

Accelerating Municipal Bond Market Development in Emerging Economies: An Assessment of Strategies and Progress

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Abstract:

The advantages of using municipal bonds to finance urban infrastructure are increasingly evident to policy makers in emerging economies, some of whom are undertaking efforts to accelerate the development of municipal bond markets in their countries. Many of these efforts use the strengths of the U.S. municipal market as a guide to suggest the kinds of market characteristics necessary to attract issuers as well as investors to the marketplace. Features of the U.S. market are often difficult to recreate in these countries in the short run, but policy makers are using a variety of innovative techniques to approximate essential market characteristics. This paper reviews these efforts in four emerging economies, Indonesia, the Philippines, Poland, and South Africa.

INTRODUCTION

Rapid urbanization is now a world-wide phenomenon, and with it has come the need to increase and improve the provision of urban infrastructure services. In order to meet the financing challenges posed by these needs a variety of countries are attempting to accelerate the development of markets in long-term bonds sold by local governments and local government-owned enterprises, often referred to as "municipal" bonds. The U.S. municipal bond market suggests to many of these countries that such markets can offer a way of helping local governments, particularly urban governments, finance critically needed infrastructure with domestic private capital, rather than through sovereign borrowing by national governments.

Developing countries in Asia and South America are particularly active in promoting municipal bond market development. Other countries in various forms of social and economic transition, such as South Africa and former Soviet block nations, have also begun to recognize the potential usefulness of municipal markets. For the purposes of this discussion, all of these countries are referred to as emerging economies.

The objective of this paper is to review and evaluate efforts in a select group of these countries to accelerate the development of municipal bond markets. This analysis is presented within a framework suggested by the key strengths of the U.S. municipal bond market, often used as model for market development in emerging economies. Information has been gathered via field visits and interviews, as well as a review of government reports, studies by consultants, research by investment analysts, and reports by donor agencies.

The emerging economies chosen for review represent a variety of different challenges, opportunities, and assistance approaches. They include the following:

- South Africa: The government is now dismantling policies of apartheid-era administrations, which have retarded the development of key market mechanisms and institutions, despite decades of intermittent municipal bond activity.
- Poland: Only a few municipal bond issues have been sold, but the government is accelerating efforts to craft laws and regulations that will responsibly channel into municipal bonds some of the rapidly growing domestic demand for investment opportunities.
- The Philippines: The passage of the Local Government Code of 1991 greatly deregulated the issuance of municipal bonds, but individual Water Districts and local governments are still working through the complex practical mechanics of bond issuance.
- Indonesia: Unlike the other countries examined, Indonesia does not sell central government treasury securities, and no local government or local government-owned enterprise has ever issued bonds. Nevertheless the government has embarked on an aggressive program targeted at the successful sale of local water utility revenue bonds by early 1997.

THE U.S. MUNICIPAL MARKET AS A MODEL FOR DEVELOPMENT

The potential advantages of municipal bond issuance as a cost-effective and reasonably equitable form of infrastructure financing are well documented. All of these advantages are highlighted in the operations of the U.S. municipal bond market, by far the largest, most active market of its kind in the world, with \$1.2 trillion in outstanding debt. Using the U.S. market as a model, policy makers in emerging economies have begun to identify a number of basic market strengths necessary to attract issuers and investors in a sustainable fashion. Many of the actual ways in which the U.S. market meets these requirements cannot be recreated in emerging economies, and policy makers in these countries tend to be sensitive to warnings by development experts that attempts to do so would be highly questionable.¹ However, many of these policy makers have been innovative in trying to find short cuts to achieve the same results, using the underlying strengths of the U.S. market as targets to be achieved in some fashion if municipal bond market development is to be accelerated in their countries. Drawn from policy studies and consulting reports produced in the countries surveyed for this paper, these strengths, as well as the ways in which they have been achieved in the U.S. market, are summarized in Figure 1, and discussed briefly in the following section.

Figure 1
FRAMEWORK FOR ASSESSING MUNICIPAL
BOND MARKET DEVELOPMENT

Supply/Demand	Essential Market Strengths	U.S. Market Characteristics
Demand for Municipal Bonds: Investor Attraction	Investor Familiarity and Confidence Ability to Trade Securities Freedom to Invest Acceptable Investment Return Strong Credit Quality Information regarding Risks Assistance in Interpreting Information	200-years of Legal/Procedural Development Active Secondary Market Absence of Government Controls Tax-exemption for Interest Income - Tax-supported Debt - Revenue-backed Debt - Separate Corporate Issuers Standardized Legal/Financial Data Financial Intermediaries (rating agencies, bond insurance, mutual
Supply of Municipal Bonds: Issuer Attraction	Tolerable Borrowing Costs Long-term Debt Amortization Assistance for Small Borrowers Facilitative Formal Oversight	Low Interest Rates/Issuance Costs Extended Maturities Bond Banks, Pooled Borrowing, etc. Responsible Self-regulation

The Demand for Municipal Bonds: Investor Attraction

- Investor Familiarity and Confidence: 200-years of Legal & Procedural Development. The U.S. municipal market is capable of withstanding occasional shocks to investor confidence caused by major issuer defaults and bankruptcies, largely because its system of legal and procedural protections has seasoned over a 200-year history of market successes and failures.²
- Ability to Trade Securities: Active Secondary Market. Because an active secondary trading market has developed in the U.S., investors are able to sell off their investments prior to maturity, thus vastly increasing investor interest in securities of any given maturity.
- Freedom to Invest: Absence of Government Controls. For the most part, the U.S. Government neither prescribes nor proscribes investments by institutional or individual investors; this has increased competition for investments, and made the market receptive to new kinds of instruments.
- Acceptable Return on Investment: Tax-exemption. Although often criticized as an inefficient subsidy, the exemption of municipal bond interest payments from federal income tax has proved to be a powerful attraction, particularly for individual investors.
- Strong Credit Quality: Tax-supported Debt. The U.S. municipal market expanded through the 1950s by relying on the credit strength of "general obligation" bonds, backed primarily by tax revenues; the ability of local taxes to generate strong and consistent revenues meant that general obligation bonds came to be seen as almost completely free from default risk.
- Strong Credit Quality: Revenue-backed Debt. As voters demanded restrictions on the sale of debt backed by tax revenues, state and local governments began to shift to bonds backed by specific project revenues rather than taxes; the relatively narrow revenue support backing these bonds was compensated for with higher interest payments.
- Strong Credit Quality: Separate Corporate Issuers. The relatively higher risks associated with revenue bonds were also addressed by the proliferation of special purpose government corporate entities (known most often as special districts and public authorities) to issue the debt, and build and manage the cost-recovery facilities designed to pay off the obligations; separate corporate status has kept this debt off state and local budgets and allowed many of these entities to function more like business enterprises.³
- Information Regarding Investment Risks: Standardized Legal & Financial Data. Because revenue bonds are typically backed only by project revenues, prudent investors require detailed information about the revenue-producing activities of the issuers and safeguards regarding the use of bond proceeds; the U.S. market has developed a tradition of extensive disclosure by issuers, as well as widely applied, reasonably effective standards of accounting, auditing, and financial reporting.
- Assistance in Interpreting Information: Financial Intermediaries. Unlike stocks, basic judgments about the credit quality of municipal bonds are difficult because they are not

typically sold by entities associated with easily identifiable products; rating agencies, bond funds, bond insurers, and other intermediaries help investors process and cope with the increasingly complex information about the risks associated with their investments.

The Supply of Municipal Bonds: Issuer Attraction

- **Tolerable Borrowing Costs: Interest Rates/Issuance Costs.** The overall low cost of capital raised on the municipal market is perhaps the single most important factor in attracting issuers to the market: (1) tax exemption for investors allows issuers to keep interest costs low; (2) a large number and variety of investors are willing and able to compete for good investments; (3) competition also among financial service providers such as underwriters and bond trustees keeps issuance costs reasonably low.
- **Long-term Debt Amortization: Extended Maturities.** The impacts of costs on issuers are also mitigated by the long maturities available in the U.S. market, which allow borrowers to amortize costs of construction over periods of time that approach the long-term life-spans of the infrastructure assets being built, thus reducing the size of annual debt service costs.
- **Assistance for Small Borrowers: Bond Banks, Pooled Borrowing, etc.** State governments in the U.S. have developed a variety of programs to assist small local borrowers in accessing the capital markets, for example by creating state-level corporate entities to consolidate local issues into single issues sold on the national bond market.
- **Facilitative Formal Oversight: Responsible Self-regulation.** Regulation of the U.S. municipal market has largely been self-imposed, with a focus on the disclosure of information rather than judgments about the merits of particular issuers or securities; this has left buyers and sellers free to test and establish procedures, instruments, and regulations that have benefited a large cross-section of market actors and contributed to steady growth in borrowing activity.

BUILDING MUNICIPAL MARKETS IN EMERGING ECONOMIES

Market Conditions in Sample Countries

All of the countries selected for this review have pressing urban infrastructure financing needs. All have programs underway to strengthen municipal bond market activity, but each is beginning with its own unique collection of challenges.

The South African municipal bond market has been in existence far longer than others in this survey. At the end of 1995 approximately R19 billion (US\$ 5.2 billion) in municipal debt was outstanding, sold by municipalities or utilities ("local service providers").⁴ Some well-known issuers, such as the Rand Water Board have sold bonds since at least the 1920s, and continue to do so today. Maturities have been extended beyond 25 years. However, the market is still under developed in certain respects, largely because most of this existing debt was sold under the apartheid government's "prescribed investment regime," which required that large shares in the portfolios of institutional investors be allocated for government investments. The government has now ended prescribed investments and is exploring ways of extending the benefits of the bond

market to the black townships that were separated from the regular local government structure, and its debt financing options, in the early 1970s.

The Polish bond market is dominated by national government debt instruments, with most maturities ranging from fifty-two weeks to five years, although variable-rate bonds with 10-year maturities have recently been sold on an experimental basis. Corporate bond issuance has only recently begun to accelerate, with most private sector firms traditionally relying on banks for financing. Some general obligation bonds for special projects have been privately placed by cities such as Warsaw, Plock, Mokotow, Miedzyrzec, etc., and a few revenue bond issues have been sold by municipal-owned enterprises. However nationwide, only about 2 percent of local government capital spending derives from borrowed funds, and most of that comes from banks or government-subsidized environmental loan funds.⁵ The national government is now exploring ways of expanding municipal bond market activity in response to growing demands from both potential issuers and investors. A first step was taken with a new law on bond issuance, which became effective in August 1995. A second step was the initiation of an over-the-counter market in securities in late 1996, with the first bond issue approved for OTC trading in December.

The Philippine bond market is also dominated by national government issues, particularly Treasury Bonds and Notes, with maturities now ranging up to seven years. Bonds are also sold by government banks and other government-owned corporations. Some blue-chip private companies have issued bonds, but most of the private sector relies for financing on banks or the stock market. Only a few municipal issuers have sold bonds, the best known of which are the Cebu Equity-Bond Units, sold in 1991 by the Provincial Government of Cebu. The bonds, with two-year maturities, were backed by a pledge of repayment from a joint public-private consortium that paid off the principal with equity shares in the corporation.⁶ After the passage of the Local Government Code in 1991, local governments were given greater discretion in arranging their own bond deals. However other than some housing-related mortgage bonds sold with guarantees by a central government housing corporation, and an issue prepared but not sold by Naga City, municipal bond activity has been virtually non-existent.

The Indonesian bond market is the smallest of the markets reviewed for this study, with a total capitalization of about one third the size of the Philippines' bond market. The central government does not sell bonds or other treasury securities, but the country does have a modest corporate bond market catering mostly to private sector companies and some state banks and other national level government-owned corporations. Maturities have ranged up to 12 years for some toll-road bonds guaranteed by national government agencies, but the vast majority of issues have maturities of five years. Of the 48 issuers who accessed the bond market between 1988 and August 1995, seven were Regional Development Banks, owned jointly by provincial and local governments.⁷ These five-year Issues, backed by general system revenues, and sold to finance on-lending to local governments for small projects, have been the nearest thing to municipal bonds sold in the market.

All of these countries are attempting to establish functioning municipal bond markets by generally strengthening capital markets, as well as promoting the efficient management of local governments and local public enterprises, the likely issuers of municipal bonds. All of these countries have already initiated, or are strongly considering, additional, more dramatic and perhaps riskier steps, involving support for specific municipal bond sales on a selective basis.

These development efforts are guided by blueprints for achieving the sorts of municipal market strengths that account for the effective supply and demand features of the U.S. market.

Building Demand for Municipal Bonds

Investor Familiarity and Confidence: Issuer Pre-screening and Preparation. In most emerging economies, markets simply lack experience with debt issuance of any kind. Private companies often raise capital by issuing equity rather than borrowing, because of high inflation, lax bankruptcy laws, burdensome tax laws, and government policy promoting share ownership. Central governments may not sell treasury debt, as in Indonesia, or sell only very short-term debt, as in the Philippines. The absence of long-term corporate or treasury debt means that benchmark yield curves are not available for pricing long-term municipal bonds. Investment intermediaries are usually not familiar enough with municipal issuers to be able to distinguish good credits from bad. In such weak market environments, investor confidence in long-term municipal issues tends to be low. The risk of default on new issues, and the resulting risk of damage to nascent bond market activity, are dangerously high.

Indonesia, with the smallest and newest bond market of the four countries surveyed, has done the most careful job of pre-screening pilot municipal issuers to insure their willingness and ability to make timely debt service payments. The government's strategy was developed in a "Policy Action Plan for Local Government Bonds" issued in 1994.⁸ All 300 of the country's local water utilities were assessed as to their suitability for municipal bond sales. The list was narrowed to those with unqualified audit opinions on the previous three years of financial statements. The utilities were further assessed and ranked on the basis of 14 performance ratios. The strongest ten with successful borrowing records (from banks or the central government) were interviewed concerning project needs, interest in additional debt financing, and management philosophy. Eventually these candidates submitted new project proposals, including preliminary feasibility studies, and more detailed financial and managerial performance data. The central government, assisted by foreign financial consultants, selected four utilities to begin the debt issuing process, and provided special assistance in selecting and contracting with underwriters and bond counsel.

Naga City in the Philippines offers an example of additional steps that individual issuers may be forced to go through to insure investor confidence. After a new governor of Cebu Province threatened to repudiate the 1990 provincial bond issue, described above, sold under a predecessor administration, Philippine investors expressed strong concerns about the relatively short, three-year terms of local officials, and the effects that short terms might have on the willingness of local governments to continue making debt service payments on obligations with longer maturities. These concerns continued, despite the fact that all payments of interest and principle for the Cebu bonds were made in full and on time. The lessons of the Cebu experience regarding the fragility of investor confidence were later incorporated into preparations for a revenue bond issue in Naga City, where the mayor attempted to institutionalize long-term local commitment to the bond sale by carefully building consensus among all local stakeholders, then formalizing the city's decision with a public referendum and an ordinance issued by the city council. The sale of these bonds was delayed indefinitely because of an offer of concessionary

donor loan funds, but the mayor's strategy appeared to be successful in convincing prospective investors that new local officials would find it virtually impossible to repudiate the debt.

Ability to Trade Securities: Secondary Markets. Active secondary trading markets are almost non-existent, even in a country such as South Africa with a long history of municipal market activity. Secondary markets help investors avoid being locked into investments that do not meet their needs, by providing them with opportunities to sell their bonds prior to maturity. But secondary markets tend to develop only after secondary trading is well underway in more familiar securities, such as stocks or central government treasury debt, and investors have become familiar with basic trading strategies and procedures. A significant volume of outstanding municipal debt is also required, as is the availability of information necessary for investors to make reasonably accurate judgments about credit quality. Other factors that contribute to secondary market activity include the existence of benchmark bonds to assist with pricing, the ability of investors to hedge their investment bets by selling bonds "short" (the sale of borrowed bonds in anticipation of making a profit--and thus offsetting other possible investment losses--by purchasing the bonds later at a lower price), tax laws and transaction fees that do not discourage trading, and trading systems with mechanisms that make possible communication between buyers and sellers, as well as timely payment and settlement of trades.

The last of these is perhaps the alternative most easily implemented, and a variety of countries are exploring ways to facilitate listing of bonds on domestic stock exchanges and encourage the development of price-indication posting or other municipal finance related information systems similar to those used in the U.S. to support placement and sales functions (e.g., Blue List or Munifax). Poland and Indonesia have given particular attention to rules for listing bonds on their stock exchanges, and Poland has also recently authorized over-the-counter market trading in bonds. However, the actual impacts on secondary market trading in these countries are not yet apparent.

Other, broader strategic moves are being made by some of these countries to facilitate secondary market development over the longer term. In the Spring of 1996, the Philippines began introducing a series of changes in the way that Treasury securities are offered and sold, designed to help expand secondary market trading in those securities, and ultimately in corporate and municipal securities as well. Among other things, government security dealers will be accredited on the basis of their market-making performance in the secondary market.

In South Africa, the post-apartheid government is abandoning its "prescribed investment regime," which required institutional investors to hold 54 percent of their investment portfolios in a range of government securities, including municipal bonds. The high, fixed percentage meant that virtually all municipal securities could be quickly sold via private placement to a relatively small number of institutional investors, who were not particularly interested in credit quality and had little to gain from trading. By ending this prescribed system, the South African government hopes to stimulate bond market development in general and secondary trading in particular.

Other methods, which promote trading without directly supporting secondary market development, involve issue-specific structuring to provide ways of mitigating interest rate risk and other risks that secondary markets help investors control for. Unfortunately, most of these techniques also increase issuance and/or debt service costs. One technique is to sell bonds with

variable interest rates, thus giving investors some protection against sudden changes in interest rates. In Indonesia and the Philippines, variable rates have already been used with treasury or corporate debt, making the technique familiar to prospective municipal issuers and investors.

Another structuring technique for extending maturities involves selling bonds with so-called "put" options. This technique is being considered by Indonesian water utilities, but the lack of underwriter and investor familiarity with it may prove to be a significant obstacle to its use. Put options give investors the right (but not the obligation) to sell their securities back to the issuer or its agent during a specified time period, at a specified price. Such options allow investors to shorten the maturity of their bonds if they wish, although under conditions determined by the issuer. Put options typically increase the issuance costs of bond sales because funds must be available to repurchase the bonds and remarketing agents must be contracted to resell them. Letters of credit and other arrangements must be formalized at the time of original sale to convince investors that the put options can and will be honored.

Freedom to Invest: Reducing Government Controls. To directly facilitate purchases of municipal bonds by institutional investors, some governments are reviewing rules that prohibit or discourage such investments. For example, until recently, Indonesian pension funds could only purchase securities that had been listed on public exchanges for three years, and were thus prohibited from investing in initial public offerings of stocks or initial sales of bonds. In the Philippines, banks are required to loan 25 percent of their loanable funds to agricultural and agrarian reform projects or enterprises, but the government may allow them to use municipal bonds (as they now use national treasury bonds) to satisfy this requirement. South Africa recently ended its "prescribed investment regime," intended originally to increase investment in government securities. However the practice retarded the development of a functioning bond market by creating a captive, but very small, community of institutional investors to whom specially tailored municipal bonds were sold via private placement. The Polish government may need to consider relaxing especially strong limits. Polish banks may invest only up to 15 percent of their capital in securities sold by any one issuer, and in any case not more than 25 percent of their capital in corporate-type securities (including municipal bonds). Prior to recent changes, insurance companies could invest only in bonds issued by companies or enterprises owned by local governments, not in bonds sold by the local governments unless a central government guarantee is involved.

Acceptable Return on Investment: Tax Treatment. The exemption from taxation of municipal bond interest income may be the principal reason why a large, active municipal market exists only in the U.S., as a study by the World Bank suggests.⁹ However, the issue of tax exemption is often more complicated and even more controversial in emerging economies than it has been in the U.S., because of different market dynamics as well as growing pressures on these governments to make taxes more equitable and productive. As a result, gradual adjustments in tax treatment of interest income will likely be a more palatable way of attracting investors than efforts to institute a U.S.-style tax exemption.

The issue is illustrated in Indonesia, where the government has given priority to eliminating a variety of tax exemptions, and is not inclined to consider one for municipal bonds. Nor does the government have reason to feel that tax exemption is of immediate critical importance in attracting investors to municipal bonds. This is because in the near future, the most aggressive

purchasers of such bonds will likely be large pension funds who, although not taxed on income, are still attracted to bonds because they lack alternative long-term investments to match their long-term liabilities. Thus tax exemption is neither currently necessary nor politically acceptable in Indonesia. Nevertheless, because of concerns about long-term municipal market development the government recently has made smaller adjustments in tax laws, for example by reducing tax rates on interest income from bonds to the same level as rates on bank deposit interest, and exempting mutual funds from income taxes (leaving individual investors to pay the taxes on their mutual fund profits).

Prior to the adoption by the Philippines of the Local Government Code in 1991, local governments could sell debt for which interest payments were not taxed as income, but complex oversight rules made the sale of such debt difficult. The Local Government Code liberalized the procedures for selling such debt, but did not contain provisions for tax exemption. Various Philippine Government officials say this omission was an oversight, but admit that the pressing need to increase tax revenues may make it difficult to reinstate full tax exemption for municipal bonds when the code is revised in early 1997. Smaller adjustments in tax treatment may be considered.

Poland's tax laws include a number of features that may require change in order for the country's municipal bond market to show the kind of rapid growth hoped for by some policy makers. For example, the interest income from municipal bonds issued by local governments is exempt from taxation for individuals, but not for corporate investors. Interest income from municipal bonds issued by local government-owned companies or enterprises is subject to full taxation.¹⁰ Until changes were made in the 1997 Tax Law, national government treasury securities enjoyed tax incentives that did not apply to local government debt, and may have crowded out at least some local borrowing. A variety of these kinds of issues are still under consideration by Polish authorities.

Credit Quality: Tax-Supported Debt. In most emerging economies general obligation borrowing is problematic because local governments typically do not have tax revenues sufficient to pay back significant levels of debt. Effective tax rates are low and difficult to adjust for political reasons, and central governments often co-opt most if not all of the productive tax sources. Intergovernmental grants or transfers typically account for most of local government revenues, however, until relatively recently, central governments typically have restricted the use of such grants for debt guarantee purposes. In the Philippines, the Local Government Code of 1991 allows national authorities to withhold portions of intergovernmental grants to local governments, known as Internal Revenue Allotments (IRAs), in order to make payments directly to creditors in cases of default on debt service. This IRA intercept mechanism, requiring prior agreement by the local governments involved, was designed as a way of allowing revenue-backed borrowing (the only kind permitted in the Philippines) to be backed with secondary pledges of grant revenues. However, ambiguities in the Code have made national government officials reluctant to actually apply the mechanism. While waiting for the Code to be revised, local governments have experimented with a variation of the intercept mechanism, involving IRA deposits to local trustee banks that agree to use the money for direct payments to creditors in cases of default.

The Indonesian central government has long prohibited the designation of intergovernmental transfers as revenue that might be used to help back local government debt

issuance, as a way of promoting fiscal discipline. However, under a new decree, the government will allow this grant stream to be intercepted by Regional Development Banks (owned jointly by provincial and local governments) in cases where local governments default on certain types of concessionary, long-term infrastructure loans. As in the Philippines, this intercept mechanism may eventually be allowed to support local government bond issuance.

Even in cases where local governments have significant, allowable sources of revenues for debt repayment, administrative capabilities may not be strong enough and free enough from outside influence to handle the business-like requirements of debt management. Central governments respond to such weaknesses by routinely placing conservative limits on the borrowing power of local governments, often in the form of maximum allowable ratios of debt service to annual net revenues. In the Philippines, for example, total annual debt service paid by local governments, may not exceed 20 percent of annual income, including IRA grants. However pressure to relax such limits is growing, as local governments develop financial management skills, and are given more autonomy. In Poland, prior to December 1993, the total outstanding principal and interest on all funds borrowed by any municipality could not exceed 20 percent of the municipality's planned annual income. After 1994, the limit was revised to focus instead on total annual debt service, which could not exceed 15 percent of expected revenue (with interest and principal on debt secured by collateral excluded from the 15 percent calculation).

All of the governments surveyed are attempting to assess the ability of local governments to engage responsibly in general obligation borrowing. In South Africa, the Municipal Infrastructure Investment Framework (MIIF) has set initial policy objectives and overall borrowing targets for municipal governments, with preliminary breakdowns by type of borrowing. Additional work will be required to begin implementation of the MIIF.

Credit Quality: Revenue-backed Debt. The difficulties inherent in selling general obligation bonds, combined with the desire to find sources of financing for municipal infrastructure that do not rely principally on taxes or transfers, means that many new efforts to support municipal bond issuance in these countries will focus on the issuance of bonds backed wholly or in part by the revenues of the particular projects built with bond proceeds. In the Philippines, the 1991 Local Government Code authorizes local governments to sell bonds to finance "self-liquidating, income producing development or livelihood projects." Water Districts in the Philippines were authorized to sell revenue bonds by the Water Crisis Act of 1994. In Indonesia the authority of local water utilities to sell revenue bonds was clarified in a series of decrees issued in 1994 and 1995 by the Ministry of Home Affairs. South Africa has a long tradition of intermittent revenue bond issuance for local service provision. The Rand Water Board has been selling bonds since at least the 1920s. The Natal Province-based Umgeni Water utility has sold both bonds and stock.

However, in attempting to sell revenue bonds in emerging economies, issuers face a key challenge. Investors who are at all familiar with municipal utility services in these countries are aware that such services are almost never profitable. Among all such services in the developing world, gross revenues typically cover costs only in telecommunications (where international service subsidizes local service). For water supply, revenues cover on average only about 30 percent of costs.¹¹ As a result, bonds sold to finance such services will likely require more security than projected revenues in order to attract investors at affordable interest rates.

In some countries, this lack of confidence is reflected in government policy. In Poland, for example, the new law on bond issuance states that local governments are liable to the full extent of all their assets for the liabilities resulting from bond issues. Thus, the traditional form of revenue bond, backed solely by the revenues of the project to be built with bond proceeds, cannot be sold by municipalities in Poland. Bonds sold by local government-owned enterprises must be "secured" by the pledge of specific kinds of collateral, and liens on revenue streams do not qualify as collateral for these purposes. Similarly, local governments in the Philippines are limited to "self-liquidating" bonds, but the Local Government Code requires that local government budgets include allocations, from any and all sources, sufficient to cover all legally contracted debt service.

In order to satisfy investors as well as policy makers, some cities have begun to explore revenue bond issues with hybrid characteristics. The issue prepared in 1995 by Naga City in the Philippines was designed to finance a bus terminal, as a "self-liquidating, income producing" project. The securities were described as "revenue" bonds, and the city pledged all revenues from the project for debt service. But the city also pledged a variety of "fallback" or secondary pledges, including all city revenues from other sources, the city's share of the Internal Revenue Allotment from the national government, as well as the first mortgage on the property and improvements of the terminal.¹² All bonds sold in emerging bond markets, particularly for traditional urban services, are likely to require broad pledges of general system revenues, in addition to project revenues, in order to satisfy potential investors.

Credit Quality: Separate Corporate Issuers. The existence of government-owned enterprises with the responsibility for providing urban services is likely to be far less conducive to bond financing for these services in emerging economies, than has been the case in the U.S., where such entities are often created specifically for the purposes of capital financing and business-like management. In emerging economies many of these entities have been created to pursue social or political purposes or are used to keep deficit-ridden operations off the budgets of regular governments.

The countries surveyed for this study have moved rapidly to improve the management of local public enterprises, but in each case, significant obstacles appear to block any rapid, widespread issuance of debt by these entities. In 1992 the Indonesian Government initiated a process for assessing the financial performance of the nation's 300 local water utilities. The Ministry of Home Affairs adopted a computerized data system for consolidating audited financial information on the performance of these utilities, using a series of indicators similar to ratios used in the U.S. municipal bond market to evaluate the performance of local enterprises.¹³ This indicator system has also been used by the government to pre-screen utilities for pilot issuance of municipal bonds.

In the Philippines, no local Water Districts have sold bonds, but a slowly growing number appears to have the capability of doing so, and others are exploring concession or build-operate-transfer arrangements with private partners. The Local Water Utility Administration (LWUA) is a dominant force in Water District finance in the Philippines, having long provided loans and technical assistance to Water Districts, as they were separated from local government administration. However, the national government is currently assessing studies suggesting that

concessionary LWUA loans may be discouraging access to private capital markets by some Water Districts.¹⁴

In South Africa, some utilities ("local service providers") have issued bonds, but the challenge is to extend cost-recovery service provision to former Black Local Authorities that were reamalgamated into the local government structure after the end of apartheid government. Questions exist regarding how to fully recover service costs from the residents of former BLAs, where non-payment of rents and fees was a widespread form of social protest during the Apartheid era. The government is also assessing local management capabilities and promoting willingness to pay among residents with a national public awareness campaign.

In Poland, the role of municipal-owned enterprises in bond issuance is somewhat limited because of their inability to issue tax exempt bonds (unlike municipalities), and the requirement that under most conditions they secure their bond issues with pledges of collateral, not including liens on revenue streams. The Polish government is likely to clarify these issues as capital market development proceeds. However, these enterprises tend to be well managed and appear to have adequate access to domestic capital, even without the ability to sell tax-exempt securities.

Information Regarding Risks: Standardized Data. Many emerging economies do not yet have widely accepted and/or practiced standards for disclosure, auditing, accounting, or financial reporting. The sort of transparency made possible by such standards is particularly important for revenue bonds, because investors need information to confirm the willingness and ability of issuers to generate future project revenues necessary to pay off the debt. Comprehensive, standardized information is especially important where the absence of secondary markets means that investors are compelled to hold bonds to maturity.

Both Indonesia and the Philippines are currently in the process of revising capital market oversight rules to require detailed, standardized disclosure. In order to increase the availability of familiar kinds of reliable data on issuers, Indonesia now requires that all bond issuers submit to audits conducted by accredited private audit firms using "generally accepted" audit standards prepared by the Indonesian Institute of Accountants.

Poland's new bond law references disclosure requirements (formalized in a separate ordinance) that must be met by privately placed issues that trade over-the-counter, as well as publicly offered bonds listed on the Warsaw Stock Exchange. Regional Audit Agencies are also required to give advisory opinions on plans by local governments to borrow, although such audits do not yet satisfy a broad range of investors. Independent audits must be satisfactorily completed prior to public trading.

South Africa's prescribed investment regime, and the implied sovereign guarantees that accompanied local government bond issues, made detailed, standardized issuer disclosure an unessential part of the sale process. To begin to remedy this situation, the Ministry of constitutional Development and Provincial Affairs (CDPA) has requested the Institute of Municipal Treasurers and Accountants (IMTA) to prepare a standardized data set on the financial positions of all municipalities, based on a new requirement for municipalities to report such data on a monthly basis.¹⁵

Assistance in Interpreting Information: Financial Intermediaries. Financial intermediaries, such as investment funds and rating agencies are extremely important in bond markets because they provide professional assistance to investors in making investment decisions, particularly in processing the often complex information that is available on prospective investments. Investment funds are typically important purchasers of municipal bonds in emerging markets. They wish to diversify their portfolios and are willing and able to buy in large amounts. Direct placements with such funds are increasing undertaken by issuers in the U.S. as a way of lowering issuance costs.

The importance of this role is particularly evident in countries like Poland, where a credit rating agency is under development, but has not yet become operational. Poland has seen a rapid expansion in the number of such funds in late 1995 and early 1996. However Poland also illustrates the costs and benefits associated with government efforts to carefully regulate the activities of such funds. Polish funds are free to invest in municipal bonds, but 90 percent of their investments must be in securities listed for trading on the Warsaw Stock Exchange or the OTC Market, both of which require significant disclosure. This will reduce the ability of municipal issuers to privately place non-tradable bonds with these funds, perhaps the only way that small municipalities in Poland can sell debt in the near future.¹⁶

Recent new capital market regulations in Indonesia allow the creation of open-ended mutual funds, and by the Spring of 1996, two such funds had appeared. However, apparent problems with other existing laws and rules regarding taxation, share redemption, and whether or not funds may leverage their positions with bank loans, clearly have slowed the proliferation of funds. The government is now addressing these issues in dialogues with the investment community.

Although many countries now have rating agencies, these organizations typically lack experience rating securities sold by local governments. More importantly, questions sometimes linger about the objectivity of such agencies, and their independence from government. Although the Indonesian Government promoted the creation of the country's first rating agency in early 1994, it refused to play a dominant role in ownership of the agency in order to insure its independence and objectivity. The rating agency is jointly owned by several pension funds and state-owned banks, the two domestic stock exchanges, and a variety of private companies. As of September 1994 all bonds issued in Indonesia were required to have ratings from this agency.

One rating agency exists in the Philippines, and interviews with institutional investors suggest that it is respected for professional, independent, and conservative ratings. Two small credit rating firms exist in South Africa. They have rated some local service provider debt, but there appears to have been little pressure for widespread use of ratings due to the prescribed investment regime of the past, as well as a lack of investor confidence in the existence of truly comparable, standardized data on issuers. The government's new initiatives to make such standardized information publicly available appears to be a key step in improving the services provided by domestic rating firms.¹⁷

Poland does not yet have a functioning rating agency, but the Polish Bankers' Association has begun the process of developing one. Capitalized in November 1996, the organization will be called the Central European Rating Agency, and will focus on ratings for new investment

funds, as well as municipal securities. This move represents a departure from the norm in most European countries, where rating agencies have not traditionally been used either domestically or in the Euromarket.

Municipal bond insurance is relatively unknown outside of the U.S., but the general concept of credit enhancement is typically well understood in emerging economies. The most desirable form of third party enhancement from the investor's perspective is a sovereign, central government guarantee of local government debt. In some cases such guarantees have been issued for municipal bonds, such as with housing project bonds sold by Philippine cities and backed by the national government's Home Insurance and Guaranty Corporation. South Africa's prescribed investment regime gave the appearance of a central government guarantee, but that country like many others is now moving away from any appearance that municipal bonds are even contingent liabilities of central governments.

Other kinds of third party guarantees are available, but often add considerably to the already high costs of issuance. Irrevocable letters of credit can be purchased from banks in all of the countries surveyed. In addition, a growing number of international companies that provide credit guarantees have been created by private investors and international donor agencies, such as the Asian Development Bank. Most of these firms focus on backing securitization efforts or public-private partnerships, but all are willing to consider providing guarantees for bond issuance.

Attracting a Supply of Municipal Bonds

Tolerable Borrowing Costs: Interest Rates/Issuance Costs. The costs of using bonds for infrastructure financing in most emerging economies tend to be high, for a variety of reasons. Credit quality is often suspect, and investors demand high interest rates as compensation for credit risk. In the Philippines, rates on 5-year bonds that Naga City planned to sell in 1995 were expected to float at 4 percent per annum above 182-day Treasury Bill rates (approximately 11 percent in the spring of 1995).¹⁸ Interviews with underwriters in Indonesia, conducted in early 1996, suggested that rates on long-term local water utility bonds would likely float at approximately 2 percent above 6-month time deposit rates (16-17 percent in February 1996).

Underwriting costs are also typically very high because financial services firms often lack experience with such deals, and because there often is a lack of competition to supply such services (sometimes accentuated by the existence of government-approved self-regulatory associations of service providers who set standard fees). Underwriters in the Philippines and Indonesia who make full commitments of their firms' capital to the purchase of the entire bond issue offered for sale typically charge fees based on flat percentages (typically 3-4 percent) of total principal. Trustee fees in both countries are charged at approximately one-half percent of outstanding principal per year. Underscoring the exceptionally high costs of borrowing in these markets, the Indonesian rating agency estimated in 1995 that total one-time bond issuance costs in that country amounted to 4.48 percent of the issue principal. Additional annual costs for trustee services, updated ratings, listing, etc., amounted to 1.66 percent of outstanding principal per year, for a five-year issue.¹⁹

A variety of methods are being explored in these countries to reduce issuance costs. Underwriting costs are usually lower if underwriters are not required to commit their own capital to

a full purchase of all the issued bonds. Underwriting on a "best effort" basis, rather than "full capital commitment," may reduce issuance costs, but of course no longer guarantees that all of the bonds offered for sale will be sold to investors. For a housing bond issue sold in 1995, the Philippine city of Legazpi made use of a "retail offering period" during which small denomination bonds (sometimes referred to in the U.S. as "mini" bonds) were sold directly to local investors before the bulk of the issue was turned over to the underwriter for national sale. The success of the local sale, involving no underwriting costs, led Legazpi officials to believe that if they had negotiated a longer retail offering period with the underwriter, they could have significantly reduced total issuance costs.

Direct placement of debt with investors, rather than competitive public offering, is one method for eliminating underwriting costs (although the services of "financial advisors" are often retained to negotiate the placements), and reducing costs associated with information disclosure, particularly if the bonds are not listed on security exchanges. In Poland and South Africa, virtually all municipal issues have been directly placed, and this has contributed to somewhat lower issuance costs in these countries. Direct placement can promote market development by building successful borrowing track records for new kinds of securities, such as municipal bonds, but involves developmental costs as well. It is likely to be less transparent, does much less in terms of promoting investor understanding of a new type of security, and may diminish the ability of investors to trade the bonds if they are not listed on public exchanges. The first bond issue approved for trading on Poland's new over-the-counter (OTC) market in December 1996 was originally a privately-placed issue, but the issuer had to meet much more stringent disclosure requirements to gain OTC listing and the possibility of secondary market trading.

A variety of techniques are also being explored in these countries to reduce the costs of debt management. Sinking funds are required by oversight bodies in Indonesia and the Philippines as a way of insuring that principle payments can be made in full for term bonds at maturity. Because such funds usually cannot earn investment income at rates higher than what the bond issuer must pay in debt service, these funds can be substantial drains on revenues, ultimately increasing the costs of the issue. In Indonesia, local governments are exploring with regulators the possibility that serial bonds and other mechanisms for minimizing the size of balloon payments at maturity may allow them to avoid the need for sinking funds.

Long-term Debt Amortization: Extended Maturities. Long maturities are very rare in emerging economies for two reasons. First and most basic, investors in such countries often are uncertain about the future. They are unsure of the willingness and ability of issuers to make timely debt service payments. In economies where there are no long-term, central government treasury securities to provide benchmarks for pricing long-term municipal debt, investors have no way of knowing if the total yield they receive is reasonable for a debt. Investors are also often rightly concerned that changes in the economy such as inflation or devaluation will reduce the value of their investments relative to other investment opportunities.

Second, active secondary trading markets, as ways of coping with these uncertainties and risks, are almost non-existent in emerging economies. Until such markets can be established or limited forms of trading encouraged, maturities on municipal bonds are likely to remain very short in these countries, at least by U.S. standards. Unfortunately, in many emerging economies, long

maturities are essential for tolerable annual debt service costs, especially given high interest rates and issuance costs.

Assistance for Small Borrowers. Some kind of collective approach to bond issuance is also essential in most emerging economies because of the very small number of local entities actually capable of selling municipal bonds. Most of these countries already have some version of "municipal development fund," the kind of financing authority that most of the developed world outside the U.S. uses as their principal conduit for local government debt financing. In countries like Belgium, Denmark, and France, such funds contribute to the development of bond markets by regularly accessing them for capital that is then on-lent to local governments. In emerging economies these funds still typically receive virtually all of their capital from international donors and central government budgets and make concessionary loans to local entities. The World Bank and other donors have created such funds in dozens of countries as ways of channeling central government loans backed by sovereign guarantees to local governments.

As these funds now exist they target their concessionary loans to precisely those local borrowers who may be capable of selling bonds. All the countries examined for this study are wrestling with the question of how to coordinate the development of bond markets with the on-going activities of these funds, particularly how to more effectively target concessionary loans to local entities that have no other financing option, while encouraging stronger entities to directly access capital markets. With a new ministerial decree, policy makers in Indonesia are taking initial steps in a process that they hope will eventually transform the government's Regional Development Account into a separate, non-governmental facility that sells bonds to raise capital for on-lending. An extensive study recently commissioned by the Philippine Government has recommended a similar transition for its Municipal Development Fund.²⁰ Similar concerns have been voiced in South Africa with regard to the activities of the Local Authorities' Loan Fund, and in Poland regarding concessionary lenders like the various environmental funds, operated by the national and regional central governments (49 Voivodships). Revisions in strategies and operating procedures for these funds have proven difficult to implement, but effective local government debt financing in all of these countries will depend ultimately on a satisfactory resolution of this key issue.

Facilitative Formal Oversight. All of these countries also face a dilemma in terms of their oversight responsibilities. Capital market regulators in emerging economies typically have responsibilities for developing as well as simply regulating markets. Thus they face the need to insure that sudden market shocks, such as defaults, do not slow ongoing market development, and they must protect often unsophisticated investors in situations where flows of information are far less than optimal. Most of the formal capital market regulatory frameworks in these countries focus on disclosure requirements, but merit regulation is exercised within the government bureaucracies with regard to debt issuance by state-owned companies and local levels of government. In other words, higher levels of government review and approve prospective municipal issues before they can be sold, regardless of separate corporate status or nominally decentralized authority and responsibility to borrow for public purposes. Yet at the same time, regulators do not want to rob the marketplace of the experience it needs to make responsible decisions about investments. The key question seems to be, to what extent should the market be allowed to make decisions about the merits of specific municipal bond issues.

All of the countries surveyed are attempting to address this dilemma in ways that go beyond the day-to-day operations of capital market regulatory agencies. Poland and the Philippines have passed national level legislation to provide legal umbrellas under which municipal bond activity may proceed. Both efforts have promoted bond issuance, but both have neglected key issues and over-regulated some activities. Such shortcomings are understandable in light of the early stages of bond market development in each country, but in both cases these hard fought laws may be difficult to amend. In Indonesia, the government has worked for years preparing badly needed basic laws clarifying local government rights and responsibilities in terms of tax and user charge collection and intergovernmental fiscal relations. Until such laws are finalized, municipal bond issuance can proceed on the basis of specific ministerial decrees, but will involve local enterprises rather than local governments. In South Africa, the Municipal Infrastructure Investment Framework (MIIF), is expected to help build the policy context within which the existing municipal finance system can be reorganized so as to help provide badly needed services to neglected former black townships.

CONCLUSION: CONTINUING CHALLENGES

Much of the preceding discussion has focused on lessons learned and best practices. The countries chosen for review in this paper are among the most advanced of all emerging economies in terms of programs to accelerate the development of municipal bond markets. That fact is reflected in their efforts, described above, to attract investors and issuers to the marketplace. Nevertheless, each of these countries faces its own set of often formidable challenges as these development programs proceed.

South Africa

South Africa already has a municipal market tradition, with debt issues outstanding, and a host of reasonably sophisticated market players. Many of the basic mechanics of municipal market supply and demand, as outlined in Figure 1, are firmly in place. The maturation of some market procedures and institutions, particularly the development of an active secondary trading market, has been retarded by the prescribed investment regime enforced by Apartheid-era governments, but the termination of that program and new efforts to increase market competition and transparency should begin to increase the demand for municipal bonds among investors. If the provision of credit analysis services can be strengthened without sacrificing objectivity and independence from government control, this would also be a small, but important step in attracting investors to credit worthy municipal bonds. Features of the market that are attractive to issuers, such as long maturities and tolerable borrowing costs, are also in place.

However, this market was built primarily to serve white municipalities. Former black townships now have urgent needs for infrastructure finance, but may be largely unwilling and unable to pay for it. In other words, while the municipal market is sophisticated, the most needy borrowers are not. It will likely take extraordinary means to attract investors to bonds backed by project revenues, issued to build infrastructure benefiting former black townships.

The principal challenge for bond market development in the country will be to determine carefully whether or not municipal bonds are even feasible for financing infrastructure in these townships, where cost-recovery service provision faces so many challenges. As with any truly

nascent municipal market one important development goal will be to avoid early defaults that undercut investor confidence in particular debt instruments or particular borrowing purposes. If traditional municipal bonds are not appropriate, as some experts maintain, pooled issuance or issuance for on-lending to local governments may be necessary. Efforts to strengthen credit quality, perhaps with grant intercept mechanisms, might also be necessary to attract investors. As always, the objective of credit enhancement should be to support issuers who are credit worthy, but may not be perceived as such by investors. Support for issuers who are not credit worthy tends to distort market mechanisms and further retards market development. In such cases, outright capital subsidies are advisable.

The Philippines

In many respects the capital market in the Philippines appears to be primed for an explosion of municipal bond activity. Factors contributing to the supply of, and demand for, municipal bonds appear to be strong. The maturities on Treasury debt have reached ten years, pension funds and insurance companies are expressing interest in longer-term investment opportunities, a few municipal bond issues have been successfully sold, the Local Government Code has armed local officials with a number of innovative tools for use in their efforts to raise money via debt financing. If the Code is revised to re-establish tax exemption and clarify the IRA intercept mechanism, and national government efforts to strengthen secondary trading market activity begin to show some success, the municipal market should be poised for take-off, particularly if inflation and interest rates remain under control.

The seasoning of these supply and demand features is reflected in a deepening understanding by investors and issuers of the key mechanics of municipal bond issuance and debt management, as evidenced in the careful marketing plan and multiple levels of credit backup designed into the Naga City bond issue. City mayors in the Philippines are elected, and mayors and local water utility directors are largely competent, responsible, responsive to service users, and entrepreneurial. They are increasingly interested in understanding their financial position and finding ways of financing infrastructure needed to cope with the sort of urban growth and industrialization that is overwhelming many local jurisdictions.

However, the fate of Naga City's unsold bonds also underscores the presence of factors inhibiting market development, most of which are byproducts of past national government programs to assist weak local governments and enterprises. The Municipal Development Fund (MDF) and the Local Water Utilities Administration (LWUA) are the principal national government facilities for channeling loan funds, mostly concessionary funds from multilateral donors, to local governments and local water enterprises respectively. The tendency of these facilities to try to satisfy donors and government critics by making loans to the financially strongest local governments and enterprises has kept these borrowers from accessing the capital markets for financing, as was the case when Naga City terminated its bond issue preparations in favor of an MDF loan. The national government is currently exploring ways of "graduating" stronger local entities from concessionary lending programs, and better targeting concessionary credit. But until such a system is fully in place, municipal bond issuance will proceed slowly.

Indonesia

Local water enterprises in Indonesia have to some extent made up in energy and innovation what the domestic capital market lacks in terms of attractions for investors and issuers.

The use of put options to extend maturities well beyond anything seen in the market in order to effectively amortize the high costs of debt issuance is an example of a creative solution to problems exacerbated by the lack of a secondary trading market. The use of formal, transparent procedures to pre-screen prospective issuers by central government officials is a textbook example of efforts required to insure that the market avoid shocks to investor confidence, which could retard market take-off in the event of early defaults. Efforts to standardize data on issuer plans and performance, support an independent rating agency, and establish reasonable, non-intrusive capital market regulatory oversight, are all advancing municipal market development. But generally high interest rates, the lack of benchmark treasury debt, and cartel-like fee setting by underwriters and other intermediaries will likely keep the supply of bonds low for the foreseeable future.

Given the weaknesses of many basic market mechanics in the country, a unified, enthusiastic central government role in supporting innovative local efforts to sell bonds would be desirable. Currently, municipal bond market development in Indonesia is still a relatively small-scale effort, narrowly identified with only a few central ministries, and supported by ministerial decrees rather than by presidential decrees or national legislation. Other ministries have been vocal in favoring other approaches for financing urban infrastructure, such as various forms of privatization, which tend to be presented as alternatives to municipal bond issuance. Many other central level officials feel that mayors or utility managers, all of whom are appointed in Indonesia, are not yet capable of effectively carrying out debt financing, and are reluctant to raise local government borrowing limits or allow intergovernmental grants to be used for leveraging debt issuance.

The lack of unified, high level support for municipal bonds is of course not unusual in an emerging economy with many other priorities. But it is particularly problematic in Indonesia because one solution to municipal market weaknesses is likely to be pooled bond issuance, or issuance by regional or national government borrowers to generate capital for on-lending to local entities. Such approaches have been discussed at some levels, but no immediate consensus on action appears imminent.

Current programs by the Ministry of Home Affairs to gradually extend administrative and financial decentralization to cities and districts, along with new national legislation on local taxes and user charges, should help to intensify the national policy dialogue regarding how local officials should and should not be raising funds for urban infrastructure. It appears that such a dialogue needs to take place before a municipal bond market can grow beyond the small collection of isolated issues now planned.

Poland

Poland, like the Philippines, appears poised for aggressive growth in municipal bond activity. A variety of market supply and demand features are already in place. High levels of demand are apparent in the rapidly expanding capital market, with sophisticated investors and

financial intermediaries, well understood issuance mechanics (refined through the issuance of national treasury debt and some municipal issues), some tax breaks for investors, and national government policy focused directly on promoting investor comfort through stringent disclosure rules and national legislation regulating local borrowing.

However, some features of the market affecting the supply of municipal bonds in Poland appear to be lagging behind the development of demand. Some of these, such as high interest rates, are not under the immediate control of government authorities. Other issues are probably worthy subjects of more government attention. For example, although highly entrepreneurial, local governments are relatively new at managing their own affairs. Local officials sometimes lack the skills to accurately assess the financial situation of their jurisdiction, and lack information about the kinds of financing options available to meet specific needs. Basic training and information dissemination are likely to be productive in this current situation, especially given the sense of urgency apparent among local officials. Efforts to provide such assistance are now underway in Poland; the government is considering additional steps.

A second important area of facilitation involves the need to clarify laws and regulations regarding municipal bond issuance. As noted in the preceding discussion, the Polish national government has been quick to issue legislation designed to regulate municipal bond issuance, but much of this appears to support investors in corporate bonds more than issuers of or investors in municipal bonds. As a result, some local officials may be confused about precise definitions of concepts such as "municipal" bond, required collateral, secured versus non-secured securities, etc.

NOTES

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