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**Subnational Debt, Borrowing Process, and
Creditworthiness**

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Note: Much of this paper draws from John Petersen and John Crihfield, *Linkages Between Local Governments and Financial Markets: A Tool Kit to Developing Subsovereign Credit Markets in Emerging Economies* (Draft, December 1998).

1. Why Borrow?

The use of credit, raising funds today that will be repaid tomorrow with interest, is one of the fundamental issues governments at all levels face. Sovereigns, the usually superior national-level government, will have many more choices in this regard because they have control over the money supply and the operation of the banking system and credit markets. However, the more open that national economies have become, the more even those options are curbed by the workings of the international economy.

Subsovereign governments in many parts of the world are now facing the question of borrowing or, if they have borrowed in the past, doing so from the private capital markets as opposed to a governmental entity or local bank. In the past, many local government loans have been in effect mandated by the central government and the underlying borrower had little to say about the purpose or terms and conditions. Part of the process of devolution has meant an opening up more opportunities to decide at the local level if to borrow and if so, then from whom and using what kind of security.

1.1 The Financing Choice:

The first choice is whether to borrow at all or simply pay for goods and services as you have sufficient funds to do so. Were there no investment or capital expenditures that provide services over several years, this decision would be an easy one to make. Where capital goods are present, however, the choice becomes more complicated.

The arguments for and against borrowing and going into debt are repeatedly debated and the cogency of those competing viewpoints vary across time and places. Generally, however, the choice of using resources today versus waiting until tomorrow is one that entails a cost (interest) just like any other economic choice. In economies with adequate savings, stable political systems, health economies, sound financial institutions and good growth prospects the cost of borrowing tends to be lower. The reverse is true when these factors are absent.

Everything else being equal, the arguments in favor of borrowing (if the credit markets permit it) are strongest in growing economies. There are three major reasons for this. First, on a pragmatic basis, the amount needed for the expenditure is too large to raise from current resources and because of the lumpy nature, all the spending must be done before there are any benefits. Second, the infrastructure needed to accommodate future growth is needed today. To delay providing it will slow the growth that will improve conditions including the ability to repay debt. But it is important to note that the debt must support productive growth and not be poured down a rat hole of unproductive uses. The third argument is that it is more equitable and economically efficient to have those that over time consume capital and get its benefits to contribute to the costs. When the technical problems of funding "lumpy expenditures" are combined with those of intergenerational equity and economic development, borrowing becomes favored where markets will accommodate it.

Arguments for “Pay-As-You-Go” versus Those for Debt Financing

Arguments for “Pay-As-You-Go” Financing

- No interest expense is incurred. Money not spent on interest costs can be used to fund additional projects.
- Debt capacity is reserved for other, possibly more important future projects.
- Future users/taxpayers have no say in whether debt is issued and are not responsible for paying for projects approved by today’s government.
- Use of credit is too tempting and will lead to over-commitment of future resources.

Arguments for Debt Financing

- Current revenues are insufficient and too inflexible to fund “lumpy” cash needs on a pay-as-you-go basis.
- Future increases in construction and acquisition costs can be avoided by funding and building projects today.
- Future inflation reduces the cost of borrowing. Debt can be repaid with currency that is worth less than the value of that borrowed.
- Payment of costs for use of capital can be synchronized with the flow of benefits over the useful life of the asset being financed.

This section begins with the premise that a decision to borrow has been made and that it is now a question of how this borrowing is best done given the available options. For the most part, the perspectives taken will be that of the subnational borrower and the lender or investor, although there are many places where the policy choices already made or to be made at the national level will have a bearing on the discussion.

In most countries, subnational debt (to the degree it is reported) usually makes up but a small portion of total public and private debt. As noted in the introduction, that situation is likely to change with growing devolution of responsibility and decisionmaking to the local level. Growth depends on putting needed improvements in place as soon as possible. Going in debt will permit growth to occur and increase the means for its repayment in the future.

1.2 Linkages to the Credit Markets

In most countries, even the smallest, least sophisticated governments have some linkage with the financial markets. The basic nexus is found in the relationship with the banking system and the county’s payments mechanism. As the system matures, other financial institutions arise that beckon for the local unit’s interest, such as insurers and various funds that may wish to attract the government’s financial assets, such as

investment funds. A higher stage yet of development occurs when the local government begins itself to directly enter the securities markets, as either a lender, borrower, or both.

In many countries the banking system was once under the control of the central government or, perhaps, provincial governments and banks that traditionally served the local units may persist in that relationship. The banks will act as depositories for local funds, receiving and providing cash payments and holding balances in safekeeping. They also will provide checking and wiring services and act as the principal outlet for short term investments. Typically the larger governments become, the more services they may require of banks and the more options they have among potential bank vendors.

With the privatization of commercial banking in much of the world, local governments may find themselves in a changing environment as regards to choices and growing linkages to the financial markets. The privatization of banks and the opening up of domestic banking to foreign competition has broadened the market for banking services and is likely to expand the alternatives that are available to individual units of all sizes. However, the greater the financial size and activity of the local unit, the more attractive it becomes to local banking service vendors. As is true with many other markets, banking services can offer economies of scale.

Growing autonomy and size of operations at the local level will likely lead to greater freedom of choice over how assets will be invested and liabilities created. Banks, for example, typically depend heavily on short term deposits for their capital base. The tenure of these deposits and how much interest must be paid by the bank to retain the accounts are increasingly subject to competitive forces. Banks, if managed and supervised according to prudential standards, have limits on the size and maturity of loans, how such loans are secured, and how much lending they can do to any given economic sector or any one borrower. Moreover, various borrowers are subject to credit standards that determine how much in the way of reserves banks must hold for a particular type of loan or borrower.

A major attribute of the growth in privatization of assets and overall growth in economic activity has been the increase in the size of capital markets. Capital markets are usually divided into two broad sectors: the *credit market*, which is concerned with debt obligations of various maturities and the *equity market*, which deals in "shares" or "stocks," which deal in evidence of ownership. Within these two broad markets, many subdivisions can occur, depending on the nature of the *issuer*, the entity that is providing the instruments or securities that evidence debt or ownership, and the technical nature of the securities instrument being offered. In this paper, the focus is on borrowing and the management of debt. But, it is well to keep in mind that borrowing transactions may be related to other services to local governments that financial institutions can provide and may involve more than one financial service and financial market.¹

¹ For example, local depository banks may hold large cash balances for local governments during the course of normal operations, as a result of the proceeds of bond sales, or as sinking funds against outstanding debt. How these

2. Subnational Governmental Entities as Borrowers

Subnational debt may be the obligation a local, regional, provincial, state government, or of projects that are sponsored by them, including projects involving the private sector through subsidies, partnerships, and concessions. The legal and financial relationships that subnational governments may enter into, including the type of debt they contract, can differ markedly among countries. In many places these relationships are evolving and even where they are established, they continue to be dynamic. Thus, the policymaker and the analyst alike must be prepared to look at a variety of factors and risk exposures when dealing with the debt transactions of subnational governments.

Analysis of subnational government debt can have many elements in common with other borrower types such as public utilities and private sector firms. But, there are some special features relating to the powers, structure, and operation of the subnational governments themselves. For example, most local governments deal exclusively in the domestic currency for revenues and expenditures. Thus, except for certain types of facilities (electric power, ports, airports, telecommunications), they will not have much access to foreign currency payments. Also, governments typically have certain powers over the local market for services that approach monopoly status that may be enforced by regulation. On the other hand, governments are site-specific and unable to change the geographic locus of business or the fundamental nature of the services they provide. And, by that same token, they do not go out of business.

A fundamental distinction in classifying debt is whether the obligor is the subnational government itself or if the obligor is some other, more limited legal entity. The obligor may be the subnational government itself, relying primarily on its taxing power and other general governmental revenues to form the credit backing of the loan (i.e., general government borrower); or the obligation may be limited to a particular revenue source of an enterprise to which the general governmental credit is not pledged (a limited or non-guarantee obligation). This distinction is reasonably clear in the United States where a revenue-generating project or enterprise that is financed with a limited obligation is referred to as a *revenue bond*. In Europe, the term "*ring-fenced*" obligation is frequently used.

However, the distinctions between general and limited pledges can be blurry. This can be the case in a project financing where there may be mixtures of public and private funds, service and off-take contracts, profit-sharing arrangements, concessions with guarantees of use, etc. This is especially so in those countries where governments formerly carried on a variety of commercial, industrial activities that are

funds are invested, in what types of securities and at what rates of interest are very important to calculating the cost of borrowing. By the same token, when governments borrow from banks, there is often a requirement that sums regularly be set aside in a sinking fund to repay the principal at term. It is clear that unless the interest earned on the sinking fund is equal to that paid on the loan, the government should be repaying the loan by amortizing the principal in installments rather than investing in a sinking fund that is payable at the term of the loan.

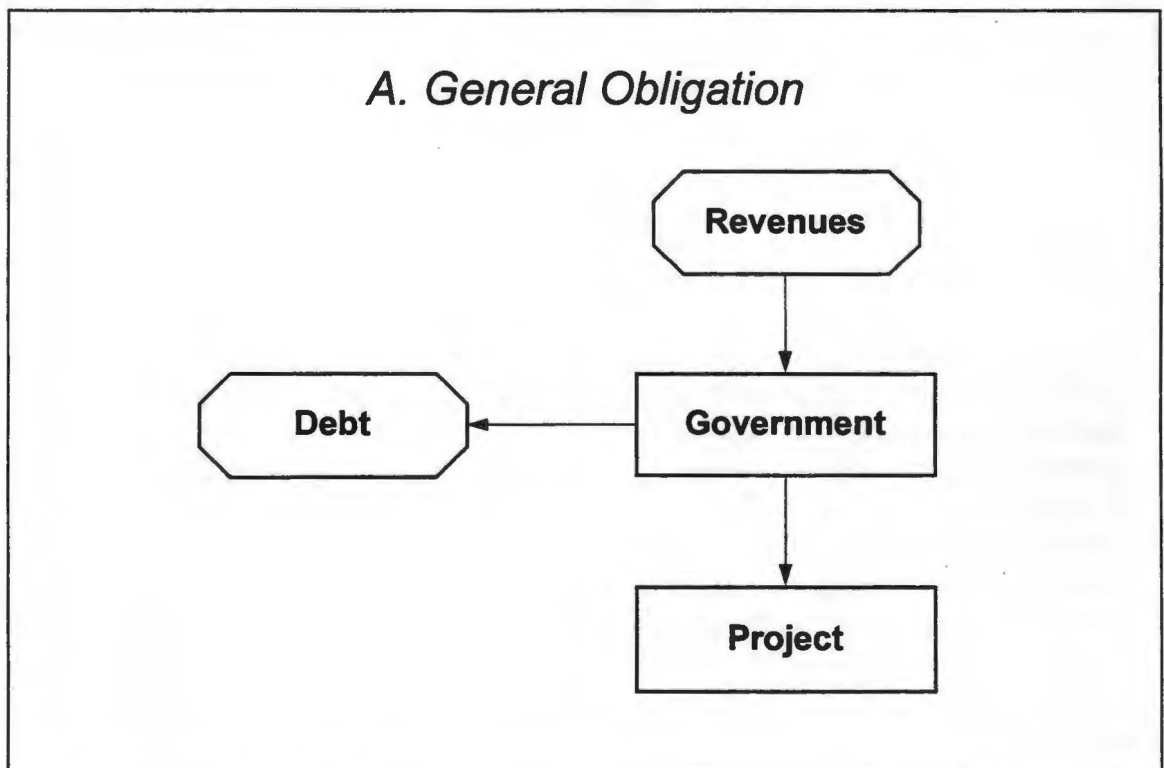
now being totally or partially privatized. A major distinction is found in those “project finance” cases where the private sector is a direct investor in a project, an equity provider and/or the operator of the facility, and is actively engaged in its operation and management. In those cases, the analysis may become very complex and involve a blend of risk factors involving both the public and private sectors.

2.1 Prototype Credit Structures

The accompanying charts present simplified schematic illustrations of three prototype financing and credit structures involving subnational governments. For ease of exposition, we have assumed that the financing involves a project, which is typically the case. However, the borrowing might be used for other purposes, including relending.

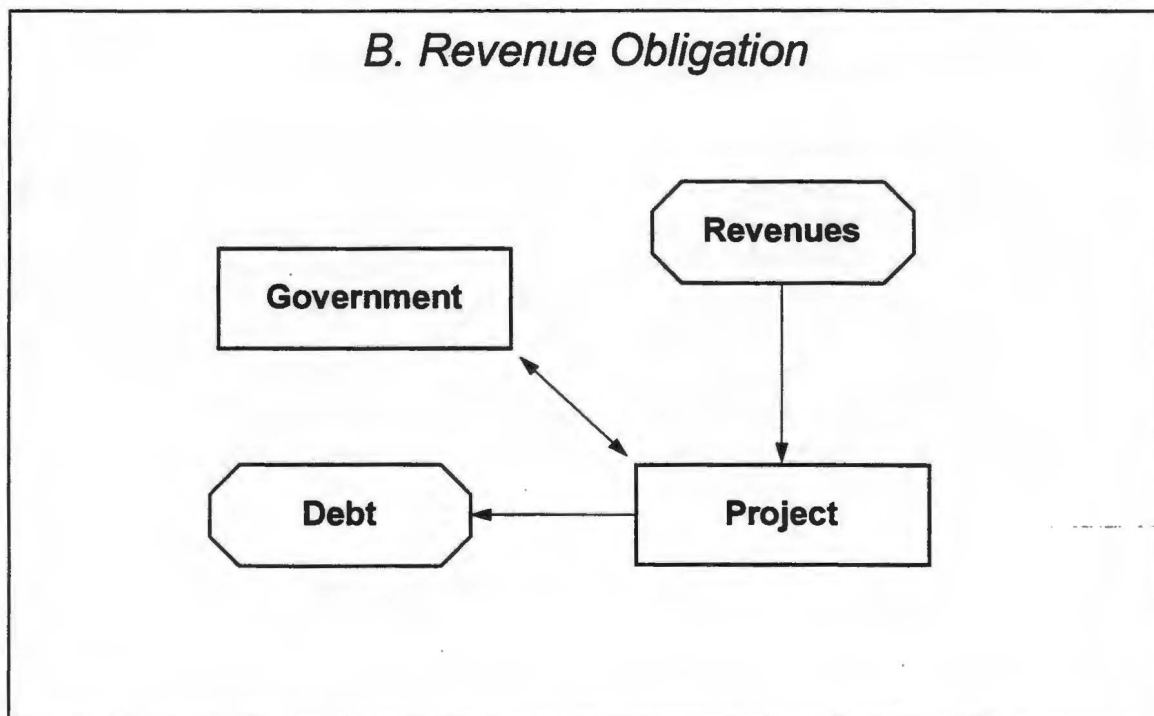
a. General Government Obligation (general revenue supported)

In this case the government uses its general revenues to support the debt service payments and owns and operates the project itself. In most countries, this would be the likely structure for public safety, public education, and health and welfare capital expenditures, which activities themselves are not revenue producing. The government issues the debt in its own name and pledges its general revenues. The proceeds of the borrowing are spent on a project. However, neither the project itself so financed or earnings from it are specifically tied to the repayment of the debt. An important variation on this theme is where the local government gets intergovernmental assistance, such as shared taxes or grants, which are pledged as part of the security.



b. Limited Obligation ("Revenue Bonds")

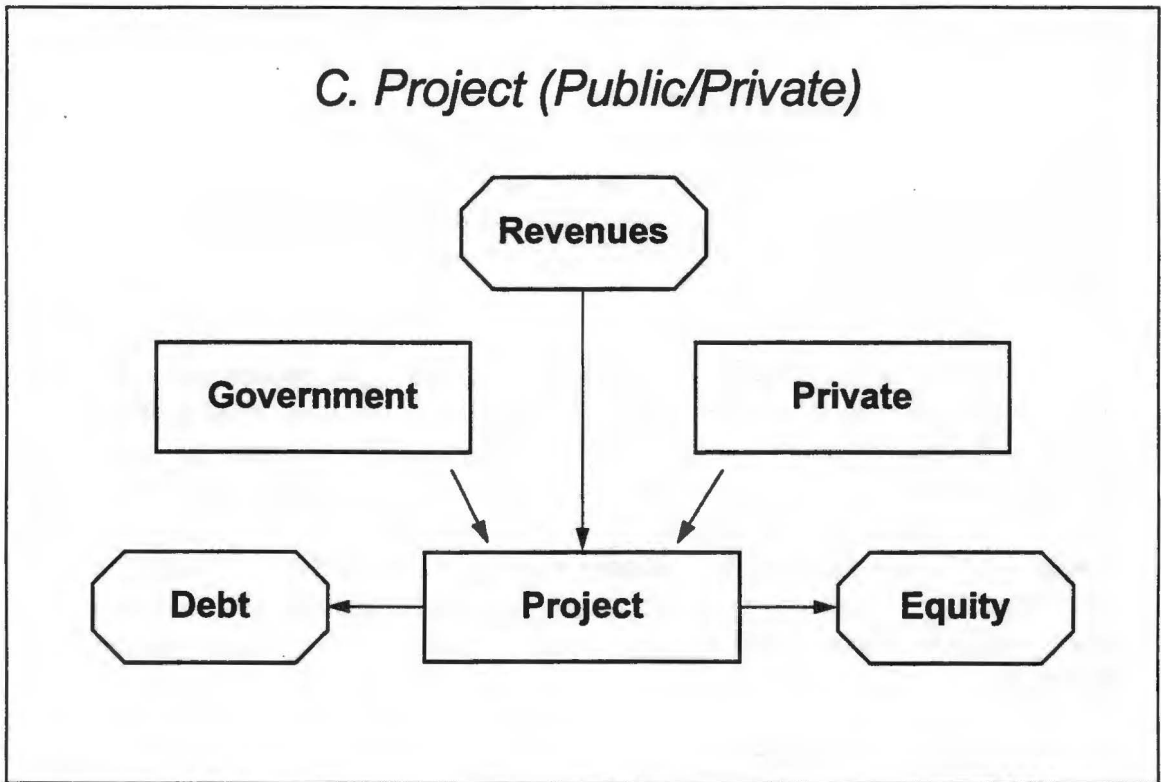
In this case, the facility is an enterprise that produces revenues through charges and fees that are used to defray much or all of the costs of operation and debt service. The debt is secured primarily or exclusively on the project earnings, general revenues are typically not pledged directly, and there may be a prohibition against their use. Common subnational enterprises are public utilities, such as water and sewer, electric distribution, local toll facilities, public markets, harvest processing facilities and local ports and terminals, etc. The debt is issued either by the project itself (which may be a limited-purpose special district) or on behalf of the project by the general governmental sponsor.



c. Project Financings (public/private undertakings)

In this third case, which is typically a "utility" type project, the government enters into arrangements with the private sector in the form of concessions or partnership agreements to build, own, and/or operate the project. The government, either national or local or perhaps both, may provide any number of inputs into the financial structure: equity interests, subsidies, and various forms of guarantees related to the demand for outputs or for supplying needed inputs. Likewise, the private sector, or international lending entities, may contribute debt, equity, and various enhancements to the financial mix. The obligations of, and returns to, the respective parties are determined by contract. The debt is typically issued in the name of the project and may be non-recourse, looking only to project earnings, ownership, and/or assets for security.

C. Project (Public/Private)



As outlined above, *types of debt* are defined by the kind of security given by the borrower. Security (that is, where the money will come from to repay the debt) typically runs to two questions (1) where the money is *expected to come from* if everything goes as planned and (2) where it *might have to come from*, which is the ultimate collateral and remedies in case of failure. Before investing, creditors want to know not only where the money is expected to come from, but also what are their remedies or security in the event of default. Unless the remedies and security are deemed adequate, the markets may set risk premiums that make credit unaffordable to many jurisdictions. Knowing the security on debt is important because uncertainty as to remedy and security builds inefficiencies into the market.²

2.2 General Obligation Debt

General obligation debt typically is taken as the pledge of a governments taxing power and other assets, real and financial, to the payment of debt service. But while the

² The question of what remedies should be available by law to creditors is critical. Any framework for subsovereign borrowing needs to spell out what powers a jurisdiction has to pledge assets, revenue streams, and to exercise its powers to set taxes, tariffs, and other levies. It is also desirable to spell out how such security can be affected in the event of default or other financial emergency.

concept seems pretty clear, the precise legal meaning of the definition is fraught with uncertainty. Most emerging countries, with the exception of the largest units, general purpose subsovereign debt has in the past carried some form of sovereign government backing. Increasingly, national governments are attempting to wean local governments off of such backing and encouraging them to borrow on their own credit. The security offered by (and creditworthiness of) the subnational unit, without an explicit or implicit guarantee by the national government, is often not clear. Accordingly, expressions such as “general obligation” or “balance sheet” debt often mask an unresolved question of ultimate security: that is, just what remedies are available to an investor in case the unit fails to pay on time and in full.³

Aside from the good faith of a jurisdiction and the prospect of national assistance if things get difficult, subsovereign general obligations have often been backed by the ability of creditors to seize financial and physical assets. For a number of reasons, this physical collateral system is not a sound approach to securing credits. Local governments with physical assets that are unrelated to their municipal service responsibilities, e.g. a commercial enterprise, might be best advised to divest themselves of the asset so as not to divert scarce city management capacity to managing a potentially private activity. Municipal assets that are used directly or indirectly in the provision of vital services should not be risked as collateral.

2.3 Limited Obligations

Governments need not in most cases pledge their full faith and credit and general taxing source to repaying a debt. Limited security can be given to secure subsovereign debt. Possible limited security arrangements include the following:

- Pledging of physical or monetary assets.
- Pledging the right to operate a facility or provide a service.
- Pledging of selected revenues, such as:
 - From tariffs, fares, or rentals.
 - From particular taxes or special levies.
 - From grants or shared taxes (intergovernmental transfers).
- Pledging the power to set specific tax rates, utility tariffs, and other levies.
- Pledging by the executive to budget for and recommend payment of future debt service, without an explicit binding pledge that those appropriations will be made.⁴
- Pledging to assign the payment of future intergovernmental revenue.

³ Thus, both new and existing holders of outstanding subsovereign debt where the sovereign guaranty find themselves asking what security stands behind general debt issues of local governments. A central question is what remedies are available to enforce that promise.

⁴ This type of security is known in the U.S. as appropriation or moral obligation debt. It recognizes that debt is not a full faith and credit binding obligation but rather is subject to the will of successive legislatures. Its origins are out lease rental debt that holds that the obligation only runs from fiscal year to fiscal year and is subject to reconsideration of the legislature each year.

A very common form of pledge backing debt in developed markets is one which is restricted to a particular revenue stream or a enumerated local government assets. Also possible is for the creditor, in case of default, to step in and perform the activity and receive the revenues. But, both the carving out of specific revenues and giving the creditors rights to assets and operational powers raises a host of operational and policy issues.

A pledge of revenues from public utilities is appropriate for financing related to those utilities that benefit from the financed improvements. But, it raises concerns if the pledge of revenue-producing properties are used to secure unrelated financing. Part of the concern is simple economics. When a jurisdiction subsidizes general expenditures at the expense of utility charges, it results in a misapplication of resources. In economic theory, and usually in practice, the service that does the subsidizing is undercoated, and the service that is subsidized is over-allocated.

Local revenue-raising powers may be limited in emerging economies. But, even where the powers of local governments to set rates and make levies do exist, there can be ambiguity as to whether local government can pledge to set tariffs, tax rates, or other charges at a level sufficient to service a debt.⁵ There can be issues as to whether such covenants unlawfully bind future administrations and legislators in the exercise of their prerogatives. However, without such a forward-looking and binding-contract ability to pledge, the pledge is much less meaningful to the point of being worthless. Where the tariffs, rates, or charges can be increased or decreased at the discretion of the local authorities, a covenant to set and maintain those tariffs, rates, or charges at adequate levels to meet operating costs and pay debt service is a useful financing tool.

The experience in many emerging market countries is that the primary cause of debt service default and payment arrears is failure to increase rates and charges that were planned to be the source of revenues. Subnational jurisdictions will benefit from clear legal authority to covenant future tariff or tax increases to secure debt. Jurisdictions may choose whether or not to use this mechanism, but they should have the legal authority to covenant, if possible.

In many countries local jurisdictions can assign creditors their interest in specified revenue streams, such as shared taxes and grants, received from the national or other higher-level governments. Revenue intercepts are attractive to a creditor because they promise frequently stable and predictable revenue stream that can be easily accessed to pay debt service. Intercepts can be designed in various ways either to assure adequate funds are available to meet debt service payments prior to their coming due (an ex ante intercept) or to be tapped only in the event of a local government's default (an ex post intercept). Another variant is to have a bank credit facility standing by to advance money in case funds are not on hand to meet debt service payments and then have the loan repaid out of future intercept receipts.

⁵ Such provisions are known as rate covenants.

Intergovernmental Transfer Payments As Collateral

Typically, in newly emerging economies, local governments are highly dependent on transfers from the central government. While these can be very volatile and untested for sustained periods of time, they form a major portion of revenues and are attractive for interception to cover debt service payments. Columbia offers an example of the widespread use of intercepts of central government payments to cover debt service through the Findetere program.

As a rule, if intergovernmental payments are used for pledging, there should be a coverage factor so that the historic and/or expected level of transfer covers the debt service payments by some fraction greater than one. In the Philippines, about 50% of all revenues received by cities are through intergovernmental transfers from the national government, and for provinces the average figure is 75%. The smaller and more rural the local government, the higher the proportion of transfers to total revenues. In that country, government owned banks (the de facto required depositories for local governments) have gotten deeds of assignment of transfer payments to cover bank loans. As aid is received, the banks have a right of offset against any loan amounts owed the banks prior to dispersal for other purposes.

Intercepts can have a powerful impact on local borrowers, especially small and remote units. The assignment to bondholders of state payments to local school districts (which typically make up over 50 percent of revenues for the districts) is very common in the United States and is the basis for high credit ratings by local school districts covered by such programs, which is usually only one full notch below that on the state's general obligation debt.⁶ As a result of this and other small-borrower preferences, local schools are among the lowest cost borrowers in the U.S. municipal bond market.

2.4 Enterprise or "Self-supporting" Financing

A common use for special pledges of revenues and assets is for a self-supporting "enterprise" that generates its own means of repayment and does not rely on recourse to general revenues.⁷ This limited obligation involves the pledge of only specified system or project revenues to repayment. In accounting terms, this implies the creation of a special fund to receive the specified revenues, which are expended to meet costs

⁶ One notch means if the state's general obligation is AAA, then the intercept protected debt will be rated AA.

⁷ This is the traditional notion of the enterprise revenue bond. There is a legion of variation on the idea, many of which have been designed in the U.S. to circumvent restrictions on tax-supported debt. This approach allows and encourages allocation of full costs of services to the beneficiaries. Economically, this is desirable because it leads to efficient allocation of scarce resources.

associated with the enterprise, including the payment of debt. This concept focuses credit concerns on the viability of a particular project or system, rather than on the viability of the jurisdiction. Poor or unsound general purpose governments in theory can have viable enterprises, and vice versa.⁸

There are several advantages to this type of financing:

- It establishes a relationship between the cost of service and service prices. This promotes more efficient operations. The cost/price relationship need not be absolute and can be modified in practice, but it has the benefit of assembling the costs and making any subsidy paid transparent.
- If the utility has been run at a surplus to subsidize other governmental functions, then the added “tax” burden resulting to utility users becomes evident.
- To the extent that general revenues have subsidized enterprise operations, the use of dedicated revenue structures will free up general revenues to pay other costs.⁹
- Management and operation of revenue-producing facilities tend to be more efficient and the facilities are better kept up since they need to be in shape to produce revenues. This can be encouraged by contractual provisions protecting income and value, paired with creditors’ active interest in assets and their operation.
- When there are legitimate reasons to use general revenues as well as specific revenues, it may be better to use general revenues to reduce the amount of debt incurred. For example, by making a municipal “equity” investment in the asset up front, and borrowing to build or acquire the rest of the asset, pledging only revenues produced by the asset, or even a part of the asset’s operations, to meet debt service requirements. This practice is common in Western European countries for many municipal utility operations.

There are also disadvantages to limited obligation, self-supporting financing.

- The expressions “asset stripping” or “security dilution” convey the concern faced by existing creditors of jurisdictions that have relied on a utility to generate subsidies for the general fund, when those revenues are instead pledged to a utility-specific purpose.¹⁰ In other words, where prior lenders have looked to the overall revenues as a source of repayments, a subsequent sequestering or stripping away of revenue streams weakens the credit.

⁸ This will depend greatly on the operational and legal strength of the ring-fence between the enterprise and its governmental parent.

⁹ In some places, such as in South Africa, the subsidy runs from the utility to the general fund, rather than the other way.

¹⁰ However, most economists would applaud this elimination of the cross-subsidy on efficiency grounds.

- Limited obligations may hinder redistribution of infrastructure and services among population groups (say, from rich sections to poor ones) by keeping potentially redistributable revenues for the benefit of an already privileged area. If there are to be preferential and redistributive policies they typically must be financed from the sponsoring unit's general funds.
- Future financing options are restricted. Enterprise financing is a matter of contract between the public-sector sponsor, acting on behalf of the enterprise, and the investors.¹¹ Investors typically will require restrictions that reduce the options of borrowers in the future. For example, borrowers must meet certain conditions before they are able to issue more debt secured on the enterprise earnings (additional bond test), must conform to certain requirements regarding reserves and insurance, and must abide by a rate covenant, as was discussed above.

The above discussion focuses on that enterprise financing associated with traditional "natural monopolies," public utilities provided by local governments. However, there are other potentially revenue-producing activities that are "semi-commercial" in character, such as transportation terminals, public markets, abattoirs, farm processing plants, and the like. In addition, industrial estates, tourism facilities (including hotels), toll roads and bridges, and a number of other revenue-producing facilities are candidates for complete or partial financing by the use of "revenue bonds." Critical components of such proposals are the ability to regulate the market (control competition), the reliability and growth of revenues, the technology used, the facilities' adequacy, firm construction dates and costs, and operating costs that are either fixed or controllable in the future.

Depending on the nature of the facility, determining the nature of and risks in these technical and economic factors requires engineering studies and market demand studies. The objective of the studies, from the financial perspective, is to obtain objective estimates of what will be the net revenues available after operations to pay debt service on the loans or bonds and, if not, what steps might be taken to ameliorate the situation. Such studies are especially critical in new, free-standing projects where there is no experience yet with operations.

¹¹ For example, there may be requirements that the borrower not pledge the same asset to another lender, except under stated conditions (additional bonds test), that the revenues provide certain coverage of the debt service (rate covenant), and that revenues be retained for use on the facility and to the benefit of bond holders (closed loop). Negotiation of these restrictions and the associated tests is an integral part of the borrowing transaction.

3. Debt Structures, Instruments, and Methods of Sale

Debt structure and instruments have to do with the mechanics of how the principal of debt is to be repaid, how long a debt will be outstanding and the how interest due on that debt will be figured and paid. Method of sale has to do with the procedures by which debt is offered to the final investors and debt obligations exchanged for the bond proceeds. Beyond legal restrictions that may be placed on particular types of debt or issuers, these matters are usually determined by the market. That is as it should be, assuming that the market is competitive and that debtor, investor and banker are all equally well informed. The financial markets are fluid, and what might be attractive one day can be unattractive the next. Inflexibility is costly.

A major concern at the national level in many emerging economies is not to interfere with the flexibility of lenders and borrowers in structuring debt so as to suit both parties. This section describes debt structure and illustrates the range of instruments available to suit the profiles of issuers and investors.

3.1 Maturity or Term of Debt

The maturity of a debt instrument should be no longer than and, better yet, matched to the economic life of the asset it is financing. Ideally, amortizing the liability on one side of the balance sheet is matched by the depreciation of the asset financed. Thus, infrastructure assets, such as water systems, roads, or municipal buildings, which typically have lives of 15 to 30 years, should, in principle, be financed with long-term bonds of similar duration.¹² In many emerging markets this matching is impossible to accomplish as investors are unwilling to extend loans beyond a few years and even then, the rates of interest may be exorbitant because either there is large perceived risk beyond a few years and/or capital can be committed at short maturities at substantial returns.

Even if longer term capital is available, the shape of the yield curve may make borrowers prefer the use of shorter term debt.¹³ Typically, the yield curve is upward sloping, i.e., the longer the term of the debt, the higher the interest rate payable. The upward slope is caused because investors want extra compensation for the lack of liquidity of long-term lending. They have increasing uncertainty as to what economic conditions, price levels and interest rates will be in the future. But that is not always the case. Short-term rates may be temporarily driven up by liquidity shortages and efforts to defend the currency. Moreover, if expectations are that the prevailing level of interest rates is unsustainably high, and that rates are expected to fall, then the yield curve may be inverted, with short-term rates higher than long-term rates. In such cases some borrowers

¹² Matching asset life to debt term is also sound public policy because facilities can be paid for by those who use them.

¹³ The yield curve is sometimes called the term structure of rates and relates the interest rate to the term of the debt (the years it will be outstanding).

may borrow short, if they believe long-term rates will fall. Others may choose to lock in the relatively lower long-term rates.

There is also a trade-off between the lower rates typical of short-term debt and refinancing risk. If the debt is shorter in maturity than the life of the asset, the issuer is exposed to refinancing risk, i.e., new debt may have to be raised during the life of the asset at a higher rate than the original loan. If the borrower's credit risk has worsened, it may not be possible to refinance. Refinancing can, of course, work in favor of the borrower. That happens if the general level of interest rates declines or where the issuer's credit has improved relative to that of the others in general. In the case of general obligation bonds, the latter situation could happen as a result of improved general creditworthiness of the jurisdiction. In the case of project finance, the construction and initial phases of operation are riskier than later phases in a mature project, and it may be possible as time goes by to refinance at lower rates. However, financiers are aware of this, and rely on the later phases to provide some compensation for the additional risk taken at the outset, so would probably reserve the right to refinance for themselves.

3.2 Debt Service (Repayment) Structures

The cash flow profile of debt refers to the way in which the borrower pays and the lender receives interest and principal over the life of the liability. Several common profiles as found in the bond markets are described below. A *term bond* typically has a fixed interest rate and *maturity* or *term*, and pays a semiannual interest payment or *coupon* with all of the principal due at the end of the life of the loan. On the other hand, a *serial bond* has the principal repaid in installments over the term of the debt. These repayments of principal, known as the *amortization of principal*, may be variously structured. Principal may be repaid in equal increments, which is called a *level principal* structure and leads to progressively smaller debt service payments ("front-end loaded"). This conservative approach leads to rapid repayment of debt and frees up future borrowing capacity quickly.

On the other hand, if the debt service payments are level, then the earlier year payments contain proportionately more interest than principal. These are called a *level debt service* structure. Alternatively, the debt service schedule may be structured to increase over time. Use of the increasing debt service structure ("back-end loaded") in municipal bonds is increasing in the United States and elsewhere in those cases where growing revenues are believed very likely to occur.

Bonds may carry options that are of value to the issuer and investor. One that is prevalent in the U.S. market is the *call option* which allows an issuer to shorten the life of the debt if it chooses. This option usually is not available for the early years of the debt and then carries a cost to effectuate. The counterpart to the borrower's call option is the *put option*, which allows the investor to put or tender the bonds back to the issuer before their stated or nominal maturity, usually at pre-stated dates and for the par value of the bonds.

Original discount bonds, called “zeros” when they fully discount future interest payments, pay no or reduced interest coupons. The investor realizes interest return by buying the bond substantially below its principal value. Such bonds can be originally issued at discount or may be created synthetically by investment banks by stripping the coupon off a standard term or serial bond. Zeros are attractive to parties who wish to secure a fixed amount of capital in the future without being exposed to reinvestment risk. When the zero bonds are created synthetically, the coupon stream from a stripped bond can be sold to an investor who is primarily interested in an annuity flow.

Cash flow profiles can be engineered to match the cash flows generated by the activity that is being financed. Liabilities can be index-linked, where the revenue flows are expected to vary with an index, such as inflation or an input cost. In this case, interest payments can go up or down, depending on the movement of the index. As noted, amortizing payments can be structured with an escalating profile, with lower debt service in the early years. This is common in commercial property finance, for example, where there is a “ramp-up” period when rentals are expected to escalate, and can be appropriate for certain municipal assets. Similarly, interest payments for initial periods can be deferred by using bond proceeds to pay interest costs in early periods (*capitalized interest*).

Bank loans or municipal bonds may be made at either *fixed or floating rates* of interest. Floating or *variable-rates as they are also called* are interest payment mechanisms wherein the interest rate is reset from time to time.¹⁴ In emerging markets, the variable rate may be the only interest payment structure available for obligations beyond a short maturity. The relative advantages of fixed versus floating rate debt are similar to those regarding short term versus long term debt. Floating rate debt implies continuous uncertainty about the cost of debt, but it can be appropriate where revenues are expected to vary in concert with changes in interest rates. However, this is not usually the case for municipalities.

Financial flexibility and access to liquidity are very important considerations for floating-rate borrowers. If there is limited ability to change taxes or rates to respond to rising interest rates, then over-reliance on variable rate debt is worrisome. The rating company Standard and Poors generally recommends that the combined short-term debt and variable rate debt not exceed 20 % of total debt but it depends on the circumstances (degree of flexibility) and matching of revenues versus debt service.¹⁵

Bonds also may pay interest on a variety of interest payment or “*coupon*” dates. Although the semi-annual is the most common, structured loans can have varying coupon

¹⁴ The interest rate may be mechanically pegged to some market index or may be set by a repricing agent that declares the rate needed to place the securities.

¹⁵ In the United States, where there is an upward sloping yield curve from short-term to long-term tenor, there has been a reward of between 100 and 200 basis points for using variable rate instead of fixed-rate debt. The structure allows flexibility to restructure debt, since it typically can be called at the reset date to restructure debt.

profiles (semiannual, quarterly, even monthly) to suit the cash flows requirements of the borrower and the capacities of the issuer.

There are several caveats to make in considering the cash flow of bonds. It is unlikely that the repayment structure of bonds should be regulated aside from confining borrowing to capital expenditures and having maturities not exceed the useful economic life. Most municipal bonds in emerging markets have had short maturities and frequently have had term bond or bullet maturity structures. This, in effect, has meant that the loans to local governments were for the construction and start-up period. Then, implicit in the repayment structure, they have required the borrower to “roll over” the loan into another one at maturity or to come up with alternative means of long-term financing. Such an approach subjects the issuers and lenders to great uncertainty regarding future debt service requirements and effectively holds borrowers hostage to future changes that may be forced upon them when they again come to market to renew the loan. The dependency of many emerging country borrowers on variable rate and end-of-the-loan term maturities are major factors in increasing the riskiness of their obligations.

A final area of policy regarding the structure of instruments is that of the restrictions that may be placed on interest rates or on the maximum maturity of bonds. Interest rates may be capped by “usury rates” that set an absolute ceiling on the rates the issuer will pay. While this was once common practice in the United States, the restriction has disappeared for all practical purposes over the last twenty years. The effect of limiting interest rates is to ration capital away from governments during periods of high interest rates. Such restrictions continue to be seen, however, as a matter of contract in the case of variable rate instruments, where a cap is either introduced or a borrower may purchase a rate cap contract from a commercial bank that will agree to pay the excess interest for a fee. The other common restriction is on maximum maturity, which is often specified in conjunction with the expected useful life of the improvement being financed. Again, these are seldom effective and the market itself provides the limitation on how far it will extend debt, especially at fixed interest rates.

3.3 Methods of Sale

Municipal securities can be sold to investors in a number of ways, ranging from the competitive auctioning of bonds to the highest bidder to a placement of them with the final investor, much as a direct loan is made from a bank. In most emerging markets, the sale is done through a process called *negotiation*, in which the borrower procures the services of a financial services firm (such as an investment banking firm) to sell its bonds to the final investors.¹⁶ The firm either will *underwrite* the issue, in which it agrees to buy the bonds at a certain price, or act as *placement agent* and which it does not agree to

¹⁶ For larger bond issues, a combination of firms, called a syndicate, may band together to underwrite and distribute the issue.

buy the bonds but rather makes a “best effort” to sell them and for which it receives a commission on the bonds sold.

The various methods of sale have their advantages and disadvantages. Generally a competitive sale environment requires there be a very active market with a large number of issuers offering fairly standardized securities and a large number of investors interested in owning them. The large volume of activity results in a number of bankers that follow the market, make bids, and place bonds to investors. It also means there are other professionals that help with the design of the issues, preparing documents, and running the auctions.¹⁷ The competitive auction, with several underwriters bidding on a bond issue, as commonly seen in the United States municipal bond is a rarity in other markets.

Where bond markets are less homogenous and sales are irregular, issuers typically require that an underwriter be hired to help prepare the issue and to seek out possible investors. This technique is called a negotiated sale in which the underwriter is selected before the sale of the issue to final investors. The negotiations can be made competitive by injecting elements of competition among firms into the underwriting selection process and subsequently by holding underwriters to the projected terms of the issue. To help achieve competition, the issuer may employ the services of a financial advisor that is knowledgeable in the design of transactions and the process of marketing of securities to assist it. The advisor can perform a variety of functions but in the negotiated transaction its primary duty is to assure the issuer that it is being dealt with fairly by the underwriter and is holding up its end of the transaction. The advisor usually helps the issuer in the process of selecting the underwriters. See the box on Krakow Selects An Underwriter.

The underwriting process, as opposed to the use of a best effort marketing arrangement, has the advantage of guaranteeing the issuer that sufficient funds will be borrowed. However, the investment banker undertakes the risk of reselling the issue and will demand more remuneration in the process of underwriting than simply acting as a placement agent. To make their profit and to cover expenses, the underwriters buy the bonds at a discount, which means that they buy the issue for less than the value at which it is reoffered to the final investors.

The mechanics of selling of the bonds and the setting of interest rates and other terms differ among the various domestic securities markets. In some countries with relatively small inactive markets, the terms of the bond offering may be set well in advance of the sale date. The bonds may then be sold on a given day with a discount or premium to make returns competitive with prevailing interest rate conditions. The technique of fixing terms will before the sale date tends to put the underwriter firms at most risk and issuers pay an interest rate premium in fixing the rates. Another approach

¹⁷ Other professionals include financial advisors, legal counsel, auditing firms, and printers to produce the documents. There may also be banks to handle the investment of proceeds and to oversee the payments under the debt contract (trustees and paying agents).

is to commit to have the bonds underwritten at a certain mark-up or in relationship to some regularly published interest-rate index, usually that on government bonds. Finally, the terms can be determined by offering the bonds at a proposed structure and then changing the terms to meet the effective demand from investors in what amounts to an “informal” auction. The key point is that the terms and their acceptability to the issuer remain open until the sales contract with the underwriter is signed (the *bond purchase agreement*).

Selecting and Underwriter by Competitive Negotiation

The gmina (city) of Krakow Poland proposed a bond issue for 15 million Polish zlotys in 1996. The city, assisted by a financial advisor, sent an RFP to a large number of investment banking and commercial banking firms. The solicitation described the project and needed funds, provided information about the city and asked for proposals from interested firms. The RFP and selection process contained several elements designed to make the choice of firms transparent and competitive. The RFP contained a tentative maturity structure for the issue and asked respondents to price the bonds (provide interest rates) and to indicate their gross profit, assuming that the bonds had been sold on a given day. In addition, the respondents were asked to estimate an itemized list of costs and to indicate which costs would be met from their profits and which would be paid by the City.

Respondents were also asked to critique the structure and suggest alternatives of their own. Firms were also asked about their experience and financial capacity. The combination of factors were used in selecting the finalists, but all-in cost of borrowing was the most important. All costs, including future interest payments and fees paid by the city, were made comparable terms using a all-in-cost internal rate of return calculation.

After the responses were analyzed by a committee, individual firms were contacted to clear up any questions (all responses were kept confidential). Of the eight firms (and syndicates of firms) that responded, the best three were invited to make presentations and to make their best and final offer. A syndicate made up in part of the local representative bank was selected. The final offer committed the underwriting syndicate to price the proposed bonds on a par with Polish Treasury bonds of the same maturity, a highly aggressive bid.

Subsequently, Krakow received an investment grade credit rating from Standard & Poors and sold bonds (Duestchmark denominated) in the Euromarket in late 1997, the first Polish city to do so.

The bond instruments or other evidence of ownership are delivered (physically or electronically, depending on prevailing market practice) and money is exchanged for them (settlement) from the day of sale or up to two weeks after the sale. Depending on market conventions and the nature of the security, the borrower (or the underwriter) may

have selected a paying agent and/or a trustee that receives funds from the issuer and makes the periodic payment of interest and principal. The trustee, if one is used in the transaction, has the additional duty of overseeing the bond contract between the borrower and ultimate buyers and is responsible for looking after the interests of the investors.

The important thing to remember is that beyond the procedures set down by enabling laws at the national level, the specifics of the bond offering are a matter of contract among the underwriter, the ultimate investor and the issuer. This puts a premium on the issuer getting good legal and financial advice independent from that given by the underwriter and the final investor.

3.4 The Securities Marketplace

Bonds are attractive because they potentially can provide greater diversification and liquidity to investors than can direct loans. That is, unless the bond is in some way restricted in secondary market trading, it can be put up for sale, thereby giving the holder liquidity before its maturity or enactment date. Ideally, there is a marketplace in existence that provides quotes of the prices at which holders are willing to sell or purchasers are willing to buy.

Domestic securities markets in emerging nations are in various stages of development and reflect differing philosophies regarding regulation, intensities of competition and technological development. There has been a tendency for regulators in emerging markets to force all securities (equity and private debt) to trade on the formal exchanges in order to develop the exchange. But formal exchange listing requirements, which typically are copied from those in developed countries, can be burdensome and the related fees, costly. That burden and cost can be unfair to new companies and to those that are small. One answer has been to create a separate bracket for smaller, higher risk companies. (Japan, for example, has a corner of its exchange set aside for small, higher-risk companies).

Another approach is to allow the development of an OTC or dealer-to-dealer market. The OTC is a "telephone" market where there are dealer to dealer trades in securities that are not listed on the exchange or that can be traded off the exchange as well as on it. or the restriction of certain classes of offerings to sophisticated institutions and individuals. This approach provides trading liquidity to otherwise less liquid shares without exposing the general public to undue risk. New credits can season and then graduate to either unrestricted OTC trading or an exchange listing at a later time.

Regulations that permit the creation of a number of separate markets can be uneconomic and lead to an undesirable diffusion of resources. The most recent moves have been toward fewer organized exchanges and towards a screen-based, fully reported trading as opposed to the open-cry, single-place market.¹⁸ The more integrated and

¹⁸ A recent article on future of the exchanges indicates that the number is likely to decline rapidly and a few large international exchanges will dominate activity. See "Survey: Financial Centers" *The Economist* (May 9th -15th 1998)

transparent a market's operation, the better defined the market's participants and scope, the more likely that market competition, on the basis of price and quality of service, will discipline the market behavior without direct regulatory involvement.¹⁹ The more these conditions are met, the more securities regulation can rely on self-regulation through self-regulatory bodies as opposed to direct regulation for setting the detailed market rules and enforcement.

pp. 54 *et seq.* The exchanges may be fewer, but their physical location may be less relevant as trading can occur wherever a computer can be plugged in.

¹⁹ A major factor in enlarging market competition is permitting the entry of foreign firms into the market.

4. Disclosure and Financial Reporting²⁰

Complete and timely disclosure of information about issuers is a necessary, if not always sufficient, condition for the effective operation of any securities market. That includes one for municipal securities where the subsovereign borrowers themselves provide the ultimate security. Information--consistent, complete, timely and comparable--is at the heart of judging the risks and rewards of investments. While information will not always answer all the questions (and bad information can give the wrong answers), an absence of information makes even knowing the right questions to ask difficult.

Emerging and transitioning markets face particular difficult problems with disclosure. Many emerging economy countries are undergoing dramatic changes in their fiscal structure, as are the financial markets structure and regulation themselves rapidly changing. As we have noted, the vague basis for local security or the former direct guarantee by the sovereign is being replaced by more specific pledges of assets and revenues. Some countries, such as South Africa, have been and will continue to be highly reliant for revenues on commercial public utility operations (water and electric) and other emerging countries, for a variety of reasons, may wish to restrict long-term debt to self-supporting commercial operations.

The ability of these governmental operations to generate resources to support themselves, or to generate surplus for general revenue purposes, depends on efficient technical and managerial operations. Even where there is primary reliance on local taxes or on intergovernmental transfer payments, information on trends in these compared to local expenses becomes vital to determining relative credit quality.²¹

Disclosures to the securities market are originated by the underlying borrowers themselves, the local governments. The borrowers may be assisted (or even superseded) by the central government or provincial government authorities in accumulating information, but the idea is that the party financially responsible for timely and full payment of debt service is the party responsible to make disclosures. A closely related concept is that the party that is in control of decisions as to honor obligations and that has control over the relevant information is the one responsible for information.²² Except in the cases where the issuer is only a "conduit" borrowing on behalf of another entity that is responsible for the debt, the issuer is the controlling party and obligated to report the information.

²⁰ A companion to this paper dealing in greater detail with securities market disclosure and its role in subnational government credit access is being prepared by the authors of this paper.

²¹ Aside from the immediate needs of the bond market, it would appear that effective democratic government will depend on reporting on a consistent format of the operating results of governments.

²² For example, a guaranty by a third party (such as the national government) has been seen as a reason to require less disclosure on the part of the actual borrower. That concept, however, has been rejected in U.S. practice where a guarantee or insurance) does not obviate the need the need for full disclosure by the borrower. in South Africa (as elsewhere) the custom evidently has been to lessen or relax requirements where the national government is the guarantor. As noted above, the change in the fiscal climate will supersede that doctrine.

4.1 Disclosure Requirements and Processes

Disclosure can be required by central governmental fiat, by securities market regulation, or as a byproduct of the operation of the market through contract and market practice and convention. Market-dictated disclosure is realized through meeting investor expectations, habitual procedure, and, most importantly under fear of anti-fraud provisions in the securities law (or similar legal obligations related to fair-dealing and fraud).²³

In the securities markets, disclosure is aimed at the investor for the purpose of informing the investor so that it can make informed investment decisions. However, an often overlooked but very practical byproduct of securities disclosure is that the performance, condition and prospects of borrowers are reported. These economic and financial factors are of material interest to those other than investors in the market. Also, the concept of disclosure reaches beyond investor “protection” to investors (avoidance of fraudulent behavior) to supporting the rationale allocation of resources and being able to effective cost risk, whatever its level may be.²⁴

Generally, formal disclosure requirements are met when the issuer sends published reports to the marketplace. The timing and scope of reporting information are important and technology is changing the process of publishing, as may be seen in the box on the Internet. There often are recipients of the information that in turn “translate” or re-communicate the disclosure and their opinions of it to existing and potential investors. The most important of these are the rating agencies, and the agencies, as will be discussed below, are often seen as a surrogate for disclosure.

The policy objective of securities market development argues that investor protection needs to be counter-balance with the needs to reduce burdens are certain classes of borrowers to accommodate their access to the securities market. Lessened standards often are applied to smaller issuers or those classes of securities that are believed to represent less risk.²⁵

The content of disclosure can either be determined in either of two ways: (1) by a regulator’s detailed listing of contents of documents and a sequence of presentation of various times, or (2) by a “flexible” standard that depends in its application on what the issuer and its advisors and agents perceive as information that investors should find useful in reaching an investment decisions. In practice there is usually a combination of

²³ The nature of the securities laws and effectiveness of anti-fraud provisions are critical to effectuating good disclosure through a market-based mechanism.

²⁴ this is not just an academic distinction but goes to the heart of market regulation. If the primary purpose is avoid fraud and investor loss, then the emphasis on a screening out high-risk securities that regulators feel might cause loss to the investors. that substitutes a bureaucratic decision of that of the market place./ The other approach, and the one stressed in the U.S. philosophy is to regulate to requiring full disclosure, and then let the market decide on the appropriate rate of return that is required to offset the level of risk, no matter what its magnitude.

²⁵ Traditionally, government securities have belonged to this lower disclosure requirement, although that tradition has been eroded in the united states and elsewhere and the exceptions are less likely.

the two approaches, with a listing of generic types of information, leaving the particulars to those responsible for the deal. Since the scope and detail of meaningful disclosure can vary markedly both among and within markets, issuers and debt issues, the modern trend is to rely on market forces and self-regulatory bodies to specify the details of content. Disclosure documents can also be available from a central source, (a depository) using information received on a recurring or event-driven basis.²⁶

4.2 Financial Disclosure

Fundamental to disclosure is the timely production of financial statements that follow consistent accounting standards and that are readily available to investors on a timely basis. Uniform accounting standards for local governments are critical to disclosure. In many countries, accounting systems are in transition and under review for improving their timeliness, conceptual consistency and transparency.²⁷ International bodies are also active in trying to achieve cross-country comparability. Strong accounting practices are central to improved financial management. In that regard, it should be noted that were the adoption of accounting standards required in order for any borrower to sell bonds or undertake a loan (perhaps with the exception in certain *de minimus* borrowers), the adoption of the standards would be accelerated.²⁸

Accounting standards and their applications vary greatly among countries and between the private sector and public sector. Most governments come from an orientation of controlling expenditures and revenues, stressing the legality of their actions and reporting their conformance with adopted legislation. This has frequently led to the use of cash accounting techniques in the recognition of receipts and outlays and frequently obscured the economic purpose or life of the expenditures. On the other hand, much of credit analysis does indeed focus on cash flows and particularly those that relate to the availability of cash to pay debt service in full and on time.²⁹

Another common distinction is where the government borrower is involved in an enterprise activity. In those cases, there may be use of accrual accounting techniques that conform with those used in the private sector. While the use of accrual accounting has sound economic rationale for determining the worth and period income performance of an activity, credit analysis will typically require conversion to a cash basis to assure that

²⁶ In the U.S. that role is played in the municipal market by a limited number of officially sanctioned (but privately owned) repositories as well as a central repository operated by an SRO (the Municipal Securities Rulemaking Board, MSRB).

²⁷ One team of investigators reviewing the Latin American markets stress the problem of financial information: "The first problem is the quality of municipal or subnational management and accounting, which is often poor and incomplete." M. Freire, M. Huertas, B. Darche, *Sub-national Access to the Capital Markets: The Latin American Experience* First World Bank Conference on Capital Markets Development at the Subnational Level (Santander, Spain, October, 1998)

²⁸ International Federation of Accounting (IFAC) *Guideline for Governmental Financial Reporting*. The IFAC is attempting to develop widespread adoption of generally accepted accounting standards.

²⁹ In credit analysis, it is customary for analysts to restate accounting reports to a cash basis to examine the availability of cash to meet debt service payments. Revenue bond contract indentures are expressed in terms of minimums of available current revenues after meeting expenses (cash outlays) in relationship to debt service needs.

the timing and magnitude of cash is available to meet debt service requirements.³⁰ The biggest concerns with cash accounting techniques are with its focus on short-term assets and liabilities and the ability of the obligor to change results by accelerating or delaying the timing of payments and receipts.

The frequency and independence of *audits* are important issues. Most governments rely on audits performed by auditors from senior levels of government. Such audits often check for compliance with various program requirements as opposed to reflecting financial condition or assigning costs to activities. In some countries, governmental financial records are not publicly available and bank secrecy laws are an impediment to reporting fully the financial statement. Unavailability of financial data for these or other reasons is a disclosure in and of itself, and a warning flag that the one's ability to assess financial risk is nil and that political and legal risks are particularly important.

In addition to financial statements, and depending on the nature and characteristics of the project being financed and the nature of the security pledged, added information having to do with operations and characteristics of the service provided and market served may be required in order to obtain appropriate disclosure.³¹ For example, investors in limited obligation or enterprise security that can look only to cash available after operating expenditures to repay debt want to know about the operating characteristics of the enterprise and the market it serves. They need this information in order to judge how efficiently it was being operated and if there were any concerns about future the strength of demand, supplies, labor relations, environmental matters, lawsuits and the like. The list of potential items worthy of disclosure can be long and the particulars will be dictated by the nature of the operation and the security pledged.³² Thus, an important initial disclosure will be the intention or contractual commitment of the issuer to provide information on a recurring basis in the future.

An important caveat, and one that is adjunct to this subject, is where disclosure requirements are made stringent and the regulators of the security markets then choose to

³⁰ Asset valuation techniques differ among countries. Those that use a historical basis can greatly understate the replacement value of plant and equipment in periods of high inflation. For example, water utilities with much of their investment in underground piping and reservoirs may have major assets that have expected useful lives of from 40 to 100 years. Utilities that use current market values for assets will appear to be much less leveraged in terms of debt as a proportion of total assets, than those that do not. However, their current depreciation charges will likely be higher, which makes them appear less profitable.

³¹ the word "appropriate" is used because once beyond a simple general government balance sheet pledge (and likely even in that case), the information needed to assess risk will be situational to a particular local government. For example, a government that relies heavily on utility operations such as electric and water systems, will find its ability to pay debt heavily influenced by the operations of those utilities. If the cost of raw materials or labor costs are rising rapidly and /or user are not paying their bills, then cash will be short and may lead to inability to make timely debt service payments.

³² The listing of items to consider are found in various trade and professional publications. A good starting point for generic items is continued in the GFOA Disclosure Guidelines for State and local securities (Chicago, 1991).

promote reliance on private sector advisory and information services to examine disclosures and make informed judgments. Disclosure requirements need not assume that every investor is to read every document and understand every nuance of every deal. Rather, a limited number of qualified professionals are doing the examining and forming opinions for which service they are paid by issuers and investors. Opinions are published and become a “baseline” of assessment and are themselves part of the disclosure process. The leading example of this role being played is the rating agencies that post ratings on issuers and issues and continue to keep them under surveillance while the debt is outstanding.³³

5. Creditworthiness, Credit Analysis and Credit Ratings

Credit analysis is a process where investors (or their advisors) examine available information regarding issuers and their obligations and seek to make judgments regarding the relative rewards from a particular investments versus the risks those investments entail. *Creditworthiness, or Credit risk*, is typically taken to mean the economic, legal and political risk inherent in a particular obligation, or more succinctly, the default risk it embodies. That is distinct from the concept of *market risk* or *interest rate risk* which usually pertains to how the entire debt market (interest rates and exchange rates, in the case of foreign currency denominated debt) will perform. The preceding section on disclosure discussed the types of information that investors and analysts require of the issuers themselves in judging credit risk. But, information used in credit analysis can be garnered from a variety of sources, such as a governmental statistical agency or even the local newspapers. The important concept is that there are multiple and objective sources of information which is timely and accurate.

Credit analysis demands resources and analytical skills that many investors, especially smaller institutions and individual investors, do not have enough of to justify a commitment to understanding a particular variety of credit. Thus, they prefer to rely on the opinions of experts. The role of the expert opinion is best reflected in the function of the commercial credit rating companies, or rating agencies as they are often called. An independent, objective system of credit ratings of high quality is seen as an essential component to the development of a vibrant, private sector capital market. It is especially important in the case of securities market investments where the investors are both numerous and “passive” and must rely on provision of information from the issuers and others in arriving at investment decisions. If the ratings are respected and used, the rating companies have the clout to demand disclosures and the skills to interpret the data. To the degree they are successful in obtaining data and their use of it reflects legitimate risk indices, then the entire market is aided by the categorization of debt and the monitoring of performance.

³³ But, nothing is free. Regulators may not be doing the substantive reviews and forming opinions on the adequacy of disclosure themselves. But, they need to institute meaningful safeguards that those who do (such as financial advisors, rating agencies and other information providers) are professionally qualified and are operating in an ethical fashion and not manipulating the market and are free of conflicts.

5.1 Subsovereign Borrower Ratings

Ratings represent a third-party opinion by experts that inform investors that themselves do not have the skill or resources to carry on their own investigations about the relative creditworthiness of competing investment opportunities. This is particularly so if investors have a diverse portfolio of securities, each of which represents only a small part of the holdings.

The concept of creditworthiness is important in this context. It has to do with the comparative risk of there being “payments difficulties” experienced by the borrower. The rating agencies uniformly do not rate the comparative market values of securities or general market risks *per se*. Each rating agency has its own formulation as to how various factors are to be weighted in arriving at an opinion. But, they typically look at pretty much the same factors when it comes to subsovereign credits, as is discussed below.

Aside from the United States, ratings of subsovereign governments is very much in its infancy. An increasing number of developed countries now have their subdivisions rated, especially those that have entered in the international bond market. For emerging and transitioning countries, the number of bond ratings by recognized international rating agencies, while growing, is still sparse. Nonetheless, the rating agencies have been staking out the subsovereign government area and many observers believe that progress in the development of subsovereign securities markets will depend on establishing ratings.

5.2 Subsovereign Rating Factors

Each of the rating agencies has its own recipe for figuring the alphabet rating categories they assign to respective credits. Ratings range from AAA for the highest category which is usually only conferred on sovereign credits down to C or D categories which are for those bonds the in default, with varying hopes for ultimate or partial repayment. While the major agencies have different ways of weighting the factors, they do agree on the major analytical ingredients they consider in judging the creditworthiness of subsovereign credits. These can be summarized as follows, with some indications as to how various factors help or hurt a credit rating:

- *Sovereign Rating Ceiling:*

The rating of the national government usually sets the top limit on the rating that a subsovereign unit can enjoy. National governments set monetary and fiscal policy and usually have first claim on foreign exchange and can change the rules of the game for its

junior units of government.³⁴ Exceptions to this rule can be found if the debt is secured by offshore assets or revenue streams.

- *Economy:*

Fiscal health is usually closely linked to the health of the local economy and the diversification in activity (which often comes with size) helps balance the economy's performance. Demographics are important. A high dependency population (the very young and very old are negatives) and too rapid growth in population are negatives. Higher-income and more educated population is a plus, as is an acceptable distribution and rate of growth in income.

- *Structure and Management:*

An assignment of functional spending responsibilities consistent with revenue resources is a plus. Intergovernmental transfers are looked at for their size and predictability. The willingness and ability of the national government to detect and stem financial emergencies is a positive. The rigor and timeliness of budgetary and financial laws are examined and can be wither a plus or negative depending on the flexibility they provide localities. Past performance in achieving budgetary balance are important. Timeliness and comprehensive of financial reporting and following consistent standards are a plus.

- *Fiscal Performance:*

Revenue composition and trends are considered with ability to set rates at the local level seen as a plus. Tax burdens should be acceptable in comparison to neighboring regions. Effective use of charges and fees are viewed favorably, large transfers of general funds to local enterprises are not. Composition and trends in expenditure. Capital spending and maintenance spending are a plus; a large wage bill is a negative. The ability to budget and to accurately realize budgets are a plus. Positive balances (surpluses) in current operating budget is a strong positive. Capital budget planning and paying for large amounts with current revenues a plus.

- *Financial position:*

Liquid assets and marketable real assets are favorable factors, as are healthy reserves in relationship to annual expenditures. Outstanding debt is considered. Short-term debt is a concern if not periodically retired. Long-term debt and contingent debt (where there are guarantees to others) is generally a negative unless used in support of productive (self-supporting) activities. Short maturity debt with principal due at the term (bullet maturity) is a negative because of continuing pressure to refinance and potential

³⁴ The rating agency of Standard and Poors lists four key factors that closely link the sovereign and subsovereign ratings and why the former has primacy; The central government can

- influence on the local's revenues
- shift spending responsibilities without matching revenue resources
- set restrictions on local financial management
- affect local debt and treasury management.

See "European Sovereign Local Government Relationships Under the Microscope" Standard and Poor's *CreditWeek Municipal* (January 25, 1998) pp. 13-18.

burden on current revenues. Overlapping debt of other governments that relies on same economic base is considered.

- *Legal framework:*

The lack of clear laws, legal precedent or effective judicial system are major impediments, especially where there are restricted revenue or enterprise-based pledges. A history of repudiations or insolvencies is a large negative. Approval of borrowings by senior units and other restrictions on local borrowing may be a positive if efficient and nonpolitical, but can be a negative if complex, difficult and political.

- *Accounting and financial reporting:*

The basis and quality of financial records is examined and prompt, consistent reports are a plus. Timely and independent audits are a positive. Cash flow information or cash basis accounting that provide reliable information on cash available to pay debt service is a positive. Evaluation of liquid assets and accounts receivable can be issues in that required investments in government bonds can be risky and accounts may be in arrears.

Opinions on credit quality are not static and the relative importance of factors can change over time. National policies having to do with items other than local debt *per se* can change the mix and weighting of credit factors. Laws governing purchasing policies, public employee retirement benefits or wages, or the reassignment of functions and revenue sources can all shift the focus of analysts.

5.3 Role of the rating agencies

The role of credit ratings is not without controversy. On the one hand, emerging markets have a shortage of trained analytical staff and the existence of the rating agency provides for a pooling of skills that can opine on the quality of a credit on behalf of all investors, using a standard methodology (at least standard to each agency). On the other hand, the concentration of opinion in a few hands using methods that are proprietary and not fully disclosed can lead to a dangerous dependence on a handful of “experts” that influence the markets without an effective check. Another urge, as noted, is to have a regulatory requirement that bonds must have a rating before they can be listed in the exchanges or sold to the investing public.

The international rating agencies themselves have considerable difficulty with the regulatory rating indicating that it leads to the “shopping for ratings” to obtain the highest rating or an acceptable one at the lowest cost. Requirements for ratings can also lead to the creation of national agencies that are not technically competent and that can be politically influenced. The major agencies themselves prefer to have the market for their opinions free and for the investors to be the final arbiters as to which agencies’ opinions are worthwhile.

The development of credit ratings in emerging markets have followed two tracks. The first is for various market participants in the emerging markets to create a domestic rating agency *de novo*, sometimes in alliance with an established international rating agency. The focus of these homegrown agencies has been on domestic credits and to meet regulatory requirements. Generally, their opinions have carried little weight internationally. The second track, which appears to be the prevailing path, has been for the major international rating agencies to open offices or to acquire local firms that fashion ratings.

The presence of both local and international ratings can lead to certain confusion about what a rating is and to which market it applies. International ratings are typically divided between those obligations that pay in a “hard” currency and those that pay in the domestic currency of the issuer. Except in hard currency countries, the domestic pay rating is almost always lower by a full notch, reflecting potential exchange rate and currency conversion risks. However, the domestic-based rating may have the national sovereign carrying the highest grade (however that rating might symbolically displayed), with private and subsovereign borrowers carrying lower ratings.

5.4 Credit Enhancements and Bond Insurance

Bond issuers often have the option of enhancing the quality of their obligation by procuring a *credit enhancement*. Enhancements are an agreement with a third party to in some way reduce the risk of the borrower’s obligation to the investor. The risk to be reduced or vitiated is typically that of failure to pay principal and interest on time and in full as promised, or credit risk.

Banks for many years have provided various supports to issuers of securities. The most common forms have been lines and letters of credit. These come in great variety and can be made exceedingly flexible and subject to conditions. Overall, lines of credit are simply cash liquidity providers and are contingent upon the borrower meeting certain conditions including not being in default. Letters of credit, on the other hand, are usually irrevocable and are payable directly to the bondholder (direct pay) in case there is a shortage of funds to pay debt service. However, once the letter of credit is exercised, the bank pays the bondholders off and then steps in and “takes over” the obligation as a bank loan (the debt is *accelerated*) to the amount it has not been retired.

Although letters or credit can be syndicated, the letters of credit granted by individual banks have their limitations. Major ones are how much the bank can guarantee, for how long the guarantee can run, and how much it will cost in fees and restrictions on the issuer. Also, many banks are not of strong credit quality or themselves rated, which reduces the value of the letter of credit to the investor and issuer alike. For example, investors will require that if a loan or bond is backed up by a letter of credit, the letter will need to be shifted to another, higher-rated bank if the original bank is downgraded.

Closely allied with the development of credit ratings has been the development of commercial bond insurance. Bond insurance acts as a third party guarantee that debt service will be paid in timely fashion. The attraction is that the insurer carries a high (best of all, the highest) credit rating from the internationally recognized rating agencies. This third-party guarantee of debt with a high credit rating lowers the cost of borrowing more to the borrower than the premium that it pays for the insurance.

Bond insurance had its origins in the United States and has been tremendously successful and pervasive in that country's municipal securities market.³⁵ However, for bond insurance to catch on and be successful, two things need to take place: (1) investors find value in the promise of these insurers to meet the debt service payments and (2) investors perceive differences in credit quality among issuers, expressed as a difference in rates of interest that they demand. Differences in credit quality are typically encapsulated in the rating symbols that are conferred on the debts. The commercial insurer has a high rating from the recognized rating agencies that carries with it the promise of a lower interest rate for the insured borrower. While these are accepted notions in the highly developed subsovereign markets in the United States, the notions are still novel ideas in emerging markets. Not surprisingly, the idea of bond insurance has been most successfully applied to sales in international currency markets.

In recent years, bond insurers have transformed themselves into taking a much broader approach than was traditional. Much as in the case of credit ratings, commercial bond insurance is a product of the U.S. municipal bond market. It became an international commodity as both the U.S. bond insurers found the original market becoming surfeit and as international markets became larger and more complicated. While all major insurers still have the AAA rating, several smaller insurance firms have emerged that are of less than prime grade themselves and will cover credits that are less than investment grade.

³⁵ The United States routinely has 50 per cent of the dollar volume of municipal bonds sold carrying bond insurance.

CREDIT MARKETS

Intergovernmental Fiscal Relations and Local Financial Management Course

**September 13-19, 1998
Council of Europe Conference Center
Budapest, Hungary**

**Organized by the Council of Europe, Economic Development Institute
of the World Bank, and Fiscal Affairs Division of the
Organisation for Economic Cooperation and Development**

Samir El Daher,

- 1. Framework for Enhancing Local Government Credit Markets***
- 2. Credit Ratings: An Introduction***
- 3. Municipal Bond Markets***

EDI Course
Intergovernmental Relations and Local Public Finance

Framework for Enhancing Local Government Creditworthiness
Municipal Credit Markets
Features and Issues

Samir El Daher
March 24, 1998 Session

Municipal credit markets, in their broad definition, refer to borrowings by sub-sovereign public entities to fund general purpose expenditures or specific purpose projects. These borrowings include debt obligations issued directly on domestic or international bond markets as well as loans from commercial banks and specialized financial intermediaries. This presentation focuses on municipal bond markets, although a passing reference is made to the role of financial intermediaries in the area of local government finance.

Municipal bond markets provide a vehicle to narrow local government resources gap through funding schemes backed by local taxing powers or the earnings of such projects as toll roads and water/sanitation facilities. In reviewing the main features of municipal bond markets, the presentation addresses the issues faced by: (i) local governments seeking to mobilize resources on capital markets for local infrastructure funding; and (ii) investors seeking to assess the attractiveness (risk/return profile) of municipal instruments amongst and within the array of available investment opportunities.

The presentation is structured in three sections as follows: the first covers the general features of municipal credit markets and the issues underlying their development in emerging/developing economies; the second reviews some important analytical parameters of municipal fixed income instruments; and the third provides examples of structured financings -- debt instruments combined with derivative products (such as futures, options and swaps -- which can be used to alter the risk profile of municipal debt instruments.

I - General Features, and Issues Underlying the Development, of Municipal Credit Markets

- Categories of municipal debt
 - * Tax-backed debt obligations
 - * Revenue bonds/project finance
 - * Other municipal debt instruments
- Relating demand for and supply of local government securities
 - * Issuers environment: accounting, auditing and disclosure; institutional and regulatory setting (collateral, bankruptcy,...)
 - * Investors perspective: risk/return profile and risk management
 - * Municipal debt securities part of overall demand for credit; municipal bonds as part of diversified portfolios
 - * Market infrastructure for municipal debt: regulation/supervision of intermediation, underwriting, distribution, payments, settlement, custody,...
- Credit Risk
 - * Local government creditworthiness
 - * Credit rating
- Financial intermediaries versus municipal bond markets: different (downstream) market segments but same (upstream) pool of term resources

II - Analytical Parameters of Fixed Income Securities

- Duration of a fixed income security as a measure of interest rate risk and duration of a portfolio of securities
- Fixed income investment risks: Definition/measurement of market, credit and liquidity risks
 - * Risk and uncertainty
 - * Market risk; expected versus realized return; volatility
 - * Liquidity risk
 - * Credit risk
- Benchmarks and risk/return parameters of municipal fixed income securities
- Credit enhancement and hedging mechanisms for fixed income securities

III - "Structured" Financings in Municipal Credit Markets

- Definition of Municipal Structured financings
- Derivatives embedded in structured financings
 - * Futures and Options
 - * Swaps
 - * Others
- Risk mitigating/credit enhancement features of structured financings
 - * Structured financings as a means for protecting financial positions of investors and debt issuers against market risks
 - * Structured financings as a means for protecting investors against credit risk
 - * Structured financings as a means for allowing debt issuers to alter structure and risk profile of liabilities

Attachments

- (1) - Local government Finance - A Framework for Enhancing Financial Management and Creditworthiness (Samir El Daher; March 1998)
- (2) - Credit Ratings - An Introduction (Samir El Daher; Feb 1998)
- (3) - Municipal Bond Markets - Experience or the USA (Samir El Daher; Feb 1997)
- (4) - Municipal Bond Markets - Prospects for Developing Countries (Samir El Daher; Feb 1997)

References

Municipal Bond Portfolio Management, 1995, by Frank Fabozzi

Local Government Finance
A Framework for Enhancing Financial Management and Creditworthiness

Samir El Daher
The World Bank

March 1998

I - Introduction

1. In many countries, the responsibilities for the provision and financing of services are being increasingly decentralized. In transition and developing economies, the expanded local government role in delivering these services is often hindered by weak institutional capacity and limited financial resources and know-how. In this context, this note reviews the broad range of issues/parameters relevant to building a sound local government finance framework and enhancing local government access to private capital/credit markets, in a way consistent with macro-economic stability and policy objectives.
2. The note identifies the main issues related to local government capacity building, and outlines approaches aimed at: enhancing the local government regulatory framework and institutional capacity for effective service delivery; improving inter-governmental fiscal relations and budgetary systems; and strengthening local government financial management and capacity to mobilize private resources for local infrastructure finance. The note also addresses the role of financial intermediation and the links of local government finance to broader capital market issues. These parameters relate in effect to the building blocks for a resilient local government financial structure and the crucial elements on which local government creditworthiness is predicated and is likely to be assessed by relevant market players.

II - Legal and Regulatory Framework

3. The full benefits of decentralization may only be captured if there is an effective legal and regulatory framework that provides for rational and unambiguous relations between central and local levels of government. In this context, a sound strategy for local government capacity building would be, inter-alia, predicated upon:
 - (i) - rationalizing revenue and expenditure assignments between tiers of government;
 - (ii) - allocating clear planning, investment and operating responsibilities for service delivery amongst tiers of government;
 - (iii) - allowing for an effective role and competitive participation of the private sector in the provision of local infrastructure; and
 - (iv) - setting clear regulations on borrowing authority and access to credit by local governments, including regulations on municipal collateral (legal issues and risks related to pledging inter-governmental transfers), municipal bankruptcy and credit workouts for over-indebted municipalities.

III - Local Government Institutional Capacity

4. The effectiveness of local service delivery is linked to the soundness of the institutional environment within which investment responsibilities are allocated, infrastructure investments planned, public utilities operated and tariffs set. A sound strategy for local government capacity building would call for strengthening the local institutional setting for service delivery and easing resource constraints through revenue generation from services, particularly in:
 - (i) - strengthening the autonomy and accountability of local public entities;

- (ii) - strengthening the planning and operating capabilities of local public entities;
- (iii) - building local government staff capabilities;
- (iv) - improving the efficiency of municipal assets use and management;
- (v) - setting clear performance criteria and other regulatory mechanisms for monopoly services;
- (vi) - developing rational pricing policies for local services differentiating between revenue generating services and public goods; and
- (vii) - improving the collection levels of local user fees.

IV - Fiscal Decentralization and Public Finance

5. A sound strategy for effective decentralization requires improved capacity for stable own-source generation by local governments. Building such a capacity is predicated upon the existence of an effective public finance and fiscal framework within a strategy involving such measures as:

- (i) - rationalizing inter-governmental fiscal relations and streamlining revenue sharing policies/arrangements between tiers of government;
- (ii) - setting predictable rules for central government transfers/grants;
- (iii) - removing disincentives from transfer rules and reducing moral hazard; and
- (iv) - rationalizing local tax bases and rates and improving tax administration and collection levels.

V - Budgetary and Control Systems

6. A sound strategy for local capacity building would require effective and reliable budgetary and control systems for local governments and affiliated entities. Implementing such a strategy would involve such measures as:

- (i) - improving local government current and capital budgeting processes;
- (ii) - developing credible accounting systems and implementing independent audits;
- (iii) - improving local government cash management and payment systems;
- (iv) - improving financial control systems;
- (v) - setting financial disclosure standards that provide investors/lenders with reliable information on local government entities and provide reliable basis for credit ratings; and
- (vi) - developing indicators on local government finance (e.g. ratios of debt service to revenues, current revenues to current expenditures, local taxes to local revenues, local taxes to total revenues, etc...).

VI - Local Government Financial Planning and Management

7. A sound strategy for effective decentralized policies should seek to strengthen local government finances and creditworthiness, through improved financial planning and management capability; in this regard, it would call for measures aimed, inter alia, at:

- (i) - improving local government financial planning;
- (ii) - improving local government capital budgeting;
- (iii) - improving local government assets/liabilities management; and
- (iv) - improving local government liquidity management.

VII - Infrastructure Financing and Access to Private Capital Markets

8. A decentralized strategy for effective service provision and local government capacity building might have to reassess the selection/financing criteria for local government programs/projects. In this regards, it should carefully consider alternative funding schemes, including privatization/concession where feasible, that enhance local government potential to mobilize private resources including domestic credit in ways that create no contingent liabilities at higher government levels. In this regard, the strategy would in particular involve:

- (i) - strengthening the review process of local public investment programs with sound selection criteria for investment projects;
- (ii) - establishing project risk/return benchmarks and profiles;
- (iii) - assessing alternative funding strategies for infrastructure investments and implementing programs/projects that facilitate local government access to private resources;
- (iv) - developing budget-neutral funding schemes including non-recourse corporate and project finance options that could reduce claims on fiscal resources;
- (v) - assessing the potentials/conditions for mobilizing debt funding backed by local government taxing powers (general obligation bonds);
- (vi) - assessing the potentials/conditions for mobilizing debt funding secured by user fees and other dedicated income streams (revenue bonds);
- (vii) - assessing the potentials/conditions for mobilizing debt funding on a corporate finance basis (balance sheet finance);
- (viii) - assessing the potentials/conditions for using short-term municipal instruments (municipal notes, commercial paper and other special instruments..) to manage cash-flows and mismatches between expenditures and revenues;
- (ix) - assessing the potentials/conditions for establishing "special purpose districts" to provide services such as water and sanitation to residential/commercial developing areas;
- (x) - assessing the potentials/conditions for establishing "tax increment districts" to fund the development of run-down areas; and
- (xi) - assessing the potentials/conditions for using financial/legal credit enhancement structures (e.g. securitization, guarantees, bond insurance, bank letters of credit, convertible debt, derivative products,...) which help diversify and transfer credit and market risks, and increase market acceptance of local government borrowings.

VIII - Market-based Financial Intermediaries for Local Investments

9. Market-based financial intermediaries involve pool financing arrangements for local infrastructure investments. Lending to local governments for viable, revenue-generating, projects could be accomplished in establishing adequately capitalized financial intermediaries, and leveraging the intermediary's equity capital through bond issuance in private credit markets without government guarantee. A sound strategy to finance local infrastructure investments through pool funding arrangements would focus on developing the conditions and criteria necessary to establish commercially viable, self-sustaining financial intermediaries and in particular in:

- (i) - defining the regulatory and institutional conditions critical to the establishment of market-based financial intermediaries for local infrastructure finance;
- (ii) - assessing the elements of public support (such as central capital grants) initially needed to assist such intermediaries in leveraging their equity resources through bond issuance on the private credit markets;
- (iii) - devising the sequences and steps, including sunset provisions, by which existing intermediaries could be transformed into market-based operations;
- (iv) - defining the main parameters in terms of intermediaries' strategic objectives and institutional and management structure;
- (v) - defining the main operational features in terms of product range (loans, guarantees, equity participation,...) offered by the intermediary;
- (vi) - defining the main operational parameters related to project financing criteria and portfolio management including diversification among sectors and borrowers;
- (vii) - defining the main financial parameters related to the intermediary's funding, lending and product pricing policies; and
- (viii) - defining the main parameters related to the intermediary's market, credit and currency risk management policies.

IX - Links to Capital Market Development Issues

10. Local government credit markets are a sub-set of the domestic capital markets. Therefore, the development of sound local government credit markets requires effective financial sector regulations -- with which local governments need to comply -- as well as sound institutions, and instruments adapted to local government needs. Highlighting this inter-dependence, a strategy for capacity building to tap/expand the upstream long-term funding pool for local investments should assess the improvements and adjustments needed in the financial market infrastructure to serve local financing needs. It will be important however that the linkages to capital market development issues, be limited to what is germane to local government financial markets and instruments, and in particular to:

- (i) - defining benchmarks for pricing debt obligations of sub-sovereign entities;
- (ii) - devising, from the debt issuers' perspective, measures aimed at bridging the gap between demand for and supply of local government securities so as to increase the flow of long-term institutional funds into local infrastructure investments;
- (iii) - defining, from the debt issuers' perspective, the critical requirements related to the development of underwriting, distribution and secondary market-making capabilities for local government debt securities;
- (iv) - building local government capability to comply with prevailing regulations on the issuance, registration, settlement, custody and repayment local government debt securities; and

(v) - developing approaches to building closer financial partnerships between local governments and providers of services and capital – commercial banks, securities firms, institutional investors, infrastructure funds, rating agencies, municipal bond insurers, utilities operators,.. -- that have complementary institutional/financial interests so as to expand the flows of domestic/foreign private finance into local infrastructure investments.

X - Conclusion

11. The set of issues addressed and proposals outlined in the note pertains to the main determinants of local government financial capacity and creditworthiness. Within this broad range, however, there would be a need to assess, on a country-by-country basis, the priority and feasibility of specific actions/approaches that may be initiated as part of a decentralized strategy in the local government finance area. For instance, in some countries, it might be important to assess the potential for direct local government access to the domestic bond markets to finance local operations. In other countries, the priority might be to explore the role of financial intermediaries as a channel to raise private resources for local infrastructure investments. The links between local government finance and broader capital market development issues are likely to be relevant in most cases. Finally, any sound strategy would entail building financial partnerships between local governments and providers of services and capital so as to expand the flows of domestic and foreign private finance into local infrastructure investments.

Credit Ratings - An Introduction

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February 1998

1. In providing independent opinions to investors as to the credit quality of debt issuers, credit ratings have become important parameters in market acceptance and pricing of debt. Ratings are now viewed as easily usable tools for differentiating credit quality by both individual investors ill-equipped to assess credit risk, and institutional investors often required to hold instruments of given credit categories in their portfolio. This introductory note reviews the key definitions and features of credit ratings and the bases on which ratings are assigned. It briefly addresses the correlation between credit quality and default rates, and outlines some of the criteria underpinning sub-sovereign credit assessments in emerging and developing economies.

Definitions and Features

2. *Definition.* Credit ratings are “opinions” as to the creditworthiness of an obligor (debt issuer) with respect to a specific financial obligation, a specific class of financial obligations or a specific financial program such as commercial paper. Ratings are based on the likelihood of default and reflect both “capacity and willingness” of obligors as to the timely payment of interest and principal in accordance with the terms of their obligations. A rating is not a general purpose evaluation of an issuer as it may also be predicated on the credit enhancement provided by a third party such as a guarantor, insurer or lessee. (Moody’s and Standard and Poor’s credit rating scales and definitions are given in Annexes 1 and 2.)
3. *Features and criteria.* Credit ratings are analyses based on current information obtained from the obligors and other sources that rating agencies consider reliable. The agencies are unambiguous in their disclaimer that “a rating is not a recommendation to buy, sell or hold a debt security... as it performs the isolated function of credit risk evaluation, which is only one element of the entire investment decision-making process”. Moreover, despite the thorough rating process, rating agencies conduct no audit of the information supplied by the issuer, that which forms the basis upon which ratings are assigned. Rating agencies have no fiduciary responsibility vis-à-vis investors. Therefore while ratings are important elements of disclosure, they should not be outright substitutes for credible reporting by issuers as far as investors are concerned.
4. *Change in rating of outstanding debt.* The financial condition of a rated entity may change, sometimes rapidly. This may be due to intrinsic reasons that alter the price structure of a product line, or erodes the competitiveness of a business concern. It may result from a lapse in the risk management and control systems of an obligor (e.g. California’s Orange County which despite its high quality rating had to file for bankruptcy protection in 1994 after sustaining large losses in its liquidity portfolio). It may also result from a macroeconomic downturn or financial shocks (e.g. current financial crises in East Asia) that deflate asset prices, reduce demand for companies’ output or contract the revenue base of public entities. As a result, credit ratings on outstanding debt obligations may be subject to downgrade or upgrade should a rating agency consider that material changes in the financial condition of an issuing entity do warrant a rating review. The issuer’s rating may be put under credit “watch” with positive or negative “outlook” until such time as a revised rating is assigned. The timeliness of rating reviews is critical to investors who view ratings as leading indicators of credit quality. In this regard, the speed in which rating agencies recognize -- and reflect through credit downgrade -- the on-set of a financial crisis for instance, might be viewed by investors as a performance indicator of the agencies’ role as “early warning system” for the financial markets. Rating agencies walk a fine line and argue that a precipitous action of downgrade, in restricting or increasing the cost of access to credit markets in time of crises, can further compound borrowers’ ills.
5. *Ratings as a relative measure of creditworthiness.* Credit ratings provide a relative ranking of issuers’ creditworthiness under similar “stress” conditions. As such they offer a vehicle for the relative pricing of debt securities where yield spreads among debt issues with different credit ratings reflect the credit risk premium

required to invest in the riskier issues. The benchmark reference for the pricing of corporate and sub-sovereign debt would normally be set by the debt securities of even maturity issued by the sovereign government in the currency of which the debt issue is denominated; the interest spread would compensate for the credit (and liquidity) risk of the debt issue vis-à-vis the so-called “risk-free” sovereign debt obligation. (For instance the US Treasury securities set the benchmark off which all US\$ denominated debt issues would be priced.)

6. *Sovereign ceilings for foreign currency ratings.* “Country risk” considerations form an integral part of the credit analysis of debt issuers as credit ratings take into account the currency in which a debt obligation is denominated. To this end, rating agencies assign sovereign ratings for countries. These ratings generally set a “ceiling” for the foreign currency denominated debt of domestic entities including sub-sovereign governments. The rationale for the sovereign rating ceiling is that domestic entities might eventually have to rely on central governments/central banks to secure the foreign exchange required for external debt service. However, it would not be inconceivable for a domestic entity to qualify for a foreign currency debt rating higher than the sovereign’s – in the case, for instance, where debt securitization is taking place backed by export trade receivables or using other forms of credit enhancement such as insurance.

7. *Project-specific ratings.* Rating agencies provide credit assessment of project finance deals. Project finance deals would normally be capped by, and not necessarily qualify for, the sovereign rating of the country in which the project is located. Regardless of country ceiling however, some projects – typically exports with structured financings – may exceptionally claim a rating higher than the sovereign’s. Moreover a project-specific rating based on secured or structured debt for instance, might be different from, and superior to, the rating of the company issuing the project debt.

8. *Short-term ratings.* Credit ratings reflect the issuers’ ability to meet their debt obligations as they come due over the contractual term of the borrowings. In this regard, debt with long-term maturity would be assigned a “long-term” rating. Rating agencies assign “short-term” ratings to debt obligations that have original maturities of one year or less such as commercial paper. A short-term rating may also be used to indicate the credit standing of an issuer with respect to a “put” feature on a long-term debt obligation (where the “put” gives investors the right to sell back the debt obligation to the issuer at an agreed price within a specified period). In this case a dual rating may be published with the short-term rating relative to the put feature and the long-term rating to the underlying long-term security.

Credit Quality and Default Rates

9. *Default rates and economic environment.* Statistical analyses correlate on a historical basis credit quality and default rates. For instance, analyses can quantify the occurrences of default $x_{AAA}\%$, $x_{AA}\%$ and $x_A\%$ over a specified holding period for entities which had been rated respectively AAA, AA and A at period-start. Analyses confirm that x_{AAA} is lower than x_{AA} which is in turn lower than x_A . Yet absolute default probabilities may not be inferred from the credit rating categories as default occurrences $x_{AAA}\%$, $x_{AA}\%$ and $x_A\%$ are period dependent (with higher concentration of defaults in periods of economic depression). For instance, analyses of corporate debt defaults during the US Great Depression show that, of all corporate issuers rated (by Moody’s) as of July 1932, almost one in ten defaulted within one year. Of the US municipal debt issues that were rated in 1929 and went into default in 1932, 78% had been rated AA or better, and 48% had been rated AAA. Reflecting the severity of the depression, such default occurrences, over relatively short holding periods, of highly rated municipal entities are unlikely to be matched in other times.

10. *Default occurrence and credit quality.* Among the studies correlating default rates and credit rating categories are Moody’s analyses of “Historical Default Rates of Corporate Bond Issuers” initiated in 1987. The recent 1997 update of the research covers the 77-year period 1920-1996, over which Moody’s had rated the debt of some 14,000 corporate and sovereign issuers. (Recent studies of municipal default rates might be less representative than for corporate defaults, as the majority of US sub-sovereign issuers are in the middle-to-high end of the investment grade spectrum, with most recent debt issues covered by bond insurance. Claims against municipal bond insurance show insignificant levels of default.) In Moody’s studies, default is defined as “any missed or delayed disbursement of interest and/or principal”. Default also includes “distressed exchanges where

bondholders are offered packages of securities with diminished financial obligation such as preferred stock...". The studies show the inverse relationship between default rates and rating categories, with a clear pattern of higher risk of default for the speculative grade rating categories. For instance, over the 27-year segment 1970-96, average one-year default rates were 0.01% for A-rated issuers; 0.12% for Baa-rated issuers; 1.36% for Ba-rated issuers; and 7.27% for B-rated issuers. Over the extended 77-year period 1920-96, one-year default rates were 0.08% for A-rated issuers; 0.30% for Baa-rated issuers; 1.48% for Ba-rated issuers; and 4.47% for B-rated issuers. For defaults over holding periods exceeding one year, the studies also show a significant jump in default frequency for progressively lower ratings. Indeed, during 1920-96, (cumulative) default rates over a 10-year holding period averaged 8% for issuers rated Baa, against 18% for Ba, and 31% for B-rated credits. A similar pattern of increasing average default rates for lower rated issues also prevails over 5, 15 and 20-year holding periods.

11. *Volatility of default occurrences and credit category.* The studies also show that the volatility of default rates increases with lower credit rating (for instance, default rates within one-year for B-rated issues reached 22% in 1970 with no such default in 1971). Volatilities of one-year default rates (expressed by the standard deviation over the study period 1920-96) range from 0.1% for Aa credits to 0.3% for A credits, 0.4% for Baa, 1.7% for Ba and 4.5% for B. The lower predictability of default rates also explains the significantly higher risk premia required by investors in lower rated issues.

12. *Event risk.* Regardless of credit quality and rating category, defaults may be brought about by "special events" which Moody's defines as changes in a borrower's "prospects of financial position that result in a sudden shift in credit quality although its precise timing and nature could not have been predicted by the fundamental tools of credit analysis". Examples would be mergers/takeovers, divestitures and filing for bankruptcy protection as a defense against litigation (e.g. the litigation-related bankruptcy filing of the Aaa-rated Texaco). Though credit evaluation is supposed to factor special events into ratings of individual issuers, the "full implications in terms of default experience of individual companies cannot be predicted in advance". Special events are likely to have their greatest impact on default rates of higher-rated issuers as these, by definition, are more resilient to default than would be, under similar exogenous economic conditions, lower-rated issuers.

Sub-sovereign Credit Ratings

13. Local governments in emerging and developing economies are increasingly seeking ways to raise debt on private credit markets to finance local investments. As a result, sub-sovereign credit assessment has become an important topic for investors and policy makers. In the USA most municipal debt issuers are rated. In emerging and developing economies, sub-sovereign credit evaluation, which is in its early stages, would need to respond specifically to the concerns of potential domestic and foreign lenders and investors as they evaluate credit demand and investment proposals by local governments. To this end, there would be a need to build and improve the information systems upon which ratings are predicated.

14. Credit rating systems in which creditors rely on sub-sovereign borrower's capacity to repay -- and not on explicit or implicit sovereign guarantee -- analyze the assignment of responsibilities among various levels of government, the structure of local government expenditures and revenues (including own-source), and the regulatory and institutional setting within which local services are delivered. Creditworthiness, as assessed by market players including rating agencies, should reflect the local resource endowment, soundness of the local government finance framework and its capacity to withstand stress and issue debt in a way consistent with macro-economic stability. Thus, credit analyses of sub-sovereign issuers and the assessment of an issuer's ability to service debt seek to address inter-alia the following:

(i) - *Economic and social characteristics of the jurisdiction.* This would include local resource endowment, existing stock of productive assets, level/distribution of income, level of education, quality of services,....

(ii) - *Sources and composition of revenues and expenditures.* This would cover the predictability of fiscal relations with, and transfers from, central government; and the local revenue base, including composition of taxes (property, business, development, sales,...), adequacy of tax rates and tax administration, and existence,

diversification and sustainability of other revenues upon which local governments would call to meet debt service. This would be matched and assessed against the level, structure and profile of local expenditures.

(iii) - Structure of local government financial operations. This would include outstanding debt and other financial commitments, structure of assets/liabilities, liquidity and unencumbered cash available,.... Also relevant would be the quality of financial controls and the transparency and credibility of budgeting, accounting and auditing systems. The issuer's record in honoring financial commitments especially under adverse circumstances would also be assessed.

(iv) - Regulatory and institutional setting for local service delivery. This would include capacity and efficiency of local government institutions; quality of local asset management; degree of autonomy of utilities companies; reliability of services to consumers and recurrent income; competition and pricing policies in the provision of local services; criteria for monitoring performance of monopoly services; and processes for planning and selecting local investments (including infrastructure) that help local government expand businesses and increase employment.

(v) - Legal and regulatory environment for local government credit. This would include the framework for debt issuance, settlement, repayment and custody; regulations on local government bankruptcy; creditors' rights and claims on local assets against other liabilities,...

(vi) - Credit enhancement mechanisms. This would include the assessment of features that strengthen the credit of local government debt issues in providing security collateral through dedicated streams of income, third party support such as guarantee, insurance and bank letter of credit, derivative structures,...

Annex 1 - Standard & Poor's Long-term Ratings Scale and Definition

- AAA** Debt rated 'AAA' has the highest rating assigned by Standard & Poor's. Capacity to pay interest and repay principal is extremely strong.
- AA** Debt rated 'AA' has a very strong capacity to pay interest and repay principal and differs from the highest rated issues only in small degree.
- A** Debt rated 'A' has a strong capacity to pay interest and repay principal although it is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than debt in higher rated categories.
- BBB** Debt rated 'BBB' is regarded as having an adequate capacity to pay interest and repay principal. Whereas it normally exhibits adequate protection parameters, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to pay interest and repay principal for debt in this category than in higher rated categories.
- BB, B, CCC, CC** Debt rated 'BB', 'B', 'CCC', or 'CC' is regarded, on balance, as predominantly speculative with respect to capacity to pay interest and repay principal in accordance with the terms of the obligation. BB indicates the lowest degree of speculation and 'CC' the highest degree of speculation. While such debt is likely to have some quality and protective characteristics, these are outweighed by large uncertainties or major risk exposures to adverse conditions.
- C** The C rating is used to cover a situation where a bankruptcy petition has been filed or similar action has been taken, but payment on this obligation are being continued.
- D** Debt rated 'D' is in default, and payment of interest and/or of principal is in arrears.

Plus (+) or Minus (-): S&P's ratings from 'AA' to 'B' may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories.

Annex 2 - Moody's Long-term Ratings Scale and Definition

- Aaa** Bonds which are rated Aaa are judged to be of the best quality. They carry the smallest degree of investment risk and are generally referred to as "gilt edge." Interest payments are protected by a large or by an exceptionally stable margin and principal is secure. While the various protective elements are likely to change such changes as can be visualized are most unlikely to impair the fundamentally strong position of such issues.
- Aa** Bonds which are rated Aa are judged to be of high quality by all standards. Together with the Aaa group they comprise what are generally known as high grade bonds. They are rated lower than the best bonds because margins of protection may not be as large as in Aaa securities or fluctuation of protective elements may be of greater amplitude or there may be other elements present which make the long term risks appear somewhat larger than in Aaa securities.
- A** Bonds which are rated A possess many favorable investment attributes and are to be considered as upper medium grade obligations. Factors giving security to principal and interest are considered adequate but elements may be present which suggest a susceptibility to impairment somewhat in the future.
- Baa** Bonds which are rated Baa are considered as medium grade obligations, *i.e.*, they are neither highly protected nor poorly secured. Interest payments and principal security appear adequate for the present but certain protective elements may be lacking or may be characteristically unreliable over any great length of time. Such bonds lack outstanding investment characteristics and in fact have speculative characteristics as well.
- Ba** Bonds which are rated Ba are judged to have speculative elements; their future cannot be considered as well assured. Often the protection of interests and principal payments may be very moderate and thereby not well safeguarded during both good and bad times over the future. Uncertainty of position characterizes bonds in this class.
- B** Bonds which are rated B generally lack characteristics of the desirable investment. Assurance of interest and principal payments or of maintenance of other terms of the contract over any long period of time may be small.
- Caa** Bonds which are rated Caa are of poor standing. Such issues may be in default or there may be present elements of danger with respect to principal or interest.
- Ca** Bonds which are rated Ca represent obligations which are speculative in a high degree. Such issues are often in default or have other marked shortcomings.
- C** Bonds which are rated C are the lowest rated class of bonds and issues so rated can be regarded as having extremely poor prospects of ever attaining any real investment standing.

Ratings from Aa to B may be further disaggregated in numerical sub-categories (1,2,3).

**MUNICIPAL BOND MARKETS
PROSPECTS FOR DEVELOPING COUNTRIES**

**Samir El Daher
The World Bank**

February 1997

INTRODUCTION

Against a background of fiscal restraint, governments in developing countries have come to realize that private resources must be mobilized to support the growing demand for infrastructure services. One way is through privatizations and concessions for private provision of infrastructure services which are taking place at a growing pace. Decisions for the provision of these services are also being increasingly decentralized with municipalities playing a growing role in forging partnerships with financiers, operators and constituents. Municipal governments seek to fund capital investments and cover operating costs through local taxes and user charges and, as available, central government transfers. Where essential services—that are not provided through private operations—cannot be funded by current revenues, the financing gap that emerges would have to be filled through borrowings. In many developing countries, local government borrowings have largely been confined to loans from commercial banks or specialized financial institutions, often with central government guarantees.

This note discusses the conditions underlying the development of municipal credit markets which can provide a vehicle to narrow local government resources gap through debt funding supported by the taxing power of local governments and revenue bonds secured by the earnings of such projects as water facilities and toll roads. (A separate note reviews the main characteristics of the US municipal bond markets which are a primary vehicle for local infrastructure finance.)

MUNICIPAL DEBT MARKETS AS A SOURCE OF LOCAL GOVERNMENT FINANCE IN DEVELOPING COUNTRIES

Developing countries have been able to attract local and foreign equity capital for private infrastructure investments. Mobilizing debt funding however has been more difficult, particularly for sub-sovereign government entities.

As far as local infrastructure finance is concerned, foreign exchange resources could be a complement to, but not a substitute for, local currency funding. Indeed, some sub-sovereign entities or projects with strong revenues base can mobilize and afford the costs of external funds, especially when borrowings cover foreign exchange outlays or finance projects that generate foreign currency receipts. However, without the necessary complement of domestic resources, foreign borrowings might not be a "sustainable" funding source for many local governments across the spectrum of infrastructure projects. Moreover, external funding may in some cases add penalties to borrowing costs. Take the hypothetical case of a relatively well managed sub-sovereign entity (say a public utilities company) that is seeking debt finance for its expansion

plans. With a credit rating of say "A" for local currency debt, it might have issued domestic debt at a cost of "yA". Assume that it cannot borrow on the local market (given the market inadequate size and depth) and must seek instead external financing. Its rating for foreign debt issues would be capped by the country's sovereign rating, say "BB", as a result of which the cost to the company of foreign currency debt would be "yBB" (more "burdensome", all other things being equal, than "yA"). Moreover, when raising foreign currency debt, borrowers may often need to swap back the debt proceeds, or part thereof, into local currency funds thus adding swap transaction fees and risks to the overall cost of debt. Finally, when debt is denominated in foreign currency, utilities companies or local government issuers would be increasing their currency exposure as a result of the mismatch between their foreign currency denominated liabilities and their revenues mostly accruing in local currency (save for some international transport and telecommunications projects).

The challenge is to expand the "market-based" funding pool for local governments by tapping private individual and institutional savings. In some developing countries, there is a growing demand for diversified long-term assets, beyond the traditional obligations of sovereign or corporate issuers. (For instance, infrastructure, particularly transportation-related, projects are being funded through capital market debt issues based on stand-alone credits similar to US municipal revenue bonds. Debt Securitization is also taking place backed by export trade receivables.)

CONDITIONS FOR THE DEVELOPMENT OF SOUND MUNICIPAL CREDIT MARKETS IN DEVELOPING COUNTRIES

There are challenges associated with local government access to private savings in developing countries, where financial and institutional capacity at the local level is often constrained and where local infrastructure investments are sometimes associated with inefficient implementation, unattractive returns and high credit risk—hardly an inducement for investors seeking competitive risk-adjusted returns, and lenders wary of poor credit. The development of domestic municipal bond markets should thus go hand in hand with improvements in the local government revenues base and in the institutional framework within which municipal services are delivered. Of importance also is the development of effective mechanisms to diversify and transfer risks. But first, the broad macro-economic framework should be such as to foster domestic savings and the efficient allocation of credit.

Macro-economic Issues

Municipal credit markets develop as a sub-set of domestic capital markets which, beyond the confines of municipal governments, require rational macro-economic, fiscal and monetary policies. Like other fixed income instruments, municipal issues will remain attractive to bondholders only when inflation is kept in check. Moreover—as a result of political constraints—local government borrowings in developing countries may de facto become part of the overall public sector debt. This makes it crucial for countries seeking to expand local borrowing operations to ensure that the consolidated public—including local government—debt remain consistent with macro-economic policy objectives and fiscal targets. Departure from

these principles might have destabilizing effects at the macro level. Genuine municipal bond markets imply that municipal issues should entail no sovereign support or guarantee which might create contingent liabilities at the sovereign level. As a result they would be priced at market-determined rates usually at a spread above central government securities.

Institutional and Regulatory Issues

The development of municipal credit markets also requires that local governments have sound institutions, predictable fiscal relations with the central government and an efficient organizational setting for services delivery. This implies transparent city budgets, credible accounting systems and independent audits, a sound competitive environment with rational pricing policies and monitorable performance criteria for monopoly services. Private provision of infrastructure services and concession arrangements—many of them already proven—must be encouraged and developed. Public utilities companies should be autonomous and have a secure recurrent income through reliable services to consumers. To play their role effectively, capital markets must rely on well functioning banking institutions with reliable payment systems and custodial services.

Municipal credit markets also require adequate legal and regulatory frameworks covering supervision, disclosure, and debt issuance, settlement and repayment. Regulations allowing municipal bankruptcy would be needed in the event of default. Strains on municipal finances which might show in periods of economic downturn are likely to be combined with declining central government transfers and mounting taxpayers resistance to higher levies. Creditors' rights and the seniority of their claims on municipal assets should thus be well specified as these claims (even on "dedicated" revenues/taxes) would likely be weighted against the effects of disrupting the provision of critical public services and actually subordinating such other municipal liabilities as employees pension claims.

Credit Issues

Credit risk accounts for a critical component of investment risk, since as a result of issuer's default, returns and initial capital could be lost. Credit quality thus becomes a determinant parameter as far as market acceptance and pricing of debt are concerned. Countries with developed financial markets rely fairly strongly on credit ratings which provide independent "opinions" to investors as to the creditworthiness of debt issuers. Moreover, there is a scope for developing countries to increase the use of financial and legal structures that enhance the credit quality of municipal debt—guarantees, insurance, securitization and derivative products—and improve investors acceptance of debt issues. In countries with sound banking systems, it might also be possible to issue municipal debt backed for instance by bank letters of credit, with the effect of transferring all or part of investors' exposure away from issuing municipalities to more creditworthy commercial banks.

Credit Rating. Local governments planning to tap the credit markets may find it beneficial to avail themselves of a credit rating by a recognized rating agency. A rating entails a credit agency review that would measure local government ability to service debt in light of available taxes and other resources, and assess their record in honoring financial commitments, especially under

adverse circumstances. Relevant areas of focus would be the economic and social characteristics of the constituency, and the structure of the government debt and financial operations (including sources of revenues, spending requirements and unencumbered cash available). Improving the credit standing of municipal issuers requires that municipal tax bases be expanded, tax rates rationalized, and that local (including infrastructure) investments be screened to select those that have large pay-offs in helping cities develop services, expand business and increase employment.

As a general rule, no issuer will receive a rating that is higher than the sovereign rating of the jurisdiction in which the issuer is located—the so-called “sovereign risk ceiling”. This reflects the risk that the depreciation in the value of the local currency or imposition of foreign exchange controls might restrict the ability of sub-sovereign issuers to honor their debt service obligations. Under certain circumstances however, securitization, through offshore receivables for instance, may provide the basis for a credit rating that may be above that of the sovereign.

Bond Insurance. Bond insurance should not be viewed as a substitute to the creditworthiness of municipal issuers but as a mechanism that enhances market acceptability of a debt issue and/or reduces its cost. Extending municipal bond insurance—an important feature of today’s US municipal bond markets where some 50% of total issues are insured—in developing countries would be contingent inter alia upon the existence of: a large pool of debt instruments, including corporate and municipal issues, which could be insured—allowing for the necessary diversification underpinning the insurance concept; and consistent credit ratings that respond to the credit-conscious investor base of the municipal markets.

Pricing of Local Government Debt

In countries with market-determined interest rates, the “risk-free” central government securities—deemed to be free from credit risk as these carry the full faith and credit of sovereign governments when they issue debt in their national currency—provide the reference yield curve (benchmark) for pricing other debt obligations including corporate and municipal issues across the maturity spectrum. Some developing countries still conform to a different pattern where administered interest rate structures make the ready identification of a benchmark difficult. (In China for instance, where the bond market is under relative government control, non sovereign debt issues must comply with the State credit plan. Coupon rates on corporate bonds and rates on commercial bank deposits may not be higher than those on government securities of comparable maturities.) Efficient credit markets require that the level and structure of rates reflect economic conditions where: (i) short-end, base rates (e.g., US federal funds rate) are set by monetary authorities in the context of monetary policy objectives; and (ii) long-term rates reflect inflation expectations as expressed by the “market”—i.e., investors in the primary or secondary markets. Debt by non-sovereign, including municipal, borrowers can then be priced at a spread above the reference risk-free yield curve, where spreads reflect issuers’ parameters in terms of creditworthiness, liquidity and size. When the government market cannot provide a benchmark due to the absence of market-determined interest rate structures, or the absence of securities in specific maturity ranges—such as India where there were no government debt issues beyond a ten-year maturity—efforts have to be made to develop “synthetic” benchmarks (or proxy yield curves).

INFRASTRUCTURE BANKS

Mobilizing foreign equity to fund infrastructure investments in developing countries has now become common, although selective in terms of countries and sectors, and often flowing in enclave investments. A strong challenge for local governments is to raise debt finance in the domestic as well as eurobond markets. A number of developing countries have established "municipal development funds" as a channel for municipal credit. Many of these funds have been mainly substitutes for government grants to municipalities. Others now seek to serve as a bridge to private credit markets in borrowing on the domestic or foreign markets—though mostly with central government guarantees—and lending to municipalities, directly or through domestic banks.

A challenge would be to move this concept further along commercial principles, and assess the feasibility of establishing "infrastructure banks" that could issue "market-based" long-term debt (neither guaranteed nor subsidized by the government) for viable, revenue generating infrastructure investments. The in-built diversification of the portfolio of these banks resulting from the variety of sub-sectors/borrowers, and hopefully the quality of their investment portfolio: (i) would provide a good security for, and strengthen the credit quality of, the debt issued; (ii) could open for smaller borrowers (companies and local authorities) the access to the debt market; and (iii) would allow the use of credit enhancement mechanisms (such as bond insurance) which may be brought to bear only in the case of an expanded and diversified pool of debt. These might be domestic or international funds that raise resources through bond issues in developed and/or developing countries. (The US "State Revolving Funds" provide an example of infrastructure banks with an element of public support where lending is mostly accomplished in leveraging central and state capital grants through bond issuance on the municipal debt markets.)

CHALLENGES AHEAD

In developing countries, municipal infrastructure investments require an enhanced institutional base and increased financial resources. Private provision of services and concession arrangements are rapidly developing across countries and sectors. Where these cannot be put in place for the delivery of essential services, fiscal resources could be leveraged by tapping the long-term credit markets best suited to the long-dated maturity requirements of infrastructure finance. A number of developing countries have made progress along this path, with Latin American relatively advanced in the process. In other regions, South Africa has a relatively developed capital market and a public debt market with a meaningful volume of local government debt outstanding. Some large cities have been able to issue foreign currency denominated debt in the eurobond markets. In April 1994, the city of Prague issued US\$250 million in five-year, fixed-rate notes that had a "BBB" investment grade rating. More recently, in July 1996, Rio de Janeiro issued US\$125 million in three-year, fixed-rate "direct, general, unsecured and unconditional" obligations of the city. Despite a "B" non-investment grade rating, the issue (priced at a spread of some 400 basis points over the reference three-year US treasury note) was well received by international investors. Other large developing country cities are now considering debt issues on the eurobond market.

In the municipal finance sector, the World Bank is currently directing efforts at: assisting in regulatory reforms; clarifying inter-governmental fiscal relations; promoting the private provision of local services; addressing resource and capacity constraints associated with decentralization; strengthening the institutional setting for service delivery by local governments; and supporting capital market reforms.

Parallel efforts—involving commercial banks, debt underwriters, institutional investors, bond insurers, utilities operators, rating agencies, regulators and central and local governments—should be directed to creating the conditions for the development of domestic credit markets for local infrastructure finance and helping developing countries establish markets for general obligation bonds (issued against the tax collection powers of local governments) and revenue bonds (secured by user fees) which would not create or imply contingent liabilities at the sovereign level.

Beyond the broad financial sector reforms required to foster domestic savings and efficient credit allocation, such efforts should aim at: (i) improving guidelines regarding accounting, disclosure, auditing and credit rating; (ii) developing underwriting and distribution capabilities for domestic debt issues; (iii) structuring credit enhancement mechanisms involving bond insurance, securitization and other risk diversification and transfer measures; (iv) helping define benchmarks for pricing municipal obligations; and (v) assessing the feasibility of establishing commercially viable infrastructure banks.

MUNICIPAL BOND MARKETS EXPERIENCE OF THE USA

Samir El Daher
The World Bank

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INTRODUCTION

Municipal bond markets provide a vehicle to narrow local governments resource gap through schemes varying from debt funding based on the full faith and credit of sub-sovereign issuers, to revenue bonds secured by the earnings of such projects as water facilities and toll roads. This note reviews the main characteristics of the US municipal bond markets—the most advanced by any measure of depth and sophistication. A separate note discusses the conditions underlying the development of municipal credit markets in developing countries.

VARIOUS CATEGORIES OF MUNICIPAL BONDS

In their broadest definition, municipal bond markets refer to borrowings by sub-sovereign public entities, directly or through their public corporations, to fund general purpose expenditures or specific purpose projects. The US municipal bond markets have developed over the past hundred years into a main component of the credit markets. The growth of these markets may be attributed to the country's decentralized federal structure and the innovations that have characterized its financial system. The tax status under which US municipal debt is issued may have had an impact on market growth. Municipal securities are sometimes referred to as the "tax-exempt" segment because interest earnings on municipal issues are exempt from federal income, and possibly state and local, taxes. The tax regime has been subject of a number of reforms (including the major Tax Reform Act of 1986) and of policy debates beyond the scope of this note. European countries with centralized processes for regional resource allocation—and where local government debt had often implied sovereign guarantee—have lagged behind. Reforms are however taking place and municipal markets (in Italy and Spain) are slowly developing. Amongst other developed countries, Australia has also created a truly sub-sovereign debt market.

Municipal bonds have been the primary vehicle for financing local infrastructure in the US. They include general obligation bonds supported by the taxing power of local governments as well as project revenue bonds by states and local jurisdictions such as counties and cities (including their "special purpose" corporations).

General Obligation Bonds

General Obligation (GO) bonds are debt instruments issued against the full faith and credit of local governments. They remain essential financing instruments of tax-supported capital projects. Unless certain tax revenues are specifically restricted, issuers generally back GO bonds with all

enterprise's revenues and, should these not be sufficient, an additional security pledge of full faith and credit of the issuer government.

Creditworthiness of General Obligation Bonds and Revenue Bonds

The comparison of GO bonds to revenue bonds in terms of creditworthiness is not straightforward as a number of factors come into play. On the one hand, the attractiveness of financing capital projects through user fees rather than broad-based taxes has, since the 1970's, reduced the capital market dominance of GO financing over revenue bonds. This is due to the: (i) limited and uncertain legal capacity of governments to carry ever larger debt burdens; and (ii) continuing market innovations which favor revenue bond issuance. Moreover, as strong as a tax-backed GO pledge might be, it is no absolute guarantee of repayment. In fact some investors might view a dedicated stream of revenues from services by a government utility as a more flexible and reliable security allowing for an increase in user fees as opposed to tax rates/bases subject to voter authorization, restriction or repeal. On the other hand, the security for revenue bonds remains narrower than broad-based GO bonds which can call on property, income and sales taxes to meet debt service requirements. In addition, the competition which may exist among providers of services may squeeze profitability and market share and introduce uncertainty as regards repayment ability compared to GO tax-backed obligations.

Short-term Municipal Instruments and Other Features of Municipal Debt

While municipal markets mainly consist of long-dated issues, there are also short-term municipal instruments such as municipal notes and commercial paper. Although commercial paper (CP) is issued for periods ranging from 30 to 270 days, a CP "program" itself could be rolled-over for several years so as to exhibit a strong relationship to long-term debt. For instance, short-term "revenue anticipation notes" and in particular "tax anticipation notes" are issued to address seasonal mismatches between expenditures for ongoing operations and lump sum receipts.

Municipalities also use debt instruments with features aimed at minimizing initial cash outlays or interest costs. For instance municipalities may issue "zero coupon" bonds with no coupon payment to bondholders. Instead the bond is issued at a deep discount and matures at par—the advantage being the smaller initial cash outlay by the issuing municipality. The difference between par value and the original discount price could be translated into a specified annual yield. A variant is the "municipal multiplier" which is a bond issued at par and does provide for interest payments; however interest accruals are only paid at maturity assuming that the undistributed payments had been re-invested at an agreed yield (usually the bond yield-to-maturity at issue). "Variable-rate demand obligations" are interest-bearing notes with "put" features tied to specific short-term indices, sold by municipalities to finance capital projects. These are part of the "structured" finance products.

Structured Municipal Finance

“Structured” financings have become part of the municipal debt markets. These are conventional debt instruments combined with derivative products such as futures, options and swaps. (Futures are contracts where financial commitments between two parties are “settled” at a future agreed date. Options are buy/sell agreements where, against an up-front fee, one party acquires the discretionary right—with no obligation—to settle a financial contract at an agreed price and time. Swaps are contracts whereby two parties agree to assume each other’s financial liabilities as these come due.) While derivatives may be used for speculative purposes, they also are powerful instruments for “hedging” risk—i.e., for protecting a financial position against unwanted market price movements. Structured financings may thus entail risk mitigating and credit enhancement features embedded in the debt instruments.

A “puttable” bond for instance gives investors the right to sell back—if they so elect—the security to the issuer at an agreed price (usually the par value) at designated dates or within specified periods. Bondholders may elect to “exercise” such a right should they become concerned about the deteriorating credit standing of an issuer. Put options also provide bondholders with market protection in an environment of rising interest rates, as they could redeem their investment at par—though the market value of their bonds might have fallen below par—and re-invest the proceeds in higher yield instruments. Conversely, from the issuers’ standpoint, municipal bonds may entail a “call option”, an arrangement which permits an issuing municipality to redeem—at its option under specified conditions—the bond before the scheduled maturity. An issuer would elect to exercise such a right if, in an environment of declining interest rates, the outstanding debt—which carries a high fixed coupon rate—could be replaced by lower cost borrowings.

Derivative products which extend market and credit risk protection to investors (e.g., put options) and market hedge to issuers (e.g., call options) are provided at a price paid for by the beneficiary of the derivative instrument. For instance a municipal debt issue with an embedded call option should carry a higher yield than a conventional issue—a “premium” that compensates the bondholder as to the uncertain maturity of his holding. Other derivatives, such as interest rate swaps or forward contracts, may allow municipal issuers to hedge their financial position in altering the risk profile of their liabilities say from variable to fixed rates, or setting a cap on the potential cost of borrowing. Swaps are also used by bondholders to similar ends. Structured products entail though a number of risks, and in particular credit risk.

State Revolving Funds

The US “State Revolving Funds” (SRFs) are pool finance arrangements that provide low-cost loans to local entities for projects that comply with national regulations. These were introduced in connection with the 1984 “Federal Clean Water Act” on environmental regulations. They involve capital grants from the federal government to the state, matched by a contribution from the state (currently 20%). Matching contributions are primarily funded with proceeds of state

general obligation, and less frequently revenue, bonds. SRF lending is mostly accomplished in leveraging central capital grants and state matching funds through bond issuance. The size, composition and diversification of the loans extended by the fund enhance the quality of the overall portfolio above the pool's weakest credit. Mechanisms enhancing the credit of the bonds issued by the fund can also be considered, for instance in subordinating one class of debt to the rights of senior creditors.

CREDIT RISK ISSUES

Unlike US Government securities, municipal debt obligations are not immune to default. In the mid-70's, New York City had to default on its debt obligations rather than disrupt the provision of basic city services. (Note that this default did not result in liabilities for, nor prompt a rescue by, the Federal Government—a reflection of the maturity of the US municipal bond markets.) Credit ratings which allow investors to gauge the creditworthiness of municipal issuers, and financial and legal mechanisms (such as options or guarantees) that enhance the credit quality of municipal debt have become important factors in investment choices.

Credit Rating. The capability of rating agencies to assess the creditworthiness of municipal and other issuers has considerably evolved since the time of the Great Depression. Indeed, “of the municipal debt issues that were rated by a commercial rating company in 1929 and plunged into default in 1932, 78 percent had been rated AA or better, and 48 percent had been rated AAA”. Credit ratings have now achieved “wide investor acceptance as easily usable tools for differentiating credit quality”. They have become important parameters in investment decisions, particularly in the US municipal bond markets which have a strong individual investor base averse to, and ill-equipped to assess, credit risk. It is no surprise thus that most US municipal debt issuers have secured a credit rating by one or more of the leading rating agencies. The stamp of a rating agency is however no guarantee against default as the financial condition of a rated entity may change, sometimes rapidly—as shown by the example of “Orange County” in California which despite its high quality rating had to file for bankruptcy protection as a result of speculative financial management. Another example is “Washington Public Power Supply System” which defaulted on its debt obligations in 1990 while these had high quality ratings. Outstanding debt ratings may thus be subject to downgrade/upgrade should a rating agency consider, in the course of its surveillance process, that material changes in the financial condition of an issuing entity do warrant a rating review. The issuer rating may be put under “credit watch” until such time as a revised rating is announced.

Credit Enhancement Mechanisms. The creditworthiness of municipal debt issues may be enhanced by special features which confer preferential status on debt obligations. These include seniority, collateral security, guarantees, put options, joint and several liability of a number of entities, and bank letters of credit for short-term debt. Municipal debt can also have the legal provisions of “public credit enhancements” which may entail state insurance programs, central/state guarantees, and automatic withholding and use of state aid—most common in the US—to meet defaulted debt service. Such programs may be used both to increase market

acceptance of bond issues and lower interest costs. Securitization is another credit enhancement tool. [Mortgage-backed securities, though not related to local government finance, provide an example of securitization which has considerably strengthened the housing finance market—its essential pillar being the diversified residential housing stock that backs the debt issues. Added to the physical asset, is the “public credit enhancement” resulting from the implied sovereign guarantee for the federal housing agencies (FNMA, GNMA) in the case of “pass-through” mortgage securities]. Other forms of municipal credit enhancements may use separately capitalized subsidiaries which could be made “bankruptcy-remote”. Finally, a potent form of municipal credit enhancement is bond insurance.

Bond Insurance. Bond insurance has played in the past 15-20 years an important role in the growth of the US municipal bond markets. Indeed, individual investors rely on bond insurance to enhance the quality of the assets they are willing to hold. Yet, bond insurance in the US has not been a vehicle for allowing non-creditworthy issuers to have market access. Rather, the insurance by “AAA” rated insurance companies allows small issuers at the lower end of the investment grade (“BBB” and “A”) to access the national market for high investment grade debt. This enhances the liquidity of the issues which can then trade on secondary markets. Close to 50% of total US municipal bond (75% of “BBB” and “A”) issues are covered by bond insurance. Providing insurance coverage only to investment grade (i.e., low default risk) credits while charging low premia makes the economics of insurance attractive to issuers. (Insurance firms further enhance their profitability through high leverage and investment income.)

PRICING OF MUNICIPAL DEBT

Debt by non-sovereign, including municipal, borrowers is priced in reference to the government securities yield curve, where spreads reflect issuers’ parameters in terms of creditworthiness, liquidity and size. Given the tax-exempt features of municipal debt, the true reference for investors in US municipal securities would be the “taxable equivalent yield” which must be earned on taxable treasury bonds to produce the same yield as a tax-exempt municipal bond.

CONCLUSION

Municipal bonds, an important segment of the US securities markets, have been a primary source of local infrastructure finance. The challenge would be to develop these markets in developing countries, where local government borrowings have been largely confined to bank loans often with central government guarantees.

SUMMARY

FRAMEWORK FOR ENHANCING FINANCIAL MANAGEMENT, CREDITWORTHINESS AND ACCESS TO CAPITAL MARKETS

Intergovernmental Fiscal Relations and Local Financial Management Course

September 13-19, 1998

Council of Europe Conference Center

Budapest, Hungary

**Organized by the Council of Europe, Economic Development
Institute of the World Bank, and Fiscal Affairs Division of the
Organisation for Economic Cooperation and Development**

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Intergovernmental Fiscal Relations and Local Financial Management

Framework for Enhancing Financial Management, Creditworthiness and Access to Capital Markets

Samir El Daher
The World Bank
September 1998

Background

- Increased decentralization in provision/financing of services
- Expanded local government role requiring improved fiscal, institutional and regulatory framework
- Expanded local government role not matched by financial management and resource generation/mobilization capability



A Simplified Model

- Assigning responsibilities among tiers of government
- Defining net inflows (tax sharing/transfers)
- Defining own-source revenues (taxes/fees)
- Defining institutional and resource gaps
- Meeting institutional/financial challenge to:
 - » Deliver services in most efficient way
 - » Fill resource gap in optimal way including debt



Decentralization and Responsibilities Assignment

- Rationalizing revenue/expenditure assignments among tiers of government
- Allocating clear planning, investment and operating responsibilities
- Promoting private participation/competition in provision of local services ==> increasing efficiency and reducing resource gap



Fiscal Decentralization - Intergovernmental Relations

- Rationalizing intergovernmental fiscal relations
- Streamlining revenue sharing policies among tiers of government
- Setting predictable rules for central government transfers/grants
- Removing disincentives from transfer rules and reducing moral hazard



Fiscal Decentralization

Own-source Finance

- Rationalizing local tax bases and rates
- Improving local tax collection levels
- Improving local capacity for strong/stable own-source generation
- (Improving pricing of local services ==> institutional capacity issues)



Local Government Institutional Capacity

- Strengthening local government organizational setting for service delivery
- Building local government staff capabilities
- Improving efficiency of municipal assets management

Local Government Institutional Capacity

- Strengthening autonomy and accountability of local public entities
- Strengthening planning and operating capability of local public entities
- Setting performance criteria for monopoly services

Local Government Institutional Capacity

- Developing rational pricing policies for local services
- Differentiating between:
 - » revenue generating services (revenue-based funding)
 - » public goods (externalities, tax-based financing)
- Improving local user fees collection levels



Local Government Institutional Capacity

- Strengthening review process for local public investment programs
- Improving screening/selection criteria for local investments
- Implementing programs/projects that enhance potential access to private resources

Local Government Budgetary Planning and Control

- Improving local government budgeting processes
- Strengthening capital budgeting (project finance)
- Developing credible accounting systems
- Implementing independent audits

Local Government Budgetary Planning and Control

- Improving local government payment systems
- Improving Cash management systems
- Improving financial control systems



Local Government Disclosure Standards

- Developing financial disclosure standards that provide investors/lenders with reliable information on local government entities and provide reliable basis for credit rating
- Building data and indicators on local government finance (e.g. current revenues to current expenditures, local taxes to local revenues, local taxes to total revenues, ratios of debt service to revenues,...)



Local Financial Management and Resource Mobilization

- Strengthening local financial management and creditworthiness
- Strengthening local government resource mobilization/access to capital markets
- Accessing credit markets to fill resource gap
 - » in manner consistent with macroeconomic stability
 - » without creating explicit or implicit contingent liabilities at sovereign level (moral hazard)



Regulatory Framework on Local Government Borrowing

- Clarifying regulations on borrowing authority and access to credit by local governments
- Improving local government credit regulations in respect to municipal collateral (legal issues/risks related to pledging inter-governmental transfers), bankruptcy and credit workouts,...

Local Government Financial Management

- Improving local government financial planning
- Improving local government assets/liabilities management
- Improving local government liquidity management
- Improving local government infrastructure funding strategies



Local Government Infrastructure Funding Strategy

- Assessing alternative funding strategies for infrastructure investments
- Devising non-recourse project/corporate finance options that reduce claims on fiscal resources
- Defining project return benchmarks and risk/return profiles

Local Government Finance and Access to Capital Markets

- Assessing potential for direct access to private credit markets to finance local government investments/operations
- Assessing role of financial intermediaries as a means to raise private resources to finance local infrastructure investments
- Addressing links with capital market infrastructure/issues

Local Government Finance and Access to Capital Markets

- Mobilizing debt funding backed by local government taxing powers (general obligation bonds)
- Mobilizing debt funding secured by user fees and other dedicated income streams (revenue bonds)
- Mobilizing debt funding on a corporate finance basis (balance sheet finance)

Local Government Finance and Access to Capital Markets

- Using short-term municipal instruments (municipal notes, commercial paper, other special instruments..) to improve cash-flow profiles and respond to seasonal expenditures/revenues mismatches
- Establishing "special purpose districts" to provide services to developing areas
- Establishing "tax increment districts" to fund development of rundown areas



Local Government Finance and Access to Capital Markets

- Using financial/legal credit enhancement structures (securitization, guarantees, bond insurance, bank letters of credit, convertible debt, derivative products,...)
- Conferring preferential credit status on debt obligations to diversify/transfer risks
- Increasing market acceptance and lowering interest costs of local borrowing

Role of Financial Intermediaries for Local Governments

- Using pool financing arrangements for local infrastructure investments
- Leveraging the intermediary's equity through bond issuance in credit markets to lend mostly for viable, revenue-generating, projects
- Mobilizing credit on private markets without government guarantees



Criteria for Market-based Financial Intermediaries

- Defining structural and regulatory conditions needed to establish market-based financial intermediaries
- Defining elements of public support (such as central capital grants) initially needed/acceptable to assist intermediaries in leveraging their equity resources through bond issuance on private credit markets

Criteria for Market-based Financial Intermediaries

- Defining strategic objectives and main institutional parameters
- Defining products range (loans, guarantees, equity participation,...) offered by intermediaries
- Defining operational features including guidelines for portfolio diversification amongst sectors/borrowers



Criteria for Market-based Financial Intermediaries

- Defining main financial parameters related to intermediaries' funding, lending and product pricing policies
- Defining main parameters related to the intermediary's market, credit and currency risk management policies
- Defining steps to transform existing intermediaries into market-based operations

Links to Capital Market Development Issues

- Developing local government markets as a sub-set of domestic credit markets - Importance of local currency credit/finance
- Developing local government credit markets/financial transactions requires effective financial regulations, institutions and instruments
- Building local government ability to deal with regulations, institutions & instruments

Links to Capital Market Development Issues

- Using/improving domestic financial market infrastructure to tap upstream long-term funding pool for local investments
- Defining benchmarks for pricing debt obligations of sub-sovereign entities
- Improving compliance with regulations on issuance, registration, settlement, custody and repayment of local government debt

Links to Capital Market Development Issues

- Outlining, from debt issuer perspective, measures that bridge gap between demand and supply of local government securities so as to increase flow of long-term institutional funds into local investments
- Outlining, from debt issuer perspective, requirements related to underwriting, distribution and market-making capabilities of local government securities



Partnership Building

- Building financial partnerships between local governments and providers of services and capital to expand flows of domestic and foreign private finance into local infrastructure investments
- Bringing together complementary financial interests (e.g. commercial banks, securities firms, institutional investors, rating agencies, bond insurers, utilities operators)