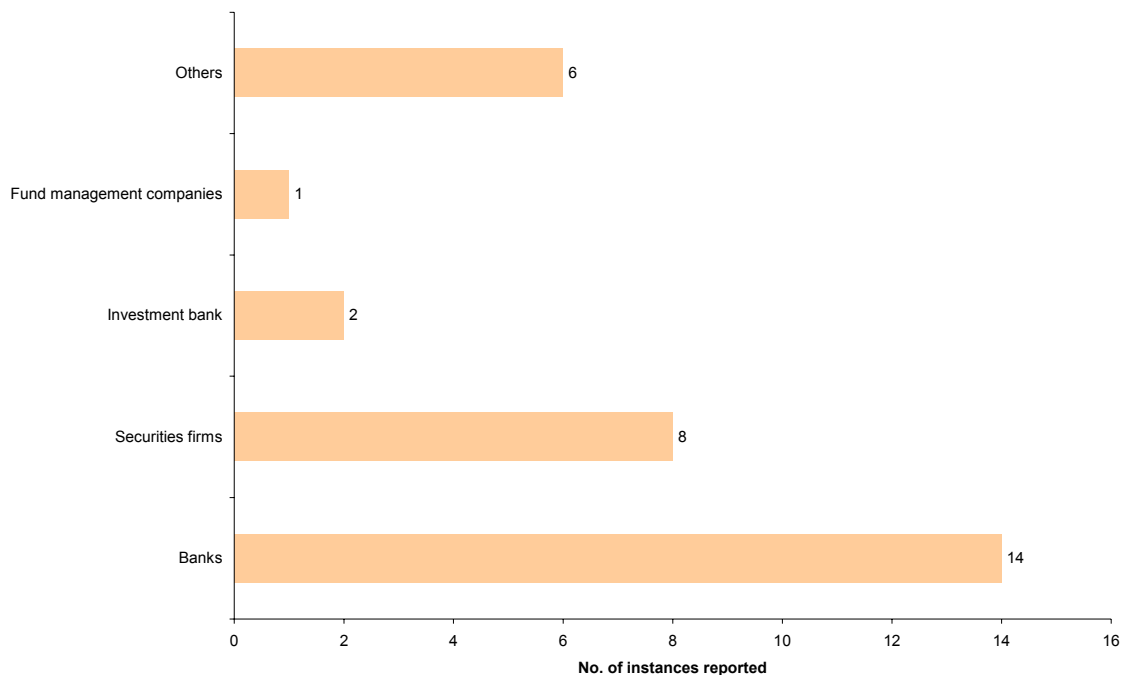
Chinese Taipei reported that while a formal primary dealer system exists, primary dealers are not obliged to make markets.

In Tunisia, while market intermediaries are allowed to act as market makers, this activity does not exist in practice.

In general, primary dealership is conferred to a variety of market participants. However, banking institutions seem to play a key role as primary dealers among the sample markets, with certain jurisdictions reporting that the primary dealer/market maker status being conferred only to banking institutions (see Figure 3.2-28). Securities firms make up the second biggest category of market makers and primary dealers. Fund management companies, while reported to be involved in market making in certain jurisdictions, do not appear to play a major role as primary dealers sample-wide.

Despite the availability of a market making system in over half of the sample, several jurisdictions reported that the lack of market makers in the bond markets have been one of the factors behind the relatively low level of liquidity in the secondary market. Malaysia, for instance, indicated that the high holding costs and the shortage of bonds outstanding have made primary dealers reluctant to make markets and this has undermined the effectiveness of the primary dealer/market maker system.

Figure 3.2-28: Who are the primary dealers and market makers?



Notes: "Others" includes other financial institutions such as merchant banks, foreign commercial banks and credit companies.

Information Dissemination Systems in OTC markets

A centralized information dissemination system in OTC markets ensures that traded bonds are priced competitively and not subject to price-fixing. The lack of such a system can cause market fragmentation and a subsequent increase in bid-offer spreads, thus lowering liquidity. Very few survey respondents spoke of centralized information dissemination in their OTC markets. Among those that did, one market reported having a screen-based system that is accessible by dealers and non-dealers alike. Some others have centralized price information systems that also facilitate price discovery by displaying all price, yield and volume information as well as matched orders cumulatively.

Clearing and Settlement Systems

Robust clearing and settlement systems are a crucial element to bond market development because they help enhance the efficiency of bond trading and reduce their associated risks. In addition, bond market liquidity is closely linked to the reliability of bond clearing and settlement systems. Investors will only trade bonds if they are confident of the settlement of their trades.

The existence of a centralized depository is one of the key elements of a dependable clearing and settlement system by concentrating physical securities in one location. In most cases, central securities depositories operate an automated book-entry system of settlement. This increases the speed and efficiency of bond trading, reduces costs associated with settlement and custody arrangements and minimizes errors and delays which may be seen in a manual system. Book-entry systems are also considered a precursor to shortening of settlement cycles and implementing delivery versus payment. Immobilization of bond scrips within a central securities depository eliminates risks related to the destruction, loss or theft of physical certificates.

Delivery versus Payment (DVP) settlement of bonds ensures that securities and payment are transferred within the system simultaneously or almost simultaneously. It effectively reduces the risk of securities being delivered, but payment not received or vice versa. An automated linkage between the clearing and settlement system and the payment system ensures an added level of guarantee that payment will be made in the event of a transfer of securities and vice versa.

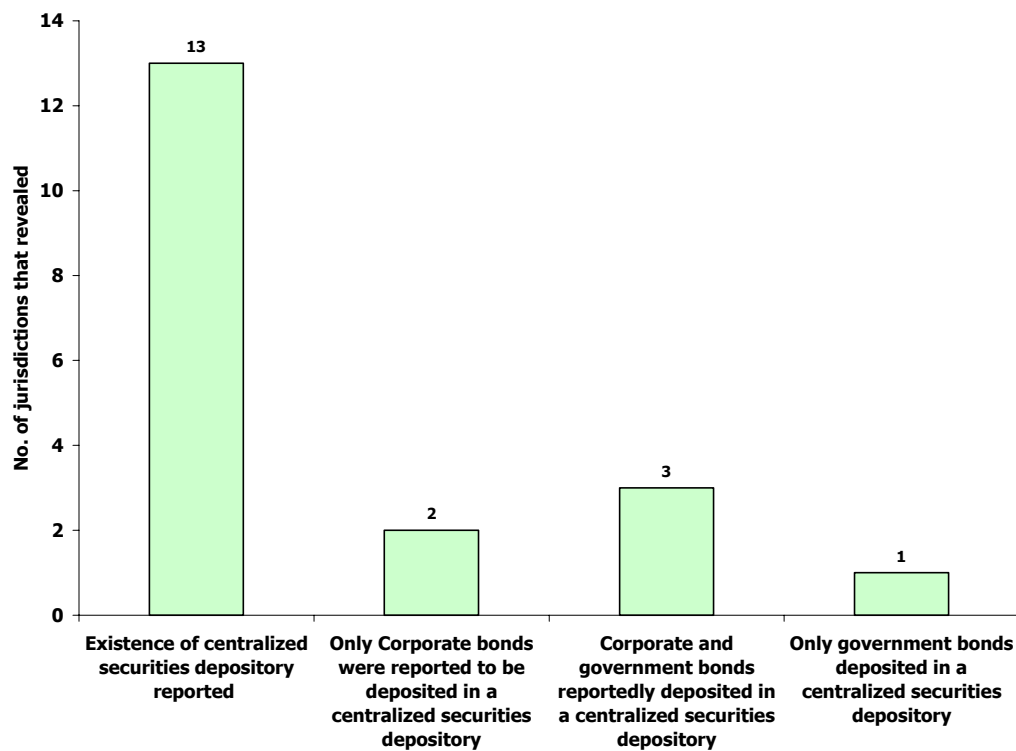
In addition, a shorter settlement cycle reduces the risk of counter party insolvency or default. A central clearinghouse and the development of a central counter party that substitutes its credit risk with that of other market participants may effectively remove counter party risks.

In our survey, we seek to determine the extent to which our sample jurisdictions meet these characteristics of robust settlement systems. We also examine the use of gross and net settlement systems in our sample jurisdictions.

More than half of our survey jurisdictions revealed the existence of a centralized securities depository (CSD) (see Figure 3.2-29). However, our survey suggested that the

usage of a CSD was not necessarily mandatory. In Thailand, investors were given the choice to deposit their bond certificates in a centralized depository or to hold them in physical scrip form. In several jurisdictions, only certain types of bonds were deposited in a central depository. For instance, in Mauritius, only corporate bonds were kept in the Central Depository and Settlement Ltd, while in Chinese Taipei, only government Treasury Bonds have been stored in the central depository since 1998. The usage of a particular central depository also varied by the trading venues of the bonds concerned. The survey also indicated that in some jurisdictions, bond and equity transactions utilized the same central depository. This was the case in Thailand, where the Thailand Securities Depository Company served as a central depository for bond and equity trades.

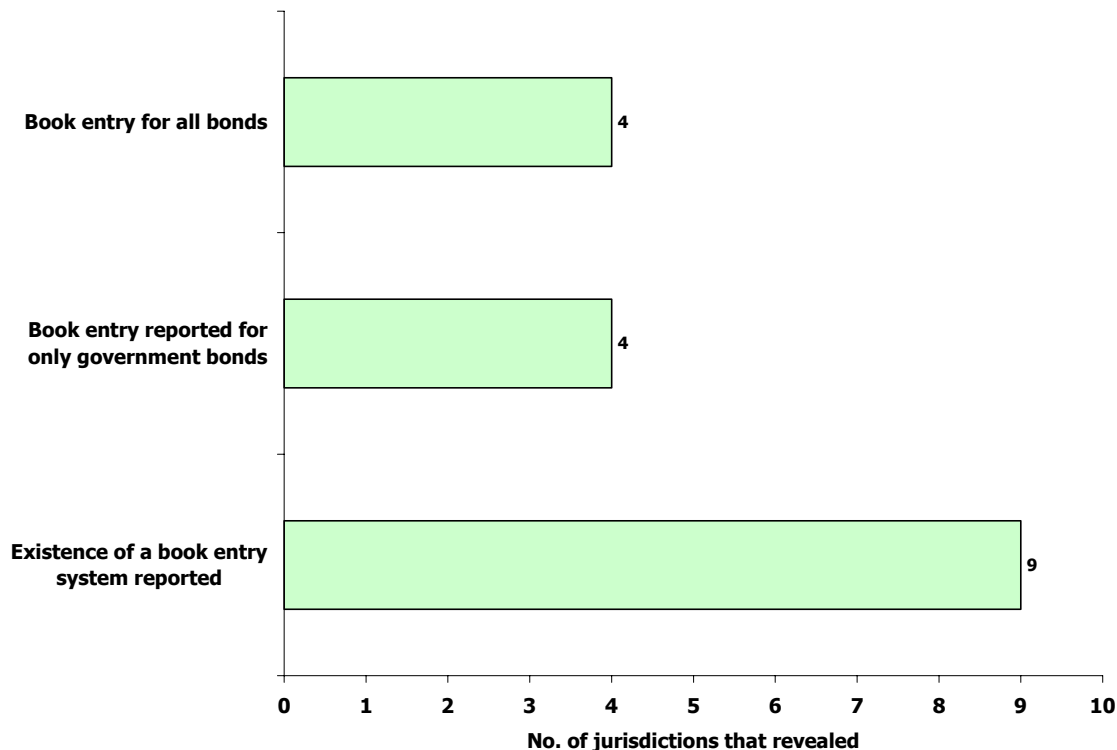
Figure 3.2-29: Existence of a centralized securities depository



Almost half of the jurisdictions indicated that they used a book-entry system in the clearing and settlement of trades. For the majority of these jurisdictions, a book entry system was utilized for government bond trades (see Figure 3.2-30). Interestingly, India reported that investors in government securities had the choice of settling trades through the Subsidiary General Ledger (SGL) of the Reserve Bank of India (a book entry

system), or via the exchange of physical certificates. Only Malaysia revealed that both government⁸⁴ and corporate bonds were settled through a centralized book entry system.

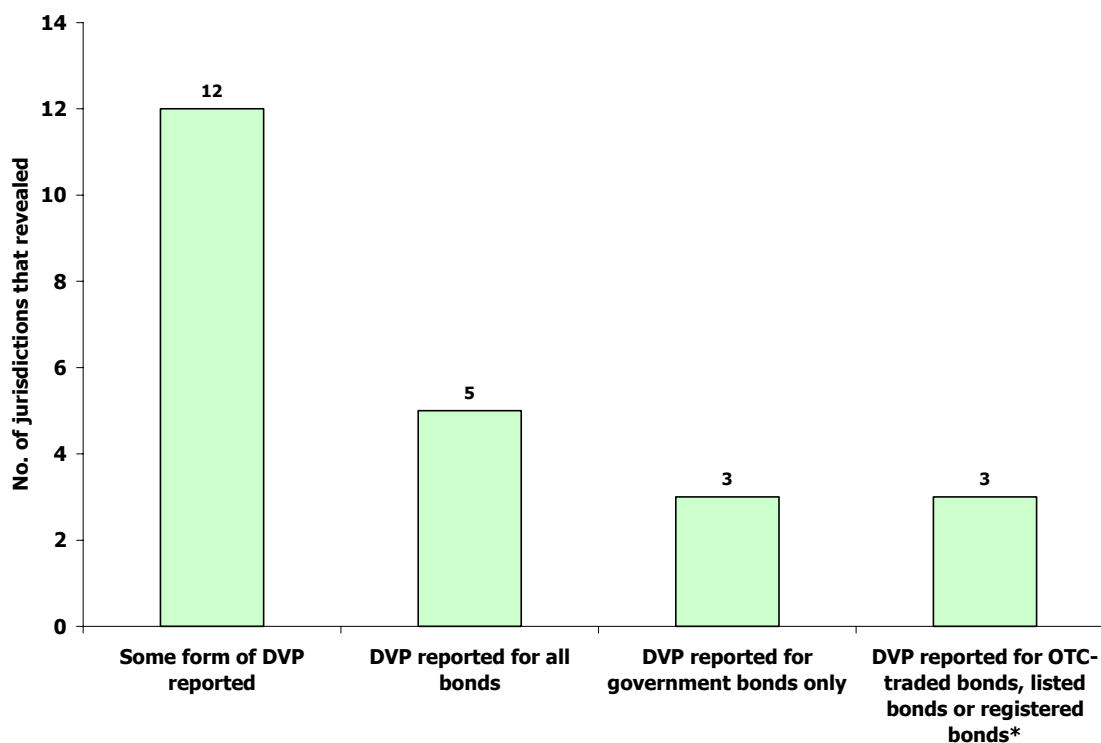
Figure 3.2-30: Use of a book entry system



Around half of the survey jurisdictions reported usage of a settlement system on a DVP basis in their bond markets. However, DVP was implemented across the entire bond market in only five of the jurisdictions that provided information (see Figure 3.2-31). In Chinese Taipei, Thailand, India and Argentina, only government bond trades were settled using DVP. Meanwhile, in Korea, only OTC-traded bonds were settled through the DVP system introduced in 1999. Chinese Taipei reported two different methods for settling bonds in their markets, one is where parties who negotiate between themselves decide on the methods for payment and delivery whilst those that use the formally established Electronic Bond Trading System were settled through DVP. An interesting point to note is that only one respondent reported a linkage between the clearing and settlement systems and the payment system. The DVP system for Singapore Government Securities (SGS) and corporate bonds was facilitated via linking the Monetary Authority of Singapore Electronic Payment System (MEPS) with the MEP-SGS system and the Debt Securities Clearing and Settlement System (DCSS), respectively.

⁸⁴ Nonetheless, a significant amount of corporate bonds currently, including almost all commercial paper is held outside this system.

Figure 3.2-31: Existence of DVP



Note: In Peru, only registered bonds are settled using DVP. In Tunisia, DVP is only used to settle listed bonds. In Korea, only OTC-traded bonds are settled using DVP.

About one third of our sample jurisdictions provided information on their settlement cycles, indicating significant variation in their settlement cycles. The majority of these jurisdictions reported the adoption of settlement cycles of T+3 or shorter. Two jurisdictions, Malaysia and India, reported having settlement cycles of T+0 for OTC-traded bonds and corporate bonds, respectively. Our survey respondents also revealed that settlement cycles differed across the types of bonds traded and their trading platforms. For instance, in Bangladesh, the settlement cycle varied from T+5 for bonds in Group A and B, to T+7 for bonds in the Z group. Settlement cycles were also shown to differ by trading venue in Chinese Taipei, Lithuania, Peru and Malaysia. For example, in Chinese Taipei, bonds traded in the OTC market were settled on or before T+2 while those traded under the ROSE (Republic of China OTC Stock Exchange) electronic bond trading system (EBTS) was settled on T+2. This was also the case in Peru, where bonds traded in the auction market were settled on T+1, while those traded in the continuous trading market were settled on T+3.

Close to a quarter of the surveyed jurisdictions indicated the existence of a central clearinghouse in their bond markets. Again, there was substantial variation in the types of

bonds that could be cleared at a single clearinghouse. In Mauritius, only corporate bonds were cleared at the Central Depository and Settlement Ltd., the central clearinghouse. Our survey findings also suggested the accessibility of a clearinghouse could vary according to the trading venue of bonds. For example, in Chinese Taipei, only ROSE EBTS-traded bonds were settled at a central clearinghouse, whereas OTC-traded bonds were not.

The survey also seeks to examine the usage of gross or net settlement systems across our sample jurisdictions. Under a gross settlement system, each bond transaction is settled individually. Meanwhile, under a net settlement system, bond traders exchange payments that offset their mutual obligations to deliver identical items at a particular time, following which, only one net amount is exchanged. Net settlement systems have become increasingly popular because it alleviates a major drawback of gross settlement, the possibility of co-ordination delays, or in extreme cases, complete gridlock, where every party to a bond trade waits for another to send in the first payment. However, a major disadvantage of the net settlement system is that the central counter party ends up bearing most of the associated liquidity and credit risks. Nonetheless, the increase in trading volumes and an increase in the values transacted has increased the trend towards gross settlement systems, in particular real time gross settlement systems. Such a system may reduce the liquidity and credit risks associated with net settlement mentioned earlier.⁸⁵ Based on the survey findings supplied by over half of the survey jurisdictions, there was considerable variation in the usage of gross or net settlement mechanisms. Half of these jurisdictions indicated the existence of a gross settlement system. In addition, our findings also revealed that the type of settlement mechanism did not have to be uniform in a bond market. This was the case in Korea and Chinese Taipei. Specifically, in Korea, exchange-traded bonds are settled on a net basis by the Korean Securities Depository, while OTC-traded bonds were settled on a gross basis. Similarly, in Chinese Taipei, bonds traded in the ROSE EBTS were settled on a net basis, while their OTC counterparts were settled on a gross basis. Malaysia, Thailand and Singapore also indicated that a Real Time Gross Settlement System (RTGS) facilitated the gross settlement of bond trades.

Two jurisdictions, meanwhile, indicated the existence of a guarantee fund to ensure that all bond transactions are settled and cleared. For instance in Lithuania, the Guarantee Fund guaranteed the full execution of all transactions, while in Tunisia, STICODEVAM guarantees all bond clearing and settlement.

⁸⁵ See “The Incentive Effects of Settlement Systems: A Comparison of Gross Settlement, Net Settlement, and Gross Settlement with Queuing” by William Roberds, Discussion Paper No. 99-E-25, Bank of Japan Institute for Monetary and Economic Studies Discussion Paper Series, September 1999.

Chapter 4 : Issues and initiatives

The previous chapter painted, in some detail, a picture of key bond market characteristics in a number of major emerging market jurisdictions, based on information derived from a survey of those jurisdictions. Aside from facts about these characteristics, the survey also obtained unique first-hand feedback on issues faced by the authorities in developing their respective markets. The purpose of this chapter is to distil some of the more significant issues affecting emerging market jurisdictions as a whole, and to examine possible implications for the design of bond market development programmes going forward.

One prevalent issue that arose from the feedback received is that companies in emerging market jurisdictions still appear to be relying heavily on bank loans to finance their activities. Although it is recognized that an established banking system can complement bond market development, in many of these jurisdictions the capital market's share of financing—and in particular that of bonds—remains typically smaller than the share of funds raised through the banking system. In other words, the continuing dominance of “balance-sheet intermediation” in many jurisdictions is thought to be limiting the potential supply of domestic corporate bonds in their markets. For a variety of reasons, including the existence of long-standing relationships between companies and their bankers and prohibitive primary corporate bond market regulation, the relative cost of raising funds through the corporate bond market remains high to a majority of companies.

As a number of jurisdictions have indicated, regulators can help in dealing with this issue through regulatory reform. Broadening the issuer base, for instance, by allowing foreign entities to raise funds in the domestic corporate bond market, can be effective but may yield positive results only in the longer term. By contrast, speeding up the issuance process by removing undue administrative impediments can afford a “quick win” by immediately lowering the time-to-market, which can be a significant component of bond financing costs. It can involve something as straightforward as standardizing documentation for bond issuance, or removing specific administrative impediments, such as minimum credit rating requirements and limits on the minimum size of the issuer. It can also involve a more comprehensive approach that, for instance, shifts the overall focus of regulation from an assessment of the merit of a particular issue (which can consume a lot of time) to supervising the extent of material information disclosure on that issuance proposal, as is currently being pursued in some of the more developed emerging market jurisdictions.⁸⁶ Other increasingly popular approaches include streamlining fragmented regulatory structures that can add to costs and that may otherwise discourage issuers from entering the bond market. Ultimately, issuers and investors will be attracted to corporate bond markets when and where there are clearly defined economic benefits that are easily realized.

⁸⁶ This full-disclosure approach to regulation shifts the majority of responsibility for evaluating the merits of an investment from the regulator to the investor.

Aside from limited bond supply, certain factors appear to be constraining the “demand side” of bond markets too. Some jurisdictions report that investors are generally less interested in maintaining bond portfolios compared to other assets because they are unaware or not accustomed to the risk characteristics of bonds; in one extreme case, a culture of portfolio investments is said not to exist. The relative lack of experience of these investors and the conservative approach they take to portfolio management may also hamper active investor participation in the bond market. Other jurisdictions where such products were better understood said that weak corporate governance, a poor disclosure and transparency regime and inadequate legal protection for bond investors were among the reasons why investors tended to limit investments to top-quality issues or shy away from investing in corporate bonds altogether. Demand for bonds also appeared to be low where investors were not able to gauge credit risks effectively, either because professional analysis was costly or lacking.

A review of the legal and tax framework, to strengthen investor protection and achieve a more balanced playing field for investments in corporate bonds, can encourage greater investor participation. For instance, the regulatory framework needs to be able to enhance bond creditors redress in the event of a default by the borrower. Others have stated that they are looking to improve their statutes that deal with contractual obligations. Certain tax initiatives can be used to remove disincentives to market participants, such as withholding taxes imposed on income distributions by corporate bonds and transaction taxes, such as real property gains taxes and stamp duties. Other tax incentives can cover the interest and fee income earned from holding, arranging, underwriting and distributing certain bonds.

Financial reporting and information disclosure standards can also be reviewed. The presentation of certified financial reports can be made a compulsory requirement for all corporate bond issuers as it is in some countries, while at the same time information dissemination systems might be improved. Domestic accounting practices ought to comply with International Accounting Standards, and as a complement to improving standards of disclosure, steps can be taken to improve third-party analysis of corporate bond issuers credit risks by setting up and enhancing the role of credit rating agencies.

In an effort to enhance the breadth of the corporate bond market, a number of the surveyed jurisdictions are seeking measures to promote the introduction of more fixed-income instruments to cater for a wider range of investor risk return profiles. Developed market trends have shown that the traditional dominance of banks and certain non-financial firms is being balanced by greater participation from institutional investors such as mutual funds and unit trusts. These investors not only provide a greater breadth to corporate bond markets but they are also characterized by the more active management of their investment portfolios as compared to institutions such as banks, life insurance companies and pension funds which tend to hold on to these assets until maturity. This provides the added benefit of ensuring greater liquidity in the secondary market for corporate bonds.

Emerging market jurisdictions appear to be increasingly aware of the significance of such players and are looking to remove or minimize any restrictive policies that prohibit greater participation by these entities. In particular one jurisdiction reported that it has revoked the minimum requirements imposed on the credit requirements of corporate bonds suitable for investment by mutual funds, provident funds and insurance companies. These efforts to promote greater participation by institutions such as pension funds and insurance companies although beneficial to the overall development of corporate bond markets must however also be balanced with the need to ensure that prudential concerns are addressed effectively.

Perhaps in reference to the situation in many East Asian stockmarkets, other respondents implied the possibility of boosting bond market demand by encouraging retail participation either through mutual funds or direct investment. Measures to achieve this include developing greater retail investor awareness of the benefits and ensuing risks of corporate bond investment and establishing government-sponsored savings bonds to further familiarize retail investors with the nuances of bond market investment. While the bond market is traditionally considered a wholesale market, the experience of some stockmarkets suggests that the advent of Internet-based innovations can allow for greater retail trading activity. On-line stock trading has indeed made an appearance in several emerging market jurisdictions, but still faces significant challenges in becoming a mainstream channel of investment. In the case of the bond market, these challenges—which can include poor Internet penetration rates in many jurisdictions—may be further compounded by a lack of familiarity among small investors with the risk-return profile of debt instruments. Therefore direct retail participation may be more easily nurtured in risk-free government bonds, than in higher risk corporate bonds.

While developing an active investor base is important for liquidity, it is nonetheless important to note that factors such as diversity, relative size and lack of uniformity of corporate bonds issues tend to result in corporate bonds not being traded like equity or government bonds. In fact, the preference of market participants, coupled with these factors, typically lead to a concentration of market liquidity in a few large, reputable corporate bond issuers. What is important, and evident from the responses provided by the survey jurisdictions, is the strategic objective to put in place effective mechanisms that provide a successful foundation for achieving as much liquidity as possible in these markets.

Ultimately, however, the key issue for many emerging market jurisdictions looking to develop bond markets may boil down to achieving an appropriate sequencing of the various stages of development. The issue of proper sequencing has attracted increasing attention in the field of financial-sector development and there are strong arguments to suggest that in addition to having clear strategic objectives and considering the attainability of such objectives, the process of market development must also be sequenced in such a way that maintains financial stability and hence ensures its long-term

sustainability.⁸⁷ Although it is acknowledged that there is no single optimal way to sequence and pace such a program, the experience of more developed jurisdictions do offer some indication as to how this process might be organized.

It is increasingly being recognized that the successful development of corporate bond markets requires the existence of well-functioning money markets and government bond markets. These markets are thought to be important preconditions to the corporate bond market development because of the benchmark yields and basic infrastructure they provide, including trading arrangements, a clearance and settlement system, and a ready set of players that understand bond investments. Results from the survey indicate a wide understanding and general acceptance of the role and significance of an effective benchmark securities market in the efficient pricing for bonds. While the establishment of a reliable benchmark yield curve does not necessarily imply the need to have a government bond market, these securities do tend to be the preferred choice of benchmarks, especially in providing longer-term yields. Indeed, many emerging market authorities seem to be actively promoting the adoption of government bonds as benchmark securities.⁸⁸ However, in many—if not the majority—of the jurisdictions surveyed, the government bond market and/or the money market are not sufficiently developed enough to play this role effectively.

Among some of the more developed emerging market jurisdictions, the issue appears to be chiefly one of liquidity. Government-bond and money markets may exist, but one or other are not actively traded, and therefore lack sufficient depth to provide effective benchmark yields. Often, liquidity may be constrained by a lack of effective facilities for primary dealers to make active markets, a “captive” market in which outstanding bond issues are held to maturity by institutions for the purpose of satisfying various prudential and other regulatory requirements, uncertainty, irregularity or relative scarcity of bond supply and an ineffective market microstructure. The situation appears to be a more fundamental one in less developed bond markets, however. Benchmark securities markets either do not exist, or are at such an early stage of development that they do not afford the basic infrastructure on which to establish a corporate bond market, let alone provide effective benchmark yields.

In a number of jurisdictions there has been a concerted top down effort to ensure that a regular issuance program for government bonds at appropriate maturities is established. Furthermore, the implementation of a pre-announced issuance calendar has also been reported by some of these jurisdictions to enable institutional investors to adjust and prepare their investment portfolios. In addition, methods of issuing government bonds have to a large extent, as in most developed markets, also shown a clear trend of moving

⁸⁷ See for instance, “Sequencing Social Security, Pension, and Insurance Reform” by Dimitri Vittas, *IMF Working Paper*, no. 1551, Dec 1995, and “Crash-Free Sequencing Strategies for Financial Development and Liberalization”, by Jorge A. Chan-Lau and Zhaohui Chen, *IMF Staff Papers*, vol. 48, no. 1, 2001.

⁸⁸ It is interesting to note, however, that in the United States—which arguably has the most active bond market in the world—the significance of government securities in providing a benchmark yield curve may be diminishing as a result of federal budget management policy. Nevertheless there are some indications that certain non-government near risk-free issues are being increasingly adopted by the market as benchmarks.

away from the issuing of government bonds at fixed prices through syndicates, in favor of auctions. This is to allow for a more competitive market-based pricing system to evolve. In cases where the financial system is at an early stage of development, there may be a need to develop the money market to address the absence of short-term benchmark securities. The presence of a money market is seen as being critical to the development of a longer-term government bond market. This again highlights the importance applied by the survey jurisdictions to developing the shorter-end of the yield curve first before extending it to longer maturities.

Nonetheless, as noted above, the chief problem facing most if not all of these countries in their attempts to establish a reliable benchmark yield curve relates to the lack of liquidity in the government bond markets and hence a substantial portion of current efforts lie in developing secondary market for these securities. This includes enhancing the institutional infrastructure of these markets by setting up primary dealer and/or designated dealer systems to promote market-making activity. Some countries have gone further to introduce inter-dealer brokers to assist primary dealers and improve market transparency by providing real-time quotes and transaction information.

In addition many of the countries surveyed that have established structures for the development of government bond markets are looking closely at the repo market or, more generally in securities lending and borrowing. These markets have allowed dealers to take a long or short position in a flexible manner and acquire securities demanded by customers without having to find another customer willing to sell the securities which consequently boosts liquidity in secondary markets. One country even reported the introduction of a general repo agreement and third party repo system to enhance the safety of repo transactions. The same jurisdiction also reported the introduction of a special loan company to assist primary and designated dealers. Another country reported initiatives to further develop risk management tools by encouraging repo activities outside the central bank's repo market and by establishing a legal framework for derivatives through the enactment of statute.

Adverse perceptions by market participants of settlement risk can severely undermine market liquidity. An enhancement of market microstructure should therefore be an area of focus. A book-entry system for government bonds can be closely tied to the wholesale payments system in an attempt to achieve DVP, which can be especially essential in enhancing the safety of OTC trades. For this to be effective, a scripless system—in which certificates might be either dematerialized or simply locked away—would be ideal. This might facilitate a trade netting system which reduces the number of payments that brokers and dealers have to make.

Other measures to improve liquidity include enhancing information dissemination systems for secondary bond markets. The establishment of an SRO can also significantly enhanced information in the market as dealers are required to register with the SRO their daily transactions which in turn are disseminated to all other stakeholders.

It should be noted that measures to improve the government bond market provide a strong basis for the growth of the market for corporate bonds, in that they both tend to share the same set of players, as well as trading, clearance and settlement infrastructures. Several jurisdictions have also indicated that they are trying to promote the exchange trading of bond markets, in an effort to widen market access, improve transparency and improve the overall market regulation and supervision. One advantage of exchange-traded markets is that they can support overall market liquidity better than OTC markets. However, it has also been noted that bond issues as a whole can display a diversity of features, including maturity, duration, coupons, credit risk and so on, which may not easily lend themselves to order-driven arrangements that are typically found in many exchanges.

Aside from elements inherent within the market itself, feedback also indicated the significance of extraneous factors on bond market development, most notably the macroeconomic environment and economic policy approaches by the government. Successful bond markets are typically associated with an environment in which nominal interest rate levels are free to reflect market expectations of future inflation, and the structure of interest rates is free to respond to market forces. In particular: spreads between yields on assets and the costs of funds to financial institutions should be free to reflect costs, risks and a competitive rate of return; yields of corporate debt securities and risk-free securities should be able to reflect credit risk; and default risk-free securities should sufficiently signal the appropriate nominal rate related to term to maturity and expectations of liquidity and future inflation.

However, many respondents noted that prevailing macroeconomic policies and conditions may have had an adverse impact on development efforts in a variety of ways. For instance:

- expansionary fiscal policy in a number of jurisdictions was said to have “crowded out” private investment by raising the cost of funds, and therefore discouraging debt financing, including that through the bond market
- macroeconomic instability, characterized by high and volatile inflation, apparently obstructed the growth of the bond market in other jurisdictions. One country reported that this situation had led to higher bond issuance costs as investors demanded higher yields to compensate them for duration and convexity risks
- the prevalent use of direct monetary tools appears to have seen an absence of market-determined interest rates, and therefore a lack active trading in government and money markets.

The challenges of reconciling macroeconomic policy objectives and capital market development aims have been well recognized for some time already. But there is now clear evidence that the strength and quality of the capital market—indeed the entire financial system—are invariably intertwined with and contributes to the long-term prosperity of the economy. Therefore, in light of the recent experiences of emerging

markets jurisdictions over the last decade, “getting the big financial policy decisions right has ... emerged as one of the central development challenges of the new century”.⁸⁹

What this as well as the preceding discussion implies is that the formulation and implementation of market development and national economic policy measures must include sufficient dialogue and co-ordination between the various stakeholders, so that the sequencing issues, systemic implications and possible consequences of policy action at both the micro- and macroeconomic level are thoroughly understood and anticipated by all parties involved—including the government, financial and market authorities and the market participants themselves. Hence, any successful effort to undertake bond market development will require a consensus to pursue the programme and ensure that policies are carefully planned, prioritized and paced with due consideration of the stages of economic development and of policy priorities.⁹⁰

⁸⁹ From *Finance for Growth: Policy Choices in a Volatile World*, World Bank, 2001.

⁹⁰ See “Designing New and Balanced Financial Market Structures in Post-Crisis Asia”, Asian Policy Forum, Asian Development Bank Institute, October 2001.

Chapter 5 : Appendix

5.1 Introduction

Survey participants

The Emerging Markets Committee (EMC) Working Group on the Regulation of Secondary Markets (Working Group 2) had disseminated the Survey Questionnaire on Domestic Bond Markets to all emerging market members of the IOSCO. The Working Group 2 received responses from a total of 22 emerging countries from Asia, Africa, Europe and the Americas. Table 5.1-1 shows the 22 emerging market members that participated in the survey.

Table 5.1-1: Participants of the Survey Questionnaire on Domestic Bond Markets

Continent	Country
Asia	Bangladesh
	Chinese Taipei
	India
	Indonesia
	Korea
	Malaysia
	Pakistan
	Singapore
	Thailand
Africa	Kenya
	Mauritius
	South Africa
	Tunisia
Europe	Hungary
	Lithuania
	Slovenia
	Turkey
Americas	Argentina
	Brazil
	El Salvador
	Peru
	Trinidad & Tobago

What is covered in the Appendix

The Appendix to the report was prepared with the objective of providing further details with regards to the facts and figures represented in Chapter 3. The Appendix contains

selected information and is based on the responses to the survey questionnaire. Since not all respondents provided complete answers to the questionnaire, the information contained in this section is not complete in certain areas.

The Appendix is divided into the following sections:

- Economic environment
- Size and structure of the bond market
- Liquidity ratios
- Benchmark/government securities
- Legal, regulatory and tax framework
- Corporate bonds: Issuers and investors
- Macroeconomic policies
- Market microstructure

5.2 Economic environment

5.2.1 Rate of economic growth

Table 5.2-1: Rates of economic growth (%)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Argentina	-1.34	10.5	10.3	6.25	5.84	-2.84	5.53	8.11	3.85	-3.40	-0.49	3.85
Bangladesh	4.92	5.04	4.57	4.08	4.93	4.62	5.39	5.23	4.87	5.94	4.97	4.96
Brazil	-4.30	1.00	-0.50	4.90	5.90	4.20	2.70	3.60	-0.10	1.10	4.20	2.06
Chinese Taipei	5.39	7.55	7.49	7.01	7.11	6.42	6.10	6.68	4.57	5.67	5.98	6.37
El Salvador	4.80	3.60	7.50	7.40	6.10	6.40	1.70	4.20	3.50	3.40	2.20	4.62
Hungary	-4.50	-11.90	-3.10	-0.60	2.90	1.50	1.30	4.60	4.90	4.20	5.20	0.41
India	5.89	1.67	4.18	4.98	6.74	7.58	7.12	4.94	6.05	6.55	6.37	5.65
Indonesia	7.2	8.9	7.2	7.3	7.5	8.2	7.8	4.7	-13.7	0.8*	4.8*	5.01
Kenya	4.67	1.44	-0.80	0.20	3.00	4.80	4.60	2.30	1.80	1.40	-0.45	2.09
Korea	9.00	9.20	5.40	5.50	8.30	8.90	6.80	5.00	-6.70	10.70	8.81	6.46
Lithuania	N.A.	-5.70	-21.30	-16.20	-9.80	3.30	4.70	7.30	5.10	-3.90	3.80	-3.27
Malaysia	9.80	8.80	7.80	8.30	9.20	9.50	10.00	7.30	-7.40	5.80	8.30	7.05
Mauritius	7.20	4.30	6.70	4.90	5.30	5.60	6.20	5.60	5.60	2.70	3.58	5.25
Pakistan	5.57	7.71	2.27	4.51	5.26	6.76	1.93	4.30	3.15	4.46	5.09	4.64
Peru	-5.10	2.20	-0.40	4.80	12.80	8.60	2.50	6.70	-0.50	0.90	3.10	3.24
Singapore	9.00	7.10	6.50	12.70	11.40	8.00	7.60	8.50	0.10	5.90	9.90	8.01
Slovenia	N.A.	N.A.	5.50	2.80	5.30	4.10	3.50	4.60	3.80	4.90	4.87	4.37
South Africa	-0.32	-1.02	-2.14	1.23	3.23	3.12	4.15	2.52	0.63	1.23	3.20	1.44
Thailand	11.20	8.60	8.10	8.30	9.00	9.20	5.90	-1.40	-10.50	4.40	4.46	5.22
Trinidad & Tobago	1.51	2.68	-1.69	-1.42	3.57	4.00	2.90	3.00	4.00	5.30	4.00	2.53

Table 5.2-1: Rates of economic growth (%)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Tunisia	7.10	3.90	7.80	2.20	3.20	2.40	7.10	5.40	4.80	6.10	5.20	5.03
Turkey	9.40	0.30	6.40	8.10	-6.10	8.00	7.10	8.30	3.90	-6.10	6.10	4.13

Note: Information is supplemented by data from International Monetary Fund

*Forecast

5.2.2 Rate of inflation

Table 5.2-2: Rate of inflation (%)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Argentina	2315.00	171.70	24.90	-72.54	4.18	3.38	0.16	0.53	0.92	-1.17	-0.70	222.40
Bangladesh	6.02	4.56	2.74	3.28	8.87	6.65	2.52	6.99	8.91	3.41	4.67	5.33
Brazil	2947.73	477.39	1022.45	1927.38	2075.83	21.98	9.12	4.34	2.49	8.43	7.00	773.10
Chinese Taipei	4.12	3.63	4.46	2.94	4.09	3.68	3.07	0.90	1.68	0.18	1.25	2.88
El Salvador	19.30	9.80	19.90	12.10	8.90	11.40	7.40	7.90	4.20	-1.00	3.00	9.35
Hungary	28.90	35.00	23.00	22.50	18.80	28.20	23.60	18.30	14.30	10.00	9.80	21.13
India	8.97	13.87	11.79	6.36	10.21	10.22	8.98	7.16	13.23	4.67	4.01	9.04
Indonesia	9.5	9.9	4.94	9.77	9.24	8.64	6.47	11.05	77.63	2.01	3.8	13.90
Kenya	11.2	19.6	27.3	45.91	28.84	1.51	9.04	11.19	6.6	3.5	6.2	15.54
Korea	8.60	9.30	6.20	4.80	6.30	4.50	4.90	4.50	7.50	0.80	2.24	5.42
Lithuania	N.A.	382,70	1162,60	188,70	45.10	35.70	13.10	8.40	2.40	0.30	1.40	15.20
Malaysia	3.10	4.40	4.70	3.60	3.70	3.40	3.50	2.70	5.30	2.80	1.60	3.53
Mauritius	10.70	12.80	2.90	8.90	9.40	6.10	5.80	7.90	5.40	7.90	5.25	7.55
Pakistan	9.05	11.79	9.51	9.97	12.37	10.80	11.80	7.80	5.70	3.60	4.45	8.80
Peru	7649.7	139.2	56.70	39.50	15.40	10.20	11.80	6.50	6.00	3.70	3.70	722.04
Singapore	3.50	3.40	2.30	2.30	3.10	1.70	1.40	2.00	-0.30	0.00	1.30	1.88
Slovenia	N.A.	N.A.	201.3	32.30	19.80	12.60	9.70	9.10	8.60	6.60	8.87	34.32
South Africa	15.10	17.00	16.60	12.90	10.60	7.50	7.00	7.60	7.10	6.90	5.4	10.34
Thailand	5.90	5.70	4.10	3.30	5.00	5.80	5.90	5.60	8.10	0.30	1.60	4.66
Trinidad & Tobago	11.03	3.85	6.47	13.24	3.69	5.34	3.30	3.70	5.60	3.40	3.60	5.75
Tunisia	6.60	8.20	5.80	4.00	4.70	6.30	3.70	3.70	3.10	2.70	2.90	4.70
Turkey	60.41	71.14	65.97	71.08	125.49	76.05	79.76	99.09	69.73	68.79	39.00	75.14

Note: Information is supplemented with data from the International Monetary Fund

5.2.3 The role of bank loans, equity and corporate bonds as sources of financing in emerging markets

Table 5.2-3: Amount outstanding of bank loans, corporate bonds and equity market capitalization as at end-1999 as a percentage of GDP

Country	Bank loans	Equity	Corporate bonds
Argentina	8.1%	29.6%	0.60%
Bangladesh	32.93%	1.9%	N.A.
Brazil	N.A.	30.3%	0.42%
Chinese Taipei	158.00%	130.58%	3.20%
El Salvador	N.A.	17.20%	N.A.
Hungary	34.80%	29.70%	0.10%
India	11.30%	41.30%	0.41%
Indonesia	20.20%	40.7%	4.20%
Kenya	N.A.	13.20%	N.A.
Korea	51.80%	180.30%	24.80%
Lithuania	11.69%	10.68%	0.30%
Malaysia	157.10%	61.40%	37.20%
Mauritius	72.50%	1.80%	0.0%
Pakistan	17.30%	36.20%	0.10%
Peru	27.70%	25.9%	3.60%
Singapore	102.20%	115.40%	30.00%
Slovenia	40.40%	3.70%	2.30%
South Africa	37.80%	55.60%	0.40%
Thailand	111.20%	33.50%	4.00%
Trinidad & Tobago	N.A.	63.60%	N.A.
Tunisia	64.00%	2.00%	2.00%
Turkey	24.90%	43.80%	0.0%

Note: Information is supplemented by data from the Bank of International Settlements, World Bank, central banks, Standard & Poors'.

5.2.4 National savings rates

Table 5.2-4: National savings rates (% of GDP)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Argentina	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Bangladesh	19.66	19.30	17.96	18.79	19.12	20.17	21.58	21.77	22.31	N.A.	N.A.	20.07
Brazil	N.A.	N.A.	N.A.	N.A.	N.A.	19.47	17.77	17.35	16.88	15.94	N.A.	17.48
Chinese Taipei	30.00	30.10	29.50	29.20	27.90	27.20	26.90	26.60	26.20	26.10	N.A.	27.97
El Salvador	9.60	11.80	15.50	16.80	18.70	17.50	13.20	15.50	16.80	14.30	N.A.	14.97
Hungary	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
India	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Indonesia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Kenya	N.A.	N.A.	N.A.	N.A.	N.A.	22.13	18.15	16.47	14.96	13.60	N.A.	17.06
Korea	37.60	37.40	36.50	36.20	35.60	35.40	33.70	33.30	33.80	33.50	N.A.	35.30
Lithuania	N.A.	N.A.	N.A.	N.A.	N.A.	5.80	5.60	6.60	2.50	0.80	4.62	4.32
Malaysia	30.0*	27.8*	33.00	35.00	34.40	35.30	38.90	39.10	42.00	41.10	39.50	37.59
Mauritius	23.60	24.90	26.10	24.70	23.40	23.30	24.00	24.50	24.80	22.80	N.A.	24.21
Pakistan	14.20	17.1	13.60	15.40	14.80	N.A.	11.80	14.70	14.90	14.90	N.A.	14.60
Peru	N.A.	12.90	11.50	12.70	16.50	17.10	16.70	18.80	17.20	17.80	17.10	15.83
Singapore	45.10	46.20	48.40	45.50	48.80	50.50	50.40	54.30	54.00	54.10	51.50	49.89
Slovenia	N.A.	N.A.	24.60	20.60	24.50	22.80	23.50	24.10	24.90	24.20	N.A.	23.65
South Africa	19.06	18.58	16.25	16.44	16.88	16.52	15.80	15.54	14.29	14.83	N.A.	16.42
Thailand	33.00	34.70	33.80	34.10	35.60	35.70	34.30	33.00	31.50	29.90	N.A.	33.56
Trinidad & Tobago	N.A.	N.A..	N.A.	N.A..	N.A.	N.A.	25.50	26.30	17.40	21.70	31.40	24.46
Tunisia	21.90	21.40	21.80	20.50	20.70	20.30	22.70	23.50	23.50	24.10	25.50	22.35
Turkey*	N.A.	N.A.	21.60	21.92	22.93	21.51	19.82	21.34	23.08	19.83	N.A.	21.50

Note: All savings rates reported are given as a percentage of GDP except where * is indicated which represents a percentage of GNP

5.3 Size and structure of the debt securities market

5.3.1 Corporate debt securities market

Table 5.3-1: Amount outstanding of corporate bonds as a percentage of GDP (%)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Argentina	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.60	N.A.	0.60
Bangladesh	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Brazil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Chinese Taipei	0.00	0.80	0.90	0.80	0.50	0.30	0.50	1.30	2.00	3.20	N.A.	1.03
El Salvador	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Hungary	N.A.	0.42	0.49	0.31	0.30	0.51	0.57	1.62	1.13	1.27	1.40	0.80
India	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Indonesia	0.36	0.00	1.55	2.99	1.37	1.94	2.39	3.59	3.87	4.21	5.36	2.51
Kenya	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Korea	13.50	14.50	14.40	14.40	14.80	16.20	18.20	19.90	27.60	24.80	25.80	18.55
Lithuania	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.00	1.77	1.34	1.09	0.67	0.97
Malaysia	5.26	6.02	7.60	8.77	12.31	14.39	18.43	22.48	26.51	37.22	41.15	18.19
Mauritius	33.40	34.40	37.60	42.30	45.60	47.60	45.30	50.80	58.40	N.A.	N.A.	43.93
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	0.01	0.05	0.09	0.08	0.10	N.A.	0.07
Peru	N.A.	0.10	0.30	0.40	0.70	1.10	1.90	2.40	3.20	3.60	4.30	1.80
Singapore	N.A.	N.A.	N.A.	N.A.	N.A.	19.53	20.27	22.10	23.25	30.70	30.96	24.47
Slovenia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2.12	2.10	2.33	N.A.	2.18
South Africa	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Thailand	n.a.	n.a.	0.06	0.57	0.48	2.64	3.23	2.98	3.26	4.03	4.56	2.42
Trinidad & Tobago	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Tunisia	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	2.00	2.00	1.61	1.87
Turkey	0.42	0.42	1.06	2.06	0.56	0.92	0.11	0.08	0.02	0.00	0.00	0.51

Note: Information is supplemented by data from the Bank of International Settlements

5.3.2 Government debt securities market

Table 5.3-2: Amount outstanding of government debt securities as a percentage of GDP (%)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
Argentina	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Bangladesh	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Brazil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Chinese Taipei	3.90	6.80	10.00	12.00	12.20	12.30	13.00	12.40	11.70	13.40	N.A.	10.77
El Salvador	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Hungary	N.A.	4.60	15.86	28.15	30.92	29.45	35.47	31.16	32.65	34.80	35.29	27.84
India	12.33	14.13	16.50	20.92	22.23	25.19	27.88	25.97	24.54	29.29	15.00	21.27
Indonesia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	31.25	31.41	31.33
Kenya	N.A.	5.42	5.16	17.62	20.58	12.64	15.63	19.36	17.22	N.A.	N.A.	14.20
Korea	5.90	6.40	6.80	6.50	6.20	5.90	6.00	6.30	9.40	12.70	13.80	7.81
Lithuania	N.A.	N.A.	N.A.	N.A.	1.44	2.64	4.01	5.55	5.75	4.87	5.49	4.25
Malaysia	52.91	48.96	45.82	40.24	36.30	31.87	28.44	24.82	28.78	29.86	29.80	36.16
Mauritius	N.A.	N.A.	N.A.	N.A.	N.A.	16.60	20.08	24.64	23.12	25.58	N.A.	22.00
Pakistan	50.00	49.00	49.00	51.00	50.00	48.00	47.00	47.00	46.00	49.00	N.A.	48.60
Peru	N.A.	N.A.	N.A.	0.04	0.67	0.62	0.53	0.44	0.48	2.06	1.95	0.85
Singapore	13.10	15.10	17.10	16.60	15.10	15.80	16.00	15.60	20.80	24.80	27.20	17.93
Slovenia	N.A.	4.49	2.53	2.95	2.23	10.02	24.47	18.06	17.10	17.98	N.A.	11.09
South Africa	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Thailand	N.A.	N.A.	51.65	7.45	7.03	6.93	7.29	7.58	16.10	21.04	21.66	16.30
Trinidad & Tobago	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	20.23	23.77	23.19	22.51	19.42	21.82
Tunisia	4.00	7.00	7.00	11.00	13.00	13.00	15.00	15.00	15.00	15.00	N.A.	11.50
Turkey	6.45	7.09	12.34	13.63	15.46	15.49	19.29	21.13	22.57	30.12	29.45	17.55

5.3.3 The comparative importance of the domestic and the international corporate bond market

Table 5.3-3: Amount outstanding of bonds issued domestically and internationally by corporate issuers as at end-1999 (US\$ billion)

Country	Domestic	International
Argentina	1.70	11.30
Bangladesh	N.A.	N.A.
Brazil	2.20	12.50
Chinese Taipei	11.82	5.60
El Salvador	N.A.	N.A.

Table 5.3-3: Amount outstanding of bonds issued domestically and internationally by corporate issuers as at end-1999 (US\$ billion)

Country	Domestic	International
Hungary	N.A.	N.A.
India	1.80	1.70
Indonesia	1.84	1.60
Kenya	N.A.	N.A.
Korea	105.10	17.90
Lithuania	N.A.	N.A.
Malaysia	34.10	9.90
Mauritius	N.A.	N.A.
Pakistan	N.A.	N.A.
Peru	0.90	0.10
Singapore	3.50	1.80
Slovenia	N.A.	N.A.
South Africa	0.00	1.60
Thailand	4.74	5.00
Trinidad & Tobago	N.A.	N.A.
Tunisia	0.1	N.A.
Turkey	0.01	0.40

Note: Information is supplemented by data from the Bank of International Settlements

5.4 Liquidity ratios

5.4.1 Corporate bonds

Table 5.4-1: Turnover ratios for corporate bonds

Country	1995	1996	1997	1998	1999	2000	Average
Argentina	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Bangladesh	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Brazil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Chinese Taipei	0.07	0.20	0.15	0.23	0.25	0.33	0.21
El Salvador	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Hungary	0.00	0.01	0.28	0.31	0.44	0.54	0.27
India	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Indonesia	N.A.	N.A.	0.47	0.34	0.30	0.40	0.38
Kenya	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Korea	2.12	1.71	1.48	3.11	3.65	2.04	2.35
Lithuania	N.A.	N.A.	N.A.	N.A.	1.31	3.99	2.65
Malaysia	0.50	0.07	0.14	0.10	0.68	0.47	0.30
Mauritius	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Peru	N.A.	3.32	4.22	2.02	0.81	0.35	2.14

Table 5.4-1: Turnover ratios for corporate bonds

Country	1995	1996	1997	1998	1999	2000	Average
Singapore	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Slovenia	N.A.	N.A.	0.11	0.15	0.10	N.A.	0.12
South Africa	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Thailand	0.57	1.50	0.69	0.07	0.18	0.35	0.56
Trinidad & Tobago	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Tunisia	N.A.	0.06	0.03	0.01	0.01	0.01	0.02
Turkey	5.57	33.03	12.19	7.18	79.01	552.19	114.86

Note: Turnover ratio is calculated taking the ratio of the turnover to the amount outstanding. In the case of countries where information is stated as not available, this may also be due to the unavailability of one of the two variables.

5.4.2 Government bonds

Table 5.4-2: Turnover ratios for government bonds

Country	1995	1996	1997	1998	1999	2000	Average
Argentina	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Bangladesh	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Brazil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Chinese Taipei	2.06	2.61	2.43	6.59	5.58	2.06	3.86
El Salvador	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Hungary	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
India	N.A.	N.A.	1.50	1.50	3.00	N.A.	2.00
Indonesia	N.A.	N.A.	N.A.	N.A.	N.A.	0.35	N.A.
Kenya	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Korea	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Lithuania	54.8	29.5	33.4	37.5	90.4	60.8	51.07
Malaysia	0.06	0.38	0.19	0.37	0.70	0.99	0.45
Mauritius	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Peru	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Singapore	4.10	4.40	7.30	5.60	3.70	4.70	4.97
Slovenia	0.08	0.02	0.01	0.02	0.04	N.A.	0.03
South Africa	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Thailand	0.44	0.53	1.26	0.61	0.65	0.72	0.70
Trinidad & Tobago	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Tunisia	N.A.	0.03	0.02	0.02	0.00	0.00	0.02
Turkey	22.67	33.32	39.94	28.92	58.81	26.16	34.97

Note: Turnover ratio is calculated taking the ratio of the turnover to the amount outstanding. In the case of countries where information is stated as not available, this may also be due to the unavailability of one of the two variables. Figures for India was obtained from *Asian Policy Forum: 5th Brainstorming Workshop on Developing Corporate Bond Markets in Asia*, 13 April 2001, ADB Institute, Tokyo

5.5 Benchmark and government debt securities

5.5.2 The role of government debt securities as benchmarks

Table 5.5-1: Benchmark securities in emerging markets

Country	Benchmarks	Maturities (years)
Argentina	Government debt securities	2,5
Bangladesh	Government-issued saving instrument rates	3-25
Brazil	N.A.	N.A.
Chinese Taipei	Government debt securities	10,15,20
El Salvador	No benchmark reported	Not relevant
Hungary	Government debt securities	0.25, 0.5, 1,2,3,5,10
India	N.A.	N.A.
Indonesia	Government debt securities	< 1 year
Kenya	Government debt securities	1–3
Korea	Government debt securities	1,3,5,10
Lithuania	No benchmark reported	Not relevant
Malaysia	Government debt securities	3,7,10,15, 20
Mauritius	Government debt securities	< 1 year
Pakistan	Government debt securities	3,5,10
Peru	Certificates of Deposit issued by the Central Bank of Peru: Government debt Securities	< 1 year
Singapore	Government debt securities	2,5,7,10, 15
Slovenia	Government debt securities	3,5
South Africa	Government debt securities	N.A.
Thailand	Government debt securities	1,2,5,7,10,14
Trinidad & Tobago	National prime lending rate	Not relevant
Tunisia	Government debt securities	2,3,4,5,10
Turkey	Government debt securities	N.A.

Note:

In the case of Argentina, the issuance of government securities has been disrupted by several economic crises.

In Indonesia, benchmarks consist of short-term government bills, which consist of 90 days promissory notes.

In Peru, until February 2001, all bond issuances made by the Peruvian government had been distributed privately (although most of them were registered in the stock exchange) and were not publicly traded. However, the Peruvian Government is now issuing Treasury Bond by primary public offering as a means of financing. The Certificates of Deposits issued by the Central Reserve Bank of Peru are used as benchmarks for short-term maturities, i.e. up to one year. Government debt securities mentioned in the table refer to Treasury Bonds.

In the case of Turkey, government securities are not formally used as benchmarks but secondary market participants use them as benchmarks.

In Trinidad & Tobago, the rate of return on domestic debt is benchmarked on the national prime lending rate.

5.5.2 The method of issuing benchmark/government securities

Table 5.5-2: The method of issuance of benchmark securities

Country	Issuance method	Use of a pre-announced calendar
Argentina	Open auction	Yes
Bangladesh	N.A.	N.A.
Brazil	N.A.	N.A.
Chinese Taipei	Open auction	Yes
El Salvador	No benchmark reported	No benchmark reported
Hungary	Open auction	Yes
India	N.A.	N.A.
Indonesia	Open auction	N.A.
Kenya	Open auction	No
Korea	Open auction	Yes
Lithuania	No benchmark reported	No benchmark reported
Malaysia	Open auction	Yes
Mauritius	N.A.	N.A.
Pakistan	Closed auction	Yes
Peru	Open auction	Yes
Singapore	Open auction	Yes
Slovenia	Open auction	Yes
South Africa	Open auction	Yes
Thailand	Open auction	Yes
Trinidad & Tobago	Not relevant	Not relevant
Tunisia	Open auction	Yes
Turkey	Open auction	Yes

Note:

The pre-announced calendar in Malaysia was introduced in 2000.

While no benchmarks have been reported in Lithuania, government debt securities are issued via open auction, using a pre-announced calendar.

In Trinidad & Tobago, the bond market is benchmarked against the prime lending rate.

5.5.3 The use of financial instruments to increase secondary market liquidity

Table 5.5-3: Use of financial instruments to increase liquidity

Country	Repos and reverse repos	Short selling	Securities borrowing and lending	Bond futures and options	Interest rate swaps
Argentina	Yes	Yes	No	Yes	Yes
Bangladesh	No	No	No	No	No
Brazil	Yes	No	No	No	No
Chinese Taipei	Yes	No	No	No	Yes
El Salvador	Yes	No	No	No	No

Table 5.5-3: Use of financial instruments to increase liquidity

Country	Repos and reverse repos	Short selling	Securities borrowing and lending	Bond futures and options	Interest rate swaps
Hungary	Yes	Yes	Yes	Yes	Yes
India	Yes	No	Yes	No	Yes
Indonesia	Yes	Yes	Yes	Yes	N.A.
Kenya	N.A.	N.A.	N.A.	N.A.	N.A.
Korea	Yes	Yes	Yes	Yes	Yes
Lithuania	Yes	No	Yes	No	No.
Malaysia	Yes	No	No	No	No
Mauritius	Yes	No	No	No	No
Pakistan	Yes	Yes	Yes	No	No
Peru	Yes	No	Yes	No	No
Singapore	Yes	Yes	No	Yes	Yes
Slovenia	Yes	Yes	Yes	N.A.	N.A.
South Africa	Yes	Yes	Yes	Yes	Yes
Thailand	Yes	Yes	Yes	No	Yes
Trinidad & Tobago	Yes	No	No	No	No
Tunisia	No	No	No	No	No
Turkey	Yes	Yes	Yes	No	No

Notes:

In Peru, the Rule of Operations on the Exchange Floor provides for the use of short selling, but currently, this instrument is not yet in use. Interest rate swaps are offered in the banking system.

5.5.4 Captive demand for benchmark securities

Table 5.5-4: Captive/excessive demand for benchmark securities

Country	Factors contributing to a captive market for benchmark securities
Argentina	The principal investors in government securities consist of pension funds.
Bangladesh	It is reported that banks and financial institutions purchase government bonds.
Brazil	N.A.
Chinese Taipei	Government bonds are a major requirement for the reserves of banking institutions and insurance companies' margin.
El Salvador	But certain organizations are required to invest a certain percentage of their assets in government securities.
Hungary	Benchmark securities tend to provide attractive yields relative to other instruments and an excessive demand for these securities has been identified. The demand for benchmark securities is normally 1.5-2 times higher than the supply in Hungary.
India	Statutory Liquidity Requirements for banking institutions, for instance, require them to hold on to government securities and gave rise to a captive benchmark securities market.
Indonesia	N.A.
Kenya	None
Korea	The need to comply with BIS ratio requirements has led many banking institutions to hold on to benchmark securities.

Table 5.5-4: Captive/excessive demand for benchmark securities

Country	Factors contributing to a captive market for benchmark securities
Lithuania	No benchmark securities reported
Malaysia	Certain institutional investors and as well as many banking institutions are required to hold on to benchmark securities as part of their asset portfolios and this has given rise to a captive market for benchmark securities. .
Mauritius	Investors are generally encouraged to invest in benchmark securities and they tend to hold on to these securities to maturity.
Pakistan	There are regulations that require banks and financial institutions to invest in approved benchmark securities, such as the Statutory Liquidity Requirement imposed by the central bank.
Peru	In general, there has been a general scarcity of securities supply in the Peruvian securities market, especially benchmark securities. The captive demand for benchmark securities has also been partly exacerbated by the long practice of issuing government debt securities via private placement.
Singapore	Banks are required to hold 10.0% of their minimum liquid assets in government bonds. While this government bond holding used to make up 70.0-80.0% of outstanding government bonds, the increase in issuance by the Singaporean government in recent years has resulted in a free float proportion of 60.0%.
Slovenia	None
South Africa	None
Thailand	At present, only a fortnight reserve requirement is required for commercial banks and finance companies at the rate of 6.0%, of which at least 1% must be in cash and others securities as specified. Demand is recently greater than the supply due to the low interest rate of bank deposits and the sluggish activity in the stock market. Despite the excess in demand for benchmark securities, it is not considered so significant so as to create a captive market.
Trinidad & Tobago	Several institutional investors such as insurance companies, pension funds and the social security provider are mandated to hold a stipulated proportion of their assets in government bonds and this places a high premium on government bonds.
Tunisia	Insurance companies are required to hold no less than 35.0% of their assets in the form of government-issued or government-guaranteed securities. This limit is going to be lowered to 20.0% in 2002.
Turkey	None

5.6 Legal, regulatory and tax framework for the bond market

5.6.1 Main regulatory agencies for the bond market

Table 5.6-1: Agencies responsible for, or involved in, the regulation of the bond market among survey respondents

Country	Government securities/debt		Corporate bonds	
	Primary market	Secondary market	Primary market	Secondary market
Argentina	Ministry of Finance	National Securities Commission (CNV)		
Bangladesh	Ministry of Finance	—	Securities and Exchange Commission	
Brazil	Central Bank of Brazil		Securities Commission	
Chinese Taipei	Ministry of Finance, Central Bank	Securities and Futures Commission		
El Salvador	N.A.	Securities Regulator (Superintendencia de Valores)		
Hungary	Government Debt Management Agency	Financial Supervisory Authority*		
India	Reserve Bank of India		Securities and Exchange Board of India, Reserve Bank of India	
Indonesia	Ministry of Finance	Capital Market Supervisory Agency (Bapepam)		
Kenya	Central Bank of Kenya	Capital Markets Authority		
Korea	Ministry of Finance and Economy	Financial Supervisory Committee/Financial Supervisory Service*		
Lithuania	Ministry of Finance, Bank of Lithuania		Lithuania Securities Commission	
Malaysia	Ministry of Finance	Bank Negara Malaysia	Securities Commission	Bank Negara Malaysia
Mauritius	Bank of Mauritius	Stock Exchange Commission	Bank of Mauritius	Stock Exchange Commission
Pakistan	State Bank of Pakistan		Securities and Exchange Commission	
Peru	(Please see note below)		Peruvian Securities Commission	
Singapore	Monetary Authority of Singapore		Singapore Exchange, Registry of Companies and Businesses	Monetary Authority of Singapore, Singapore Exchange
Slovenia	Ministry of Finance	Capital Market Agency, Bank of Slovenia	Capital Market Agency, Bank of Slovenia, Ministry of Finance	Capital Market Agency, Bank of Slovenia
South Africa	National Treasury	Financial Services Board		
Thailand	Public Debt Management Office, Ministry of Finance, Bank of Thailand	Ministry of Finance, Bank of Thailand	Securities and Exchange Commission	
Trinidad & Tobago	Ministry of Finance, Central Bank of Trinidad & Tobago, Securities and Exchange Commission		Securities and Exchange Commission	

Table 5.6-1: Agencies responsible for, or involved in, the regulation of the bond market among survey respondents

Country	Government securities/debt		Corporate bonds	
	Primary market	Secondary market	Primary market	Secondary market
Tunisia	Ministry of Finance, Central Bank of Tunisia	Ministry of Finance, Central Bank of Tunisia, Conseil du Marché Financier (CMF)	Conseil du Marché Financier (CMF)	
Turkey	Undersecretariat of the Treasury	Capital Markets Board, Undersecretariat of the Treasury	Capital Markets Board	

Notes:

*marks out single financial sector regulators. Banks mentioned in this table are all central banks.

In Hungary, only the Ministry of Finance (along with the Government and the Parliament) has regulatory power over financial regulation. Regulations are prepared by professional institutions and negotiated with the institutions concerned, which include market participants. Regulations are promulgated by either the Ministry of Finance, the Government or the Parliament.

The Securities and Exchange Board of India (SEBI) does not regulate corporate debt securities with initial maturities up to one year.

The central bank in Kenya has some authority over short-term government papers.

In the case of Malaysia, the ambit of the Securities Commission does not encompass banking institutions that deal in the secondary bond market. These institutions are granted 'exempt dealer' status and fall under the jurisdiction of the central bank. A similar situation has also been reported for Slovenia, where banking institutions are allowed to deal in the secondary bond market but fall under the jurisdiction of the Bank of Slovenia.

In Mauritius, the listing of corporate bonds is overseen by a one-stop Listing Committee, while in the case of unlisted bonds, the offering process may involve other government organizations.

In Peru, according to the Securities Market Law, the issuance and trading of securities issued by the Central Government, Regional Governments, Local Governments and the Central Reserve Bank are subject to the dispositions contained in the corresponding authoritative legal norms. It should be mentioned, that in the public offerings of Treasury Bonds made for the first time by the Peruvian Central Government during 2001, the authoritative legal norms authorized the Ministry of Economics and Finance to issue these securities, and established that such securities would be traded in the Lima Stock Exchange, hence their trading, in these cases, is subject to the supervision of the Peruvian Securities Commission.

5.6.2 Self-regulatory organizations (SROs)

Table 5.6-2: Emerging bond markets—self-regulatory organizations (SROs)

Country	Self-regulatory organization
Argentina	Stock Exchanges and Stock Markets, OTC (MAE)
Bangladesh	None
Brazil	National Association of Open Market Institutions (ANDIMA)
Chinese Taipei	ROC OTC Securities Exchange (ROSE)
El Salvador	Stock Exchange
Hungary	Budapest Stock Exchange, Central Clearing House and Depository Ltd. (KELER Rt)
India	N.A.
Indonesia	Surabaya Stock Exchange
Kenya	None
Korea	Korean Securities Dealers Association, Korean Stock Exchange
Lithuania	None
Malaysia	Kuala Lumpur Stock Exchange
Mauritius	None
Pakistan	Stock exchanges

Table 5.6-2: Emerging bond markets—self-regulatory organizations (SROs)

Country	Self-regulatory organization
Peru	Lima Stock Exchange, CAVALI Clearing and Settlement Institution
Singapore	Singapore Exchange, Singapore Investment Bankers' Association (SIBA), Debt Capital Market Committee
Slovenia	Ljubljana Stock Exchange, Stock Exchange and Central Securities Clearing Corporation (KDD)
South Africa	Bond Exchange of South Africa
Thailand	Thai Bond Dealing Centre (Thai BDC)
Trinidad & Tobago	Trinidad and Tobago Stock Exchange (TTSE)
Tunisia	None
Turkey	Istanbul Stock Exchange

Note:

In El Salvador, the responsibility of regulating the primary and secondary markets is shared between the Securities Regulator and the Stock Exchange.

In the case of Chinese Taipei, ROSE is responsible for regulating both exchange- and OTC-traded securities. ROSE has been renamed as GreTai Securities Market (GTSM).

At the time of the survey, the Thai BDC does not yet function as an exchange and bonds are traded over the counter.

In Argentina, the main difference between Stock Exchanges and Stock Markets is defined by the fact that the former deal with corporate bonds issuers while the latter consists of brokers and are considered to be qualified entities to trade listed securities.

The Trinidad and Tobago Stock Exchange regulates the secondary market.

5.6.3 Agencies responsible for corporate bond market development

Table 5.6-3: Agencies responsible for, or involved in, the development of the bond market in emerging market jurisdictions

Country	Agencies responsible for development
Argentina	National Securities Commission, SROs
Bangladesh	None
Brazil	ANDIMA, Comissao de Valores Mobiliarios
Chinese Taipei	Securities and Futures Commission (SFC), Central Bank of China
El Salvador	None
Hungary	Government Debt Management Agency, Hungarian Financial Supervisory Authority, National Bank of Hungary
India	Reserve Bank of India, Securities and Exchange Board of India
Indonesia	Capital Market Supervisory Agency (Bapepam), Central Bank, Ministry of Finance
Kenya	Capital Markets Authority
Korea	Ministry of Finance and Economy, Financial Supervisory Service/Financial Supervisory Committee
Lithuania	Lithuanian Securities Commission
Malaysia	Securities Commission
Mauritius	None
Pakistan	Securities and Exchange Commission of Pakistan (SECP)
Peru	Peruvian Securities Commission
Singapore	Monetary Authority of Singapore, Singapore Investment Bankers' Association (SIBA)
Slovenia	Securities Market Agency, Stock Exchange, Ministry of Finance, Bank of Slovenia, Associations of Stock Exchange Members

Table 5.6-3: Agencies responsible for, or involved in, the development of the bond market in emerging market jurisdictions

Country	Agencies responsible for development
South Africa	Bond Exchange of South Africa, Financial Services Board, South African Reserve Bank, National Treasury
Thailand	Bank of Thailand, Thai BDC, Ministry of Finance, Thai SEC
Trinidad & Tobago	Central Bank of Trinidad & Tobago, Ministry of Finance
Tunisia	Ministry of Finance, Conseil du Marché Financier (CMF)
Turkey	Capital Markets Board (CMB)

Note:

In Tunisia and Turkey, the respective securities market regulators are involved in the development of the bond market by virtue of their position as the sole regulator of the bond market. In general, however, it is reported that there is no specific body responsible for the development of the bond market per se.

5.6.4 Process of issuance

Table 5.6-4: Selected aspects of the process of corporate bond issuance

Country	Regulatory approval timeframe*	Timeframe for overall issuance process**	Disclosure	Restrictions	Other remarks
Argentina	N.A.	N.A.	Issuance is completely based on disclosure	No limit on issuance size and frequency	Issuance without rating has been allowed.
Bangladesh	N.A.	N.A.	N.A.	N.A.	Private placement only needs to make submissions to the Registrar of Joint Stock Companies
Brazil	N.A.	7 weeks	N.A.	The company must be a public company to be able to issue bonds.	Private placement does not need approval, but public offer requires registration with the CVM. It is common practice (but not compulsory) to register with the National Private Bond System (SND) which reportedly grants credibility and transparency to the issue. Many companies become public in order to issue bonds.
Chinese Taipei	Public issue:	2-5 months for	Issuers are	From January	N.A.

Table 5.6-4: Selected aspects of the process of corporate bond issuance

Country	Regulatory approval timeframe*	Timeframe for overall issuance process**	Disclosure	Restrictions	Other remarks
	1. straight bond-7 days. 2. Convertible bonds and bonds with warrants:7 business days for rated public issues Private placement: there is no requirement for approving.	un-guaranteed bonds including credit rating procedure; 3 months for guaranteed bonds including credit rating procedure.	required to fulfill disclosure requirements	1999, un-guaranteed bonds require credit rating. From July 2001, guaranteed bonds will also require credit rating. Convertible bonds are exempted from these credit rating requirements.	
El Salvador	N.A.	N.A.	N.A.	N.A.	N.A.
Hungary				The issuer must have been in operation for at least 1 calendar year.	Compulsory listing on the exchange within 60 days after the closing of subscription period if the combined face value of the publicly offered series equals or exceeds HUF200 million either separately or together with securities offered previously, publicly or privately, representing the same rights.
India	The law gives up to 21 days for SEBI to approve.	5-12 months	Disclosure requirements apply	No limitations on issuance size and frequency	
Indonesia	The law gives up to 45 days for the regulator to review the registration statement	3-4 months	Disclosure requirements apply	Issues with tenures less than 3 years do not need approval.	
Kenya	N.A.	N.A.	The issuer must publish half yearly management accounts in national newspapers and a set of audited annual accounts	Paid-up capital and reserves of the issuer must not be less than 50 million Kenya Shillings and must remain saw for as long as the bonds remain	(Offer period must take at most 10 days)

Table 5.6-4: Selected aspects of the process of corporate bond issuance

Country	Regulatory approval timeframe*	Timeframe for overall issuance process**	Disclosure	Restrictions	Other remarks
			are to be submitted every year while the bonds are outstanding.	outstanding. If not, the issue will require a guarantee from a bank or an approved financial institution. The issuer is required to have recorded profit in at least 2 in the last 3 financial periods before the offering. The minimum size of the issue must be by KSh50 million and the minimum issue lots must be of the value KSh100,000.	
Korea	7 days for corporate bonds, 5 for secured and guaranteed bonds	N.A.	N.A.	Total amount of bonds issued cannot exceed four times the issuer's assets	N.A.
Lithuania	2-4 weeks	N.A.	Disclosure requirements for shares applies to debt securities.	No limitation on issuance size, frequency and capital requirements for the issuer.	N.A.
Malaysia	14 days	3 months	Full disclosure-based issuance process was implemented in 2001.	The minimum credit rating requirement has been removed in 2001, and so has the mandatory requirement for an underwriter. While some restrictions on the utilization of proceeds from corporate bond issuance still apply, these have been relaxed in the recent years.	N.A.
Mauritius	N.A.	2-3 weeks	N.A.	N.A.	Issuance process is overseen by one-stop agency, the Listing Committee, for

Table 5.6-4: Selected aspects of the process of corporate bond issuance

Country	Regulatory approval timeframe*	Timeframe for overall issuance process**	Disclosure	Restrictions	Other remarks
					the listing of bonds, while unlisted bonds need approval from the relevant Ministry.
Pakistan	N.A.	N.A.	N.A.	Only listed companies can make public offers (but the law are being changed to accommodate unlisted companies)	Private placement does not require rating or approval. Issuance must comply with listing rules of the stock exchange.
Peru	The law gives up to 30 working days. In the case of issuers that has issued bonds in the previous 12 months and had not been subject to a major sanction, the law stipulates a limit of 7 working days for approval. It has been reported that the average time required registering the securities with the regulator has been reduced to an average of for 14 days in the recent year.	3-4 months	Disclosure requirements apply.	No limitations on issuance size or frequency. No capital requirements for issuers.	Issuers are required to enter into an agreement with two separate rating agencies that will undertake periodical rating of the securities.
Singapore	N.A.	N.A.	Prospectus that complies with disclosure requirement must be lodged with the Registry of Companies and Businesses before public offering.	No approval is required for the issuance Singapore dollar or foreign currency bonds. There are no restrictions on issuance size and liquidity. No capital requirements for issuers.	Separate procedures apply with regard to listing on the exchange
Slovenia	N.A.	N.A.	Issues are assessed based on disclosure	No limitation on instrument types, issuance size	The Capital Market Agency grants license for

Table 5.6-4: Selected aspects of the process of corporate bond issuance

Country	Regulatory approval timeframe*	Timeframe for overall issuance process**	Disclosure	Restrictions	Other remarks
			only	and frequency. (The limitation based on the issuer's capital was removed in 1999).	"going public" in the case of issuer or holder of securities previously issued via private placement.
South Africa	N.A.	7-30 days	Listing applications are subject to listing and disclosure requirements.	N.A.	N.A.
Thailand	15 days from fully documented application.	2.5 months.	Both public offering and private placement are subject to disclosure requirement, while issues granted special offering exemptions are not.	No restriction on issuance size and frequency and no capital requirement for the issuer.	The special offering exemption must meet the criteria as follows: (1) offer size does not exceed 100 million bath. (2) the offer is made to no more than ten investors. (3) the offer is made for debt restructuring plan. (4) the offering exempt has no impact on public
Trinidad & Tobago	The timeframe is not specified by any rules.	N.A.	Guidelines on the issuance of prospectuses have been issued to provide guidance to issuers. Legal provisions for disclosure are contained in the Companies Act 1995 and the Securities Industry Act 1995	No restriction on issuance size and frequency and no capital requirement for the issuer.	The Securities Industry Act 1995 is being reviewed to provide for more bond market regulation.
Tunisia	N.A.	3 months.	Issues must comply with disclosure requirements.	No restrictions on issuance size and frequency.	N.A.
Turkey	The law allots 30 days to the regulator to review a registration application if the offer document is	N.A.	N.A.	No restriction with regard to issuance size and frequency. But certain limits apply different types of debt	N.A.

Table 5.6-4: Selected aspects of the process of corporate bond issuance

Country	Regulatory approval timeframe*	Timeframe for overall issuance process**	Disclosure	Restrictions	Other remarks
	complete.			securities based on equity capital, outstanding securities and profitability.	

Note:

*Regulatory approval timeframe refers to the amount of time stipulated by primary issuance regulations that is allotted to the regulators to give their approval for a primary offering.

**Timeframe for overall issuance process refers to the amount of time that is required, on average, to complete the whole process of issuance from the beginning to end.

5.6.5 Credit rating services and the process of issuance

Table 5.6-5: The role of credit rating services

Country	Credit rating agencies (CRA)		Compulsory credit rating	Minimum rating requirement?	Links of domestic CRAs to international CRAs
	Domestic	International			
Argentina	Yes	Yes	No	Not relevant	Yes
Bangladesh	No	No	Not relevant	Not relevant	Not relevant
Brazil	Yes	Yes	N.A.	N.A.	No
Chinese Taipei	Yes	No	Yes	No	Yes
El Salvador	Yes	Yes	N.A.	N.A.	No
Hungary	Yes	No	No	Not relevant	Yes
India	Yes	Yes	N.A.	N.A.	No
Indonesia	Yes	No	Yes	N.A.	No
Kenya	No	Yes	N.A.	N.A.	Yes
Korea	Yes	N.A.	Yes	No	Yes
Lithuania	No	No	Not relevant	Not relevant	Not relevant
Malaysia	Yes	No	Yes	No	Yes
Mauritius	No	No	Not relevant	Not relevant	Not relevant
Pakistan	Yes	No	Yes	Yes	Yes
Peru	Yes	No	Yes	No	Yes
Singapore	No	Yes	No	Not relevant	Not relevant
Slovenia	No	Yes	No	No	Not relevant
South Africa	Yes	Yes	N.A.	N.A.	Yes
Thailand	Yes	No	Yes	No	Yes
Trinidad & Tobago	No	No	Not relevant	Not relevant	Not relevant
Tunisia	Yes	No	No	No	Yes
Turkey	Yes	No	No	Not relevant	Yes

Table 5.6-5: The role of credit rating services

Country	Credit rating agencies (CRA)		Compulsory credit rating	Minimum rating requirement?	Links of domestic CRAs to international CRAs
	Domestic	International			

Note: Links to international CRAs refer to affiliation and/or partial ownership and may not apply to all of the domestic CRAs. "International" CRAs refer specifically to the global CRAs, among which are Standard & Poor's, Moody's, Fitch-IBCA and Dulf & Phelps etc.

In Bangladesh, one company is in the process of gaining approval to operate as a domestic CRA and in the middle of securing collaboration from an international CRA.

While there is one Salvadoran credit agency, this is not currently operating, leaving the other two international and foreign credit rating agencies in the market as the only ones in operation.

In Malaysia, the removal of the minimum credit rating requirement was implemented in July 2000.

In Peru, credit rating is compulsory in the case of debt securities.

In Chinese Taipei, the compulsory credit rating requirement only applies to straight bonds. A minimum rating requirement of BBB applies to shelf-registered corporate bonds.

In Tunisia, the domestic CRA, Maghreb Rating, is a subsidiary of Inter Arab Rating (IRC).

5.6.6 Shelf-registration

Table 5.6-6: Shelf-registration for corporate

Country	Shelf-registration facility
Argentina	Yes
Bangladesh	No
Brazil	No
Chinese Taipei	Yes
El Salvador	N.A.
Hungary	No
India	Yes. Shelf-registration is available in the form of an umbrella prospectus where the company files one consolidated offer document with SEBI for the entire amount that it proposes to raise in the coming one-year period. This facility is only at the disposal of Development Financial Institutions.
Indonesia	No
Kenya	No
Korea	Yes
Lithuania	No
Malaysia	Yes
Mauritius	No
Pakistan	No. However, at the time of the survey, the Pakistan SECP was in the middle of introducing a shelf-registration option for frequent issuers.
Peru	Yes
Singapore	Yes. Though shelf-registration is not a term used locally. Multiple issues are allowed over a given period of time for debt securities, which are exempted from prospectus requirement by the Companies Act.
Slovenia	No
South Africa	Yes
Thailand	Yes. The approval granted to the issuer covers all issues for the next 12 months.
Trinidad & Tobago	No

Table 5.6-6: Shelf-registration for corporate

Country	Shelf-registration facility
Tunisia	Yes
Turkey	Yes

5.6.7 Formal framework for the issuance of asset-backed securities (ABS)

Table 5.6-7: The availability of a formal ABS issuance framework

Country	Formal ABS framework
Argentina	Yes
Bangladesh	No. But efforts are being taken to develop an ABS issuance framework.
Brazil	N.A.
Chinese Taipei	No. But the law on securitization is being developed.
El Salvador	No. The law on securitization is being developed. Nevertheless, banks are reported to be conducting some form of asset securitization.
Hungary	Yes
India	No
Indonesia	Yes
Kenya	No. Efforts are being undertaken to develop an ABS issuance framework.
Korea	Yes. Introduced in 1998.
Lithuania	No
Malaysia	Yes. Introduced in 2001.
Mauritius	No
Pakistan	Yes
Peru	Yes
Singapore	Yes, the MAS Issued guidelines which define the roles, responsibilities and risks that banks retain or undertake when they participate in a securitization transaction. These guidelines also set out the capital treatment of securitized assets, as well as disclosure, separation and other requirements for the various roles that banks take on in a securitization transaction.
Slovenia	No
South Africa	No. But the Bond Exchange has adopted the London Stock Exchange rules for "Specialized Debt".
Thailand	Yes. Law on Special Purpose Vehicles was introduced in 1997.
Trinidad & Tobago	No
Tunisia	Yes
Turkey	Yes

5.6.8 Degree of offer document standardization

Table 5.6-8: Standardization of offer documents

Country	Remarks on offer document standardization
Argentina	N.A.
Bangladesh	Offer documents are standardized.
Brazil	Bond contracts and trust deeds have minimum disclosure standards that are defined by CVM regulations without sacrificing their flexibility. In the last few years, there has been greater consensus among market participants that greater standardization of bond contracts would promote liquidity.
Chinese Taipei	Application forms with regard to primary issuance are standardized, but contents of bond contract and trust deeds are not standardized.
El Salvador	N.A.
Hungary	The content of prospectuses is set and outlined by the law.
India	SEBI has standardized the format for the offer document by issuing guidelines on mandatory disclosure requirements and contents of the offer document. However, there is no specific format for trust deeds, though SEBI regulations provide for mandatory clauses in trust deeds.
Indonesia	Offer documents are standardized.
Kenya	Offer documents are standardized.
Korea	Offer documents are standardized.
Lithuania	General requirements for content of prospectuses and subscription agreements are set in the legal acts.
Malaysia	Prospectuses and trust deeds are standardized by specific regulations. Certain groupings of market players have set standards for other offer documents such as subscription agreements.
Mauritius	Trust deeds are covered according to relevant legislations.
Pakistan	Offer documents such as bond contracts and trust deeds are not standardized and such contractual agreements vary according to the term and conditions specified in the scheme of the issue.
Peru	There are common rules that govern the contents of the prospectuses, and there are regulations with regard to the standardization of corporate bonds by local issuers, which cover aspects such as the interest rates, terms to maturity, and form of calculation of interest payments.
Singapore	Offer documents are not standardized, but efforts are being undertaken by industry participants to increase standardization.
Slovenia	Prospectus and extracts of prospectus are standardized. In this respect, the law defines the two as obligatory offer documents and securities regulations define the exact form and content of the prospectus and its abstract for each kind of securities issued.
South Africa	The Bond Exchange tries to encourage new corporate issues to adopt the Euro Bond Offering Circular documents.
Thailand	Minimum content with regard to terms and conditions in bond contracts e.g. the characteristics of a debenture, repayment, collateral, duties of an issuer as well as the consequence of breach of terms and conditions are specified by the SEC. Efforts are being undertaken to standardize bond contracts. The SEC has set a standard form with regard to registration statement and prospectus which requires
Trinidad & Tobago	Offer documents are standardized.
Tunisia	Standardization is applicable in terms of content of the documents.
Turkey	Prospectuses, circulars and the format of bonds have been standardized.

Note:

In Brazil, ANDIMA has been reported to be the main driver behind the move towards greater standardization of bond contracts.

5.6.9 Taxes on bond market transactions

Table 5.6-9: Taxes on bond market transactions

Country	Primary market		Secondary market	
	Tax	Details/Remarks	Tax	Details/Remarks
Argentina	Yes	15% tax over the interest in the corporate financing value. Plans have been announced by the government to eliminate this.	No	None
Bangladesh	Yes	Prior to its abolition, a stamp duty of 2.5% applies for corporate bond issues. This has been recently replaced by a lump sum tax of Taka2,500 (around US\$50)	No	None
Brazil	N.A.	None	No	None
Chinese Taipei	No	None	Yes	Stamp duty applies for corporate bond transactions and amounts to 0.1% of trade value. The tax law on bond interest may however be revised according to the law on withholding tax.
El Salvador	N.A.	None	Yes	Tax applies on capital gains.
Hungary	N.A.	None	No	None
India	N.A.	None	Yes	Stamp duty is only applicable to physical paper transactions. Stamp duty has been abolished for dematerialized paper since February 1999. Stamp duty rates differ from state to state.
Indonesia	No	None	No	None
Kenya	N.A.	None	No	None
Korea	N.A.	N.A.	No	None
Lithuania	Yes	Stamp duty of US\$250 applies for issuers	No	None

Table 5.6-9: Taxes on bond market transactions

Country	Primary market		Secondary market	
	Tax	Details/Remarks	Tax	Details/Remarks
Malaysia	No	Stamp duty for corporate bond issuance was waived in 1989	Yes	Withholding tax of 15% for foreign investors on interest earned still applies, though this rate was lowered in 1994 from the original 20%. Stamp duty for PDS transfer was waived in 1989. With effect from 1992, interest income earned from bonds issued by public listed companies is exempt from income tax for individuals. 1993 saw this exemption extended to issues by non-listed companies. Tax exemption was also given on interest income received by unit trusts and listed closed-end funds from corporate bonds, other than convertible loan stock.
Mauritius	N.A.	N.A.	No	None
Pakistan	N.A.	N.A.	Yes	Secondary market transactions of bonds involving physical certificates are liable to a stamp duty amounting to 0.10% of the face value payable by the investor. Exemption of the stamp duty is given when transfers of bonds are conducted via the Central Depository System. Corporate bonds are also exempt from capital gains and withholding tax.

Table 5.6-9: Taxes on bond market transactions

Country	Primary market		Secondary market	
	Tax	Details/Remarks	Tax	Details/Remarks
Peru	N.A.	N.A.	Yes	A General Sales Tax of 18.0% is applied to the total trading fee.
Singapore	N.A.	N.A.	No	In most cases, including scripless bonds, stamp duty does not come into effect
Slovenia	N.A.	N.A.	No	None
South Africa	Yes	A stamp duty of 0.25% applies to primary issues.	Yes	A VAT of 14% applies to bond trades though there is no stamp duty on ownership transfer of listed bonds.
Thailand	Yes	As for individual investors, the first buyer of discount bonds is taxed 15% upfront on the discount, which is treated as interest income. If bonds are sold prior to maturity, the tax paid would not reflect the actual income received by the bondholder, encouraging bondholders to hold on to bonds until maturity.	Yes	For juristic/legal persons, a Special Business Tax (SBT) applies to capital gains made on bond trading, on a net basis within one month. Tax deduction from capital losses is not allowed.
Trinidad & Tobago	N.A.	N.A.	Yes	A stamp duty applies to all securities transactions. The duty is reported to be minimal.
Tunisia	N.A.	None	Yes	A tax is levied on the commissions (between 0.01% and 0.005% of trade value) received by all intermediaries. The Value added tax is 18%)

Table 5.6-9: Taxes on bond market transactions

Country	Primary market		Secondary market	
	Tax	Details/Remarks	Tax	Details/Remarks
Turkey	N.A.	None	Yes	A Banking and Insurance Transaction tax is levied on the commissions (5% of commission) received by all intermediaries and this is passed on to investors. Commission rate is set at 0.015% of trade value).

5.7 Corporate bonds: Issuers and investors

5.7.1 Major issuers in the primary market

Table 5.7-1: Corporate bond market in emerging market jurisdictions: Issuer base

Country	Banking institutions	Utilities companies	Leasing companies	Infrastructure and telecommunications companies	Non-bank financial companies	Others
Argentina	✓	✓				✓
Bangladesh						✓
Brazil		✓		✓		
Chinese Taipei	✓	✓	✓	✓	✓	✓
El Salvador	✓					
Hungary	✓		✓	✓	✓	✓
India		✓				✓
Indonesia	✓			✓	✓	✓
Kenya						✓
Korea	✓	✓				
Lithuania	✓	✓		✓	✓	✓
Malaysia		✓		✓	✓	
Mauritius			✓			
Pakistan			✓			
Peru	✓		✓			✓
Singapore	✓	✓	✓	✓	✓	✓
Slovenia	✓			✓	✓	

Table 5.7-1: Corporate bond market in emerging market jurisdictions: Issuer base

Country	Banking institutions	Utilities companies	Leasing companies	Infrastructure and telecommunications companies	Non-bank financial companies	Others
South Africa	✓	✓		✓	✓	
Thailand	✓	✓			✓	
Trinidad & Tobago	✓				✓	✓
Tunisia	✓		✓			
Turkey	✓		✓			✓

Note: The table was constructed based on the information contained in the answers to the survey questionnaire as provided by the respective countries.

In Argentina, banks make up as much as 90.0% of the issuer base.

In Bangladesh, corporate bonds have only been issued by a few manufacturing companies.

“Others” in Hungary includes municipalities and non-financial companies which mainly consist of manufacturing companies.

In Indonesia, “Others” refers to the property sector, which in has been the foremost corporate bond issuers at least for the period 1996-2000. Information from Indonesia is obtained from “Country Studies: The development of Indonesia Corporate Bonds Market”, by Akhmad Rizal Shidiq and Urip Suprodjo. Published for the *Third Brainstorming Workshop on Developing Corporate Bond Markets in Asian Development Bank* at the Asian Policy Forum organized by ADB Institute, Tokyo on 26 January 2001.

In Lithuania, the major corporate bond issuers consist of manufacturing companies which make up as much as 71.7% of the value of corporate bonds distributed in the country.

In Peru, around half of the issuers of PDS consists of manufacturing companies.

In Singapore, “Others” includes, among others, state-related corporations.

In Turkey, manufacturing companies are also among the main corporate debt issuers.

In Lithuania, “Others” include manufacturing companies, which issued over 70% of the value of bonds issued in Lithuania at the time of the survey.

In India, Financial Development Institutions have generally issued the most amount of bonds in India. “Others” includes Financial Development Institutions.

5.7.2 Third-party credit enhancement

Table 5.7-2: The role of third-party credit enhancement for primary issues

Country	Are credit guarantee services available?	Are credit guarantee services generally used?	Main guarantor(s)
Argentina	Yes	No	N.A.
Bangladesh	No	Not relevant	Not relevant
Brazil	N.A.	N.A.	N.A.
Chinese Taipei	Yes	Yes	Banks
El Salvador	Yes	No	N.A.
Hungary	Yes	Yes	Banks
India	No	Not relevant	Not relevant
Indonesia	No	Not relevant	Not relevant
Kenya	Yes	Yes	Banks
Korea	Yes	No	Not relevant
Lithuania	Yes	No	N.A.
Malaysia	Yes	Yes	Banks
Mauritius	N.A.	N.A.	N.A.

Table 5.7-2: The role of third-party credit enhancement for primary issues

Country	Are credit guarantee services available?	Are credit guarantee services generally used?	Main guarantor(s)
Pakistan	N.A.	N.A.	N.A.
Peru	Yes	Yes	N.A.
Singapore	Yes	No	N.A.
Slovenia	No	Not relevant	Not relevant
South Africa	No	Not relevant	Not relevant
Thailand	Yes	No	Not relevant
Trinidad & Tobago	No	Not relevant	Not relevant
Tunisia	Yes	Yes	Banks
Turkey	Yes	Yes	Banks, Holding companies

Note:

In Bangladesh, personal directors of the holding company of the issuer have been reported to provide guarantees on bond offerings.

In Hungary, guarantee is compulsory in the event that the value of the issuance exceeds the capital of the issuer.

In India, the issuer is required to create a form of “guarantee” by way of a lien on its immovable/movable properties, in favor of the debenture trustee, who will hold this in trust on behalf of the debenture holders.

Most newly issued bonds are no longer guaranteed in Korea after the East Asian crisis in 1997.

Prior to the East Asian crisis in 1997, bond primary issues were generally guaranteed, mainly by banking institutions and credit guarantee companies. The scenario was altered in the wake of the crisis.

It has been reported however, that in Trinidad & Tobago, the government provides guarantee for debt securities issued by state enterprises.

5.7.3 Hybrid bonds

Table 5.7-3: The variety of bonds issued in emerging markets

Country	Convertible bonds	Bonds with warrants	Exchangeable bonds	Bonds with options	Participating bonds	Coupon-stripped bonds	Islamic /Profit sharing bonds
Argentina	√	√					
Bangladesh	√						
Brazil	√						
Chinese Taipei	√	√	√	√		√	
El Salvador							
Hungary	√						
India	√	√					
Indonesia	√						
Kenya							
Korea	√	√	√	√	√		
Lithuania	√			√			
Malaysia	√	√					√
Mauritius							
Pakistan	√						

Table 5.7-3: The variety of bonds issued in emerging markets

Country	Convertible bonds	Bonds with warrants	Exchangeable bonds	Bonds with options	Participating bonds	Coupon-stripped bonds	Islamic /Profit sharing bonds
Peru				✓			
Singapore	✓	✓	✓	✓			✓
Slovenia	✓						
South Africa				✓		✓	
Thailand	✓	✓		✓			
Trinidad & Tobago				✓		✓	
Tunisia	✓				✓		
Turkey	✓			✓			✓

Note: The table was constructed based on the information contained in the answers to the survey questionnaire as provided by the respective countries.

Exchangeable bonds are distinguished from convertible bonds by the fact that the latter can be converted into shares of the bond-issuing company while the former can be exchanged for shares in a company other than the issuing company. Bonds with options also include callable bonds.

In Argentina, it has been remarked that the issuance of hybrid bonds has been rather limited.

No hybrid bonds are issued in El Salvador.

It has been reported that no hybrid bonds have been issued by Hungarian companies as of end-2000.

Almost all of the corporate bonds issued in Indonesia are straight bonds.

Kenya also reported the absence of hybrid bonds in its market.

No hybrid bonds are reported to have been issued in Mauritius.

Most of the corporate bonds issued in Peru are straight bonds. Peru reported on the issuance of the so-called “structured bonds” whose returns depend on the evolution of an index built considering the prices of a group of shares. There was a public offering of “convertible bonds” in 1994 but these were redeemed in 1997.

5.7.4 Major investors in corporate bonds

Table 5.7-4: Corporate bonds in emerging market jurisdiction: Investor base

Country	Investment management funds	Banks	Pension funds	Insurance companies	Individuals		Others	
					Yes	N.A.	Yes	N.A.
Argentina		✓	✓					
Bangladesh		✓				✓		✓
Brazil	N.A.	N.A.	N.A.	N.A.		N.A.		N.A.
Chinese Taipei	✓							
El Salvador		✓	✓					✓
Hungary	✓	✓	✓	✓		✓		✓
India						✓		
Indonesia	✓	✓	✓	✓				.
Kenya		✓	✓			✓		✓
Korea	✓	✓		✓				✓

Table 5.7-4: Corporate bonds in emerging market jurisdiction: Investor base

Country	Investment management funds	Banks	Pension funds	Insurance companies	Individuals		Others	
					Yes	N.A.	Yes	N.A.
Lithuania		✓		✓				
Malaysia	✓	✓	✓	✓				✓
Mauritius		✓				✓		✓
Pakistan	✓	✓						✓
Peru	✓	✓	✓	✓		✓		✓
Singapore	✓	✓		✓				
Slovenia		✓		✓		✓		✓
South Africa	✓	✓	✓	✓				
Thailand	✓	✓	✓	✓		✓		
Trinidad & Tobago	N.A.	N.A.	N.A.	N.A.		N.A.		N.A.
Tunisia	✓							
Turkey	✓					✓		

Note: "Others" may include non-bank financial institutions, among others.

In Hungary, "Others" includes some of the non-financial companies and foreign institutional investors.

In Korea, "Others" includes securities companies.

"Others" in Malaysia includes finance companies and discount houses.

Peru reported that the major investors in PDS mainly consist of local institutional investors. Investment management companies that invest in bonds tend to consist of mutual funds and investment funds. "Others" includes securities firms and financial companies.

Other investors in PDS in Slovenia include non-financial companies, the government and the provider of auxiliary financial services.

Information from Indonesia is obtained from "Country Studies: The development of Indonesia Corporate Bonds Market", by Akhmad Rizal Shidiq, Urip Suprodjo. Published for the *Third Brainstorming Workshop on Developing Corporate Bond Markets in Asian Development Bank* at the Asian Policy Forum organized by ADB Institute, Tokyo on 26 January 2001.

The information for India only refers to the bonds issued by Development Financial Institutions.

In Kenya, "Others" includes other institutional investors.

It has been reported in Pakistan that the retail investor base has been growing.

5.7.5 The choice between floating and fixed coupon rates on corporate bonds

Table 5.7-5: Fixed or floating coupon rates? Common practice in emerging countries

Country	Fixed or floating coupon rates?	Main factors attributed to the choice between fixed and floating rates/Other remarks
Argentina	Coupon rates are mainly fixed .	N.A.
Bangladesh	Coupon rates are fixed .	The rates are determined by bank interest rates, return rates on shares as well as redemption option.
Brazil	Coupon rates are mainly floating .	At the time of the survey, only around 6% of the issues registered with the National Private Bond System has fixed coupon rates. The situation is mainly due to historically volatile inflation rates.
Chinese Taipei	Coupon rates are mainly fixed .	There is general preference for fixed cost in financing.
El Salvador	Coupon rates are fixed .	N.A.
Hungary	Fixed and floating rates are used.	Divergent inflationary expectations among investors.
India	Coupon rates are mainly fixed .	The general desire to safeguard against a fall in interest rates. Interest rates in India are higher in nominal terms compared to most countries.
Indonesia	Fixed and floating rates are used.	N.A.
Kenya	Coupon rates are mainly floating .	N.A.
Korea	Coupon rates are mainly fixed .	There have been few instances of issuing floating-rate bonds but it has been reported that the number of bonds with floating rates is small but has been increasing since 1999.
Lithuania	Fixed and floating rates are used.	The choice of fixed or floating coupon rate depends on the market of distribution. Bond rates are fixed on the Lithuanian debt market while on foreign markets rates are usually floating.
Malaysia	Coupon rates are mainly fixed .	The fixed interest rate offered range from 0% to 12.0%. Floating rates are based on the KLIBOR rates.
Mauritius	Coupon rates are mainly fixed .	General preference among investors for stable rates.
Pakistan	Fixed and floating rates are used.	A ceiling is specified for coupon rates on bonds: 13.5% for convertible bonds and 15% for non-convertible bonds.
Peru	Fixed and floating rates are used.	As at June 2001, 57% of the total outstanding amount of PDS offers fixed coupon rates. The remaining 43% offers floating coupon rates, especially issues made in domestic currency (almost 60% of local currency issues offers coupon rates that are linked to the General Price Index).

Table 5.7-5: Fixed or floating coupon rates? Common practice in emerging countries

Country	Fixed or floating coupon rates?	Main factors attributed to the choice between fixed and floating rates/Other remarks
Singapore	Coupon rates are mainly fixed .	Main investors in PDS—insurance companies—prefer fixed income and this has been reflected in the offering of fixed-income bonds. In 1999, 61% of PDS had fixed coupon rates while only around 14.0% of PDS offered in Singapore come with floating coupon rates.
Slovenia	Coupon rates are mainly floating .	Index-linked coupon rates are generally in use. Coupon rates are indexed to the base interest rate and the nominal interest rate. The base interest rate is calculated as three-month average of inflation as measured by CPI. In the case of classic bonds, the issuer pays real interest rates at the maturity dates for interest.
South Africa	Coupon rates are mainly fixed .	Floating rates tend to be used on bonds with maturities of three years or less, and usually pay interest quarterly, with the coupon rate linked to the Treasury Bill or the Johannesburg Inter-bank Rate (JIBAR).
Thailand	Coupon rates are mainly fixed .	There is a general preference for a fixed cost in financing.
Trinidad & Tobago	Coupon rates are mainly fixed .	N.A.
Tunisia	Coupon rates are mainly fixed .	The coupon rates are linked to the fixed money market rates.
Turkey	Coupon rates are mainly fixed .	Both fixed and floating rates are used for corporate bonds, though fixed rates are more prevalent. Volatile inflation results in fixed coupon rates being limited to short-maturity bonds. The choice over fixed or floating rates is determined by expectations of interest rate direction.

Note:

In cases where a jurisdiction only indicates the use of one type of coupon rates (either Fixed or Floating), the statement is made based on what is commonly practiced in that particular market.

It has been reported in India that the interest rates in India tend to be higher in absolute terms compared to most countries.

5.7.6 Investor protection via laws on bankruptcy and foreclosure

Table 5.7-6: Procedures with regards to bankruptcy and foreclosure of transactions

Country	Remarks on existing procedures with regards to investor protection in the event of bankruptcy and foreclosure
Argentina	N.A.
Bangladesh	Bankruptcy laws exist and they provide meaningful procedures for the resolution of and protection of the interests of creditors and debtors. Nevertheless, it has been reported that the justice system is slow and that judgments in the lower courts may be impartial. This makes legal recourse time consuming and difficult.
Brazil	N.A.
Chinese Taipei	The Company Law allows for bondholders holding at least 5% of the total corporate bonds in the same issue to convene meetings of corporate bondholders to make resolutions and claim their rights. Once approved by the local court and posted to the public, such resolutions are legalized and shall be executed by trustees of corporate bondholders.
El Salvador	There are no formal proceedings in such cases.
Hungary	The Act on Bankruptcy includes detailed regulations for bankruptcy and the rights of the debtors. Nevertheless, the order of priorities accorded to the various creditors places bondholders at the end of the queue behind the Tax Office, National Health Service and other creditors.
India	N.A.
Indonesia	The Bankruptcy laws have sufficient provisions in relation to bankruptcy. However, the judicial process is time consuming.
Kenya	N.A.
Korea	The bankruptcy laws contain adequate provisions with regards to the event of bankruptcy or foreclosure.
Lithuania	Following the initiation of bankruptcy proceedings, bondholders rank third in importance after the claims of employees (e.g. compensation etc.) and the claims by the state (taxes, health insurance contribution etc.). All other claims on the company would only be satisfied after these two claims have been fully met. Claims in terms of computed interest and defaulted interest payment are only entertained after demand of all classes of claimants has been met.
Malaysia	Prior to the changes made to Section 176, Companies Act between October 1998 and June 2000, one of the problems highlighted with regard to bankruptcy laws was the fact that legal protection from creditors given by the court (i.e. restraining order) in the event of default/bankruptcy also extended to the guarantors of PDS issues, and this effectively restrained bondholders from making claims against guarantors. In October 1998, amendments were made to Section 176, which imposed relatively more stringent requirements for a company to apply for a restraining order from the court. On June 2000, further amendments were made to Section 176 which excluded guarantors, including PDS issue guarantors, from being covered by a restraining order, thus compelling them to honor their obligations to certain creditors of the company, including guaranteed bondholders. These changes to the law have enhanced the protection of the rights of bond investors.
Mauritius	It has been reported that Mauritian laws contain formal procedures for the winding up of the transactions of a bank.
Pakistan	N.A.
Peru	There is a law that establishes the rules applicable to the economic and financial reorganization, dissolution and liquidation, and bankruptcy of companies, as well as the mechanisms for the global reprogramming of the obligations assumed before the state of insolvency. This law is not applicable to the companies subject to the supervision of the Superintendence of Banking and Insurance.

Table 5.7-6: Procedures with regards to bankruptcy and foreclosure of transactions

Country	Remarks on existing procedures with regards to investor protection in the event of bankruptcy and foreclosure
Singapore	There are no insolvency laws catering especially to the bond market itself but existing insolvency laws are applicable to the bond market and adequately address the issue of insolvency of the bond issuer. Bondholders are considered technically to be creditors of the issuing company and the rights between the issuer and the bondholder are governed by contract law.
Slovenia	It is not possible to initiate legal proceedings of compulsory settlement against an investment firm. The receiver in the bankruptcy proceedings initiated against an investment firm may not withdraw from a contract with regard to selling or buying securities entered into by the investment firm in question.
South Africa	N.A.
Thailand	Issuers, bondholders, sellers and purchasers of bonds are all bound by contracts. Thus in the event of a default, the non-offending party has the right to take civil actions. For instance, in the case of any party in an unsecured transaction going bankrupt, the other party assumes the same rights as other unsecured creditors. In the case of secured transactions, bondholders can seize the collateral for the repayment of debt and these collaterals shall not be included in the bankrupt estate. Secured bondholders are also given the rights of unsecured creditors on the bankrupt estate should the value of debt exceeds the value of the collateral. In the case of guaranteed bond, bondholders can make a claim against the guarantor for the payment of their debt for either the whole amount of their debt repayment or for any remaining value of debt repayment that exceeds the proceeds received from the allocated bankruptcy estate. Provisions under bankruptcy laws are deemed adequate since the law gives all creditors sufficient time to file a claim for the repayment of their debt.
Trinidad & Tobago	While existing company laws provide for the legal proceedings with regards to the bankruptcy of a corporate entity, extant securities legislation does not address the issues related to bankruptcy or foreclosure of transactions.
Tunisia	Bankruptcy laws exist and they provide meaningful procedures for the resolution and protection of the interests of creditors and debtors.
Turkey	In the event of a bond issuer going bankrupt, in the case of bonds that have been secured by a collateral, the collateral is used for the repayments of the bonds. Otherwise the bonds are treated in the same way as other debts of the corporation.

Notes:

In Singapore, the trustee acts as a watchdog of the bondholder's interests. The roles of the trustees include ascertaining whether the assets of the bond issuer and its guarantor corporations are sufficient to discharge the principle debt when it falls due. The trustee is also empowered to make an application to the court for suitable orders to protect the interests of bondholders if it deems that the assets of the bond issuer are insufficient to discharge the principal debt. The trustee is also the person who will take action to enforce the obligations to pay under the bond when necessary. In the case of secured bonds, and where the securities are vested in the trustee, the trustee can exercise the statutory power of sale or appointment of receiver.

Protection from secondary market transaction loss

Table 5.7-7: Measures to protect investors from transaction loss

Country	Remarks on available recourse in the event of any impediments in settling transactions
Argentina	Argentina maintains a number of guarantee funds the main purpose of which is to protect investors in the event of a counterparty default.
Bangladesh	N.A.
Brazil	N.A.
Chinese Taipei	N.A.
El Salvador	N.A.
Hungary	The Central Clearing House and Depository Ltd operates a multilevel system of transaction guarantees. This includes strict capital requirement on direct clearing members. Institutions, that are not able to meet these requirements, could become indirect clearing members only. The investment service providers are obliged to keep a certain amount of liquid assets as guarantees for the transactions with KELER and they are obliged to participate in the Exchange Settlement Fund. In the case of large-scale deals, use of the Hungarian gross settlement system, the VIBER, may also be required.
India	N.A.
Indonesia	N.A.
Kenya	N.A.
Korea	The bankruptcy laws contain adequate provisions with regards to the event of bankruptcy or foreclosure. Furthermore, the Korean Stock Exchange is responsible to protect the rights of the non-offending party. The use of delivery versus payment (DVP) also reduces the risk of a default in transactions. In cases where the transactions are carried out OTC and without using DVP, the innocent party assumes the rights of a creditor in the event of a bankruptcy or non-settlement of transactions.
Lithuania	A Guarantee Fund was created to ensure that transactions concluded at the National Stock Exchange of Lithuania be fully executed. Also, the Law on Investor-Protection Scheme will be enforced in Lithuania in 2002.
Malaysia	The Kuala Lumpur Stock Exchange has established an Investors' Compensation Fund that provides a certain degree of coverage for transaction loss.
Mauritius	N.A.
Pakistan	N.A.
Peru	The Lima Stock Exchange is required by the law to maintain a guarantee fund to back the reposition of securities or funds transacted by investor via securities firms. The guarantee fund consists of contributions from securities firms. In addition to that, securities firms are also required to provide guarantees in favor of the capital market regulator to back the liabilities assumed with their clients in relation to transactions made <i>outside</i> the stock exchange. A liquidity fund is also maintained by the national clearing institution to protect direct participants from the risk that the counterparty reneges on an obligation in securities market transactions.
Singapore	N.A.
Slovenia	The Rules and Regulations of Central Securities Clearing Company (KDD) have provided for the setting up of a guarantee/compensation fund consisting of cash contributions of the members of the clearing system.
South Africa	The Bond Exchange maintains a guarantee fund that provides immediate cover—up to a limit—to members or clients in the event of a member default. The Exchange also requires members to either self-insure or hold appropriate fidelity insurance cover against default risk.
Thailand	N.A.
Trinidad & Tobago	N.A.

Table 5.7-7: Measures to protect investors from transaction loss

Country	Remarks on available recourse in the event of any impediments in settling transactions
Tunisia	There exists a form of guarantee fund that backs transactions and guarantees the settlement of all transactions.
Turkey	Adequate provisions relating to bankruptcy or foreclosure exist with unpaid money or undelivered securities being covered by the collateral of the related members, which are deposited with the stock exchange.

5.8 Macroeconomic policies and bond market development

5.8.1 Discretionary monetary policy tools

Table 5.8-1: The use of discretionary monetary policy tools

Country	Interest rate controls	Bank-by-bank credit ceilings	Statutory liquidity ratios	Directed credits	Bank-by-bank rediscount quotas	Credit squeeze
Argentina						
Bangladesh			√		√	
Brazil						
Chinese Taipei			√		√	
El Salvador	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Hungary						
India	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Indonesia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Kenya		√				√
Korea						
Lithuania			√			
Malaysia			√	√		
Mauritius	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Pakistan	√		√	√		
Peru					√	
Singapore						
Slovenia						
South Africa						
Thailand						
Trinidad & Tobago	√		√			

Table 5.8-1: The use of discretionary monetary policy tools

Country	Interest rate controls	Bank-by-bank credit ceilings	Statutory liquidity ratios	Directed credits	Bank-by-bank rediscount quotas	Credit squeeze
Tunisia			✓			
Turkey			✓			

Note:

In cases where whole rows are empty, no discretionary monetary policy tool has been reported to be in use. Information for certain countries may not be complete.

Argentina reports a passive monetary policy regime which has been in place since 1991 with the adoption of a currency board. Until June 2001, the Argentinean peso was pegged to the US dollar at the rate of conversion 1 peso = 1 dollar.

Lithuania also implements a currency board and pegs the Lithuanian Litas to the US dollar. The Bank of Lithuania imposes certain restrictions in terms of liquidity index, compulsory reserves index and capital adequacy index. Lithuania has announced that the peg will be anchored to the euro in February 2002.

5.8.2 “Indirect” monetary policy tools

Table 5.8-2: The use of “indirect” monetary policy tools

Country	Public sector deposits	Credit auctions	Reserve requirement	Lombard windows	Open market operations	Repos and reverse repos	Purchase and sale of forex swaps
Argentina					✓	✓	
Bangladesh	✓	✓	✓		✓		
Brazil			✓		✓		
Chinese Taipei			✓		✓		
El Salvador					✓		
Hungary			✓		✓	✓	
India	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Indonesia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Kenya				✓	✓		
Korea			✓	✓	✓	✓	✓
Lithuania			✓	✓	✓	✓	
Malaysia	✓		✓		✓	✓	
Mauritius			✓				
Pakistan			✓		✓		
Peru			✓		✓	✓	✓
Singapore					✓	✓	✓
Slovenia			✓	✓	✓	✓	
South Africa		✓	✓	✓	✓	✓	✓
Thailand			✓	✓	✓	✓	
Trinidad & Tobago			✓		✓		

Table 5.8-2: The use of “indirect” monetary policy tools

Country	Public sector deposits	Credit auctions	Reserve requirement	Lombard windows	Open market operations	Repos and reverse repos	Purchase and sale of forex swaps
Tunisia		✓	✓		✓	✓	✓
Turkey			✓		✓	✓	

Note: In cases where whole rows are empty, no discretionary monetary policy tool has been reported to be in use. Information for certain countries may not be complete.

Argentina reports a passive monetary policy regime, which has been in place since 1991 with the adoption of a currency board. Until the first week of January 2002, the Argentinean peso was pegged to the US dollar at the rate of conversion of 1 peso = 1 dollar.

In Bangladesh, monetary policy tools may also include others.

In Hungary, the National Bank of Hungary (NBH) uses repos but does not use reverse repos as indirect tools. Instead of reverse repos, a deposit facility is available for the banks. Moreover, there are regular NBH-bond auctions as a special type of open-market operations.

Chinese Taipei also reported the use of rediscount.

5.8.3 Capital controls

Table 5.8-3: Capital controls and their effects on bond market

Country	Remarks on capital controls
Argentina	No capital and exchange control since 1991.
Bangladesh	Currency is fully convertible only in the current account.
Brazil	N.A.
Chinese Taipei	No capital and exchange control
El Salvador	No capital and exchange control in El Salvador. Such controls are seen as to impede bond market development.
Hungary	Steps have been taken since mid-1990s to liberalize capital controls, especially with regard to long-term transactions in relation to the OECD and EEA Member States. Nevertheless, exchange controls still exist for short-term capital flows (including derivatives transactions). Long-term transactions including some activity on the bond markets are already liberalized and thus capital controls are not seen as a hindrance to bond market development.
India	N.A.
Indonesia	No capital controls though portfolio investment flows require some form of government approval to enter and leave the country.
Kenya	No explicit or implicit capital and exchange control.
Korea	No capital and exchange control. Many restrictions on capital movement have been removed since the East Asian crisis, though some restrictions remain that may impede bond market development. These include the requirement for the approval from the Governor of Bank of Korea for domestic residents wishing to lend more than KrW100 million to foreigners.
Lithuania	No capital and exchange control. The national currency was pegged to the US dollar in 1994 (the peg was changed to the euro in 2002). This exchange regime has benefited the bond market since it reduced inflation and interest rates.
Malaysia	Certain capital controls measures have been introduced in the wake of the 1997-98 East Asian financial crisis but these have since been removed. Certain capital controls still apply.
Mauritius	No capital and exchange control.

Table 5.8-3: Capital controls and their effects on bond market

Country	Remarks on capital controls
Pakistan	Remittance on capital account is not permitted, but there are no restrictions on the repatriation of capital investment, profit and dividend by foreigners. Obtaining foreign private loans or foreign currency loans are not restricted.
Peru	No capital and exchange control.
Singapore	No capital and exchange control, though monetary management policies require that bank lending exceeding S\$5 million to non-residents for uses unrelated to the domestic economy be made in consultation with the central monetary authority. This measure is seen as a potential hindrance to domestic bond market development. Thus, to promote bond market development, non-residents are allowed to issue Singapore dollar-denominated bonds (for uses unrelated to the domestic economy) on condition that they swap or convert the Singapore dollar proceeds into foreign currency.
Slovenia	Regulations on the free movement of capital have been changed and are almost in line with EU regulations, which require the elimination of all restrictions on capital flows. While there are some remaining restrictions, these do not apply to the purchase of debt securities via private placement.
South Africa	Exchange controls have largely been liberalized, and foreigners are allowed to move funds across borders. Though foreign investments by residents of South Africa are still subject to controls, these have been relaxed. Emigrants from South Africa, however are subject to Blocked Rand requirements. Block Rand could be utilized for bond market transactions, however, exchange control regulations stipulate that the principal portion remains blocked and may not be remitted out of South Africa, though restriction does not apply to the income portion i.e. interest which is remittable. It has been recognized that the removal or further relaxation of exchange controls could boost the development of the domestic bond market within the context of the globalization of capital flows.
Thailand	No controls on current account but there are some restrictions on the capital account. These include the requirement for the central bank's approval for overseas investment in financial assets and property by residents. The central bank also prohibits speculative transactions but permits long-term investments. In 1998, the central bank imposed a ceiling of ThB50 million on the amount of baht-denominated credit facilities provided by each financial institution to non-residents without the underlying trade or investment activities taking place in Thailand. The Thai SEC recognizes that in the long term, these capital controls may hinder the issuance of foreign bonds, which in turn may limit the diversity and innovation in the domestic bond market.
Trinidad & Tobago	No capital and exchange control.
Tunisia	Acquisition of bonds or of more than 50% of capital by non-Tunisian citizens requires prior authorization.
Turkey	No capital and exchange control.

5.9 Market microstructure

5.9.1 OTC vis-à-vis Exchanges

Table 5.9-1: OTC markets vis-à-vis formal exchanges

Country	Benchmark securities trading: Exchange or OTC	Corporate bond trading: Exchange or OTC	Government policy: Exchange or OTC
Argentina	Mainly OTC	Mainly OTC .	Neither
Bangladesh	Not traded	Exchange . There is no OTC market at present in Bangladesh.	Neither
Brazil	N.A.	Mainly OTC with all trades registered with SND. Trades on the exchange can also be done but liquidity on the exchange has been historically limited due to the success of the clearing and settlement structure of the SND.	N.A.
Chinese Taipei	OTC	Mainly OTC	Neither
El Salvador	No benchmark reported	Exchange & OTC	Exchange
Hungary	Exchange & OTC. Liquidity on both exchange and OTC is reported to be limited.	Exchange & OTC. Liquidity on both exchange and OTC is reported to be limited.	Exchange
India	OTC. Trading on exchange via an order-driven system is being introduced.	Exchange	Neither
Indonesia	N.A.	Exchange & OTC	N.A.
Kenya	OTC	Not traded	N.A.
Korea	OTC	OTC	Neither
Lithuania	No benchmark reported	Exchange & OTC	Neither
Malaysia	Exchange & OTC	OTC	Neither
Mauritius	OTC	Exchange	Exchange
Pakistan	Exchange & OTC	Exchange	N.A.
Peru	OTC	Exchange & OTC	Exchange
Singapore	OTC	Mainly OTC	Neither
Slovenia	Exchange & OTC	Exchange & OTC	Neither
South Africa	Exchange	Mainly OTC	Exchange
Thailand	OTC	OTC	Neither
Trinidad & Tobago	Not relevant	Exchange & OTC	Exchange
Tunisia	Exchange & OTC	Exchange & OTC	Neither
Turkey	Exchange & OTC	Exchange & OTC	Neither

Table 5.9-1: OTC markets vis-à-vis formal exchanges

Country	Benchmark securities trading: OTC	Exchange or	Corporate bond trading: Exchange or OTC	Government policy: Exchange or OTC
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Note:

Whenever only OTC or Exchange is given as an answer, this usually means that those particular securities are *principally* traded on those trading platforms and thus this does not preclude the use both OTC and Exchange.

In the “Government policy: Exchange or OTC”, the table presents the leanings and direction of government policy on the two trading venues and whether the government offers any incentive to encourage trading on the exchange rather than the OTC market or vice versa. “Neither” signifies that the government does not encourage one trading platform over another.

In Bangladesh, no benchmark securities are traded on any exchange and there is an absence of an OTC market.

The OTC market is not regulated in El Salvador and the information on the OTC market is limited. It has been reported that there are no benchmark securities in El Salvador.

There are no organized OTC markets in Lithuania.

In Mauritius, private debt securities traded on the exchange are reported to be free from tax.

Peru reports that corporate bonds issued are usually listed and traded on the Lima Stock Exchange. According to the Peruvian Income Tax Law, capital gains obtained from the sale of securities registered with CONASEV through centralized trading mechanisms are relieved from the payment of capital gains tax until end-2002. While most of Treasury bonds outstanding in Peru were not publicly issued, they are listed on the exchange and are publicly traded. The Certificates of Deposit of the Central Reserve Bank on the other hand are traded in the OTC market.

Trinidad & Tobago reported the use of the prime lending rate as the benchmark rate.

5.9.2 Market makers and primary dealers

Table 5.9-2: Primary dealers and market makers in the secondary bond market

Country	Banks	Securities firms	Fund management companies	Investment banks	Others
Argentina	N.A.	N.A.	N.A.	N.A.	N.A.
Bangladesh	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Brazil	✓	✓		✓	
Chinese Taipei	✓	✓			✓
El Salvador	N.A.	N.A.	N.A.	N.A.	N.A.
Hungary	✓	✓			
India	✓				✓
Indonesia	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Kenya	N.A.	N.A.	N.A.	N.A.	N.A.
Korea	✓	✓			✓
Lithuania	✓	✓			
Malaysia	✓				✓
Mauritius		✓	✓		✓
Pakistan	✓	✓		✓	
Peru	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Singapore	✓				
Slovenia	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
South Africa	✓				
Thailand	✓	✓			

Table 5.9-2: Primary dealers and market makers in the secondary bond market

Country	Banks	Securities firms	Fund management companies	Investment banks	Others
Trinidad & Tobago	✓				
Tunisia	✓				✓
Turkey	✓				

Note:

It has been reported that no formal system of market making exists in Bangladesh, Indonesia, Peru, and Slovenia.

In Brazil, while certain market intermediaries are allowed to act as primary dealers, it has been reported that there is no formal market-making mechanisms.

In Korea, at least one merchant bank is involved in market making.

Chinese Taipei reported that while there is a primary dealer system in place, these primary dealers are not obliged to make markets.

In Tunisia, "Others" includes market players who specialize in government bonds. While market intermediaries are allowed to act as market makers, this activity has been reported not to exist in practice.

5.9.3 Trading platform

Table 5.9-3: Trading platforms for the secondary bond market

Country	Telephone vs. screen-based trading	Cross-border secondary market transactions	Use of electronic trading system (ETS)?
Argentina	Telephone	N.A.	Yes
Bangladesh	N.A.	No	Yes
Brazil	Telephone	N.A.	Yes
Chinese Taipei	Screen-based	No	Yes
El Salvador	Screen-based	N.A.	Yes
Hungary	Screen-based	Yes	Yes
India	Telephone	No	No
Indonesia	N.A.	N.A.	N.A.
Kenya	Telephone	No	No
Korea	Telephone	Yes	Yes
Lithuania	Screen-based	No	Yes
Malaysia	Telephone	No	Yes
Mauritius	Telephone	N.A.	No
Pakistan	Telephone	No	Yes
Peru	Screen-based	No	Yes
Singapore	Screen-based	No	Yes
Slovenia	Screen-based	No	Yes
South Africa	Screen-based	N.A.	Yes
Thailand	Telephone	No	Yes
Trinidad & Tobago	Telephone	No	No
Tunisia	Telephone	No	Yes
Turkey	Screen-based	No	Yes

Note:

In El Salvador, there is no regulatory framework outlining the procedures for cross-border trading of debt securities. The ETS referred to in the case of El Salvador is the VENTAVAL which is operated by the Central Reserve Bank of El Salvador.

5.9.4 Clearing and settlement

Table 5.9-4: Existence of Centralized Securities Depository

Country	Remarks on the use of a Centralized Securities Depository
Argentina	N.A.
Bangladesh	N.A.
Brazil	N.A.
Chinese Taipei	Yes for Treasury bonds that have been dematerialized in a central depository since 1998.
El Salvador	Yes, the Deposit of Valores (CEDEVAL).
Hungary	N.A.
India	N.A.
Indonesia	Yes, the Indonesian Central Securities Depository caters for corporate bonds while the Central Bank caters for government bonds
Kenya	N.A.
Korea	Yes, the Korea Securities Depository.
Lithuania	Yes, the Central Securities Depository of Lithuania
Malaysia	Yes, the Malaysian Central Depository.
Mauritius	Yes for corporate bonds, i.e. the Central Depository and Settlement Ltd.
Pakistan	N.A.
Peru	Yes, CAVALI Clearing and Settlement Institution.
Singapore	Yes for corporate debt securities, i.e. the Centralized Depository (CDP). In addition, these corporate debt securities are dematerialized in the CDP, i.e. traded scripless.
Slovenia	Yes, all bonds are dematerialized in a centralized depository operated by KDD.
South Africa	Yes, effective use of Central Depository has reduced gross settlement exposures by 90%.
Thailand	Yes for corporate bonds. However, investors have a choice of whether to hold physical certificates or deposit them in a central depository, i.e. the Thailand Securities Depository Company Ltd (TSD), which is also the clearinghouse for and depository for equities transactions. However, for government bonds, the Bank of Thailand acts as a registrar and depository.
Trinidad & Tobago	Yes, at the time of this questionnaire, the Trinidad & Tobago Central Depository has been registered but it is not yet operational
Tunisia	The Tunisian Central Securities Depository (STICODEVAM)
Turkey	Yes, a centralized depository exists, i.e. the ISE Settlement and Custody Bank Inc. (Takasbank).

5.9.5 The use of a book-entry system

Table 5.9-5: Existence of a book entry settlement system

Country	Remarks on book-entry system: Is a book-entry system used for bond?
Argentina	Book entry for government bonds.
Bangladesh	N.A.
Brazil	N.A.
Chinese Taipei	Book entry for T-bonds.

Table 5.9-5: Existence of a book entry settlement system

Country	Remarks on book-entry system: Is a book-entry system used for bond?
El Salvador	N.A.
Hungary	N.A.
India	Government securities, including Treasury Bills are settled via the Subsidiary General Ledger (SGL) of the Reserve Bank of India, a book entry system or through delivery of physical securities. For other bonds, settlement is done through the physical
Indonesia	N.A.
Kenya	N.A.
Korea	N.A.
Lithuania	Yes, book entry for all bonds.
Malaysia	Yes, book entry for all bonds.
Mauritius	N.A.
Pakistan	N.A.
Peru	Yes
Singapore	N.A.
Slovenia	N.A.
South Africa	N.A.
Thailand	Book entry for government bonds.
Trinidad & Tobago	Yes, book entry for all bonds.
Tunisia	Yes, a book entry system is used for bonds
Turkey	N.A.

5.9.6 Delivery versus payment (DVP)

Table 5.9-6: The use of DVP

Country	Remarks on DVP
Argentina	DVP for government bonds.
Bangladesh	N.A.
Brazil	N.A.
Chinese Taipei	DVP only for T-bonds that are traded through the inter-dealer system EBTS
El Salvador	N.A.
Hungary	N.A.
India	DVP only for government securities that are settled through the book-entry system.
Indonesia	N.A.
Kenya	N.A.
Korea	DVP was introduced for OTC-traded bonds in 1999.
Lithuania	DVP for all bonds.
Malaysia	DVP for all bonds.
Mauritius	N.A.
Pakistan	N.A.
Peru	DVP exists for all securities registered in CAVALI Clearing and Settlement Institution

Table 5.9-6: The use of DVP

Country	Remarks on DVP
Singapore	DVP exists for government securities and corporate bonds.
Slovenia	DVP for all bonds.
South Africa	N.A.
Thailand	DVP for government securities.
Trinidad & Tobago	N.A.
Tunisia	DVP for listed bonds
Turkey	DVP for all bonds.

5.9.7 Settlement cycles

Table 5.9-7: Settlement cycles

Country	Remarks
Argentina	T+3.
Bangladesh	Varies according to the group of security. A and B groups = T+5 Z group = T+7
Brazil	N.A.
Chinese Taipei	For OTC transactions, bonds are settled on or before T+2. For ROSE electronic bond trading system-traded bonds, T+2 rolling settlement.
El Salvador	N.A.
Hungary	T+2 for exchange-traded and OTC government bonds.
India	For corporate bonds, a rolling settlement system exists ranging from T+0 to T+5.
Indonesia	N.A.
Kenya	T+2 for delivery T+3 for settlement
Korea	N.A.
Lithuania	Central market-traded bonds (except government bonds) are settled on T+3. Central market-traded government bonds are settled on T+1. Block bond trades can be settled from T+1 to T+5.
Malaysia	T+0 in the OTC market and T+3 for exchange-traded bonds.
Mauritius	N.A.
Pakistan	N.A.
Peru	Settlement cycle varies with trading venue. In the auction market, T+1, while in the continuous trading market T+3.
Singapore	N.A.
Slovenia	N.A.
South Africa	N.A.
Thailand	T+2
Trinidad & Tobago	T+5
Tunisia	N.A.
Turkey	N.A.

5.9.8 The availability of a clearing house/central counterparty

Table 5.9-8: Existence of a clearing house/central counterparty

Country	Remarks
Argentina	Yes, ARGENCLEAR.
Bangladesh	N.A.
Brazil	N.A.
Chinese Taipei	None for OTC-traded bonds. Yes, for GTSM (GreTai Securities Market) Electronic Bond Trading System traded bonds (formerly known as ROSE)
El Salvador	N.A.
Hungary	N.A.
India	N.A.
Indonesia	N.A.
Kenya	N.A.
Korea	N.A.
Lithuania	The Settlement Centre of the Bank of Lithuania for exchange trading (excluding block trading). Settlement for block trades may be executed through the Settlement Centre or directly, upon mutual agreement of the parties.
Malaysia	Yes for all bonds. SCANS for exchange trading and the central bank discount window for the OTC market.
Mauritius	Yes for corporate bonds, i.e. the Central Depository and Settlement Ltd.
Pakistan	N.A.
Peru	No
Singapore	N.A.
Slovenia	N.A.
South Africa	N.A.
Thailand	N.A.
Trinidad & Tobago	N.A.
Tunisia	Yes for listed bonds where STICODEVAM guarantees bond clearing and settlement.
Turkey	N.A.

5.9.9 Types of settlement system

Table 5.9-9: Types of settlement system in use

Country	Remarks
Argentina	Settlement is done on a net basis.
Bangladesh	N.A.
Brazil	N.A.
Chinese Taipei	Net settlement for GTSM (formerly ROSE) electronic bond trading system traded bonds. Gross settlement for OTC bonds.
El Salvador	N.A.
Hungary	N.A.
India	Trades for corporate bonds are settled on a gross basis.
Indonesia	N.A.
Kenya	N.A.

Table 5.9-9: Types of settlement system in use

Country	Remarks
Korea	For exchange-traded bonds, trades settled on a net basis by the Korea Securities Depository. For OTC-traded bonds, trades settled on a gross basis.
Lithuania	Settlement of central market-traded bonds is on a net basis.
Malaysia	Settlement is done on a gross basis under the Real Time Gross Settlement System (RENTAS)
Mauritius	N.A.
Pakistan	For listed corporate bonds, settlement is on a gross basis.
Peru	Settlement is done on a net basis.
Singapore	Settlement of government securities is done on a Real Time Gross Settlement (RTGS) basis, involving instant transfer of bonds and funds.
Slovenia	N.A.
South Africa	All bonds are settled on a net basis.
Thailand	Corporate bonds are usually settled on a bilateral (gross) basis. Government bonds are settled in the Bank of Thailand's Real Time Gross Settlement (RTGS) system.
Trinidad & Tobago	Settlement is on a gross basis.
Tunisia	All bonds are settled on a net basis
Turkey	N.A.