

DISCUSSION PAPER NO.1
INFRASTRUCTURE, ECONOMICS AND FINANCE DEPARTMENT

Local Financing For Sub-Sovereign Infrastructure In Developing Countries:

Case Studies of Innovative Domestic Credit
Enhancement Entities and Techniques

**Robert Kehew,
Tomoko Matsukawa
& John Petersen**



THE WORLD BANK

INFRASTRUCTURE, ECONOMICS AND FINANCE DEPARTMENT
IN COOPERATION WITH MUNICIPAL FINANCE THEMATIC GROUP, TRANSPORT & URBAN DEVELOPMENT DEPARTMENT

FEBRUARY 2005

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Acknowledgements

This study was sponsored by the World Bank's Project Finance and Guarantees unit (PFG) in the Infrastructure Economics and Finance Department (IEF); and reviewed by the Municipal Finance Thematic Group, Transport and Urban Development Department (TUD). The report was prepared by Tomoko Matsukawa (PFG), the task manager, together with John Petersen (Professor, School of Public Policy, George Mason University) and Robert Kehew (International Director, Government Finance Group at ARD, Inc.). John Petersen and Robert Kehew conducted case studies and drafted chapters 1-3 and 5, and Tomoko Matsukawa contributed chapter 4 on donor support and finalized the discussion paper. Andres Londono (PFG) worked on the task team and provided valuable contributions to the authors in preparing and editing this paper. Sarah Obrien (ARD) also supported the team.

The report benefited from reviews and comments by several World Bank Group staff, in particular Mihaly Kopanyi, the Chair of the Municipal Finance Thematic Group who encouraged the writing on the topic of local credit enhancement programs. Lawrence Hannah, Kyoichi Shimazaki, Dhruva Sahai. Sumeet Thakur and Tony Pellegrini gave the team valuable comments and peer review at various stages of development of the discussion paper. Case studies could not have been completed without the kind assistance and comments from the Bank's infrastructure managers and colleagues including: Oscar Alvarado, Bruce Ferguson, Sonia Hammam, Peter Johansen, Abha Joshi-Ghani and Rajivan Krishnaswamy; as well as Saima Qadir of the GEF and Juan Carlos Dugand of FINDETER.

The task team would like to extend its appreciation to Hossein Razavi, Director, IEF, as well as Suman Babbar, Senior Adviser (PFG) and Ellis Juan, Manager (PPI) of the IEF for their valuable support and guidance.

Acronyms & Abbreviations

BSP	Bangko Sentral ng Pjilipinas
DBP	Development Bank of the Philippines
DBSA	Development Bank of Southern Africa
EE	energy efficiency
FI	financial institutions
FINDETER	Territorial Financing Institution (Colombia)
GEF	Global Environment Facility
GoTN	Government of Tamil Nadu
IRA	Internal Revenue Allotment
IFI	International Financial Institutions
INCA	Infrastructure Finance Corporation of South Africa
LGU	Local Government Units
LGUGC	LGU Guarantee Corporation (Philippines)
TNUDF	Tamil Nadu Urban Development Fund (India)
USAID	U.S. Agency for International Development
USAID DCA	USAID's Development Credit Authority

Executive Summary

With decentralization, sub-sovereign governments are expected to take on increasing responsibilities in providing infrastructure services. The mobilization of local currency financing to match local currency revenues is essential to develop sustainable infrastructure finance at the sub-sovereign level.

This paper reviews *innovative local credit enhancement entities and techniques* that help mobilize domestic commercial debt resources for sub-sovereign infrastructure finance. These credit enhancement schemes are provided either by a financial entity or a program, and mitigate borrower credit risk and liquidity/market risk commonly observed in sub-sovereign lending in developing countries. (In these cases, ready-available borrower credit profile and developed long-term debt markets often do not exist).

The programs studied provide examples of credit enhancement at:

The **individual borrower level**—in this document, we examine a municipal bond guarantee company and local credit guarantee programs covering borrower credit risks for commercial creditors, and a second-tier bank and secondary debt purchase to provide liquidity for original creditors;

The **portfolio level**—we consider financial intermediary institutions that pool sub-sovereign debt to fund in the commercial markets with various enhancement techniques.

Credit enhancement designs are dependent on the status of domestic financial markets and degree of sophistication at local banks and institutional investors. Through the case studies, this paper analyzes different types of credit enhancement structures, such as different types of guarantees (comprehensive and partial credit), co-financing and subordination, bond banks and pooling, liquidity provision and secondary market support. In each case, corporate sponsorship varies, and ranges from government agency or government-owned entity, to public-private mixture entity, to private capital funds.

The paper discusses chief lessons in designing credit enhancement entities for the benefit of practitioners in developing countries (both at the government and the private sector) and at donor institutions. These lessons are multiple and include:

- Plan for credit enhancement to play a permanent role in a system of sub-sovereign finance.
- Consider private sector ownership (whole or part) and independent management.

- Accept that credit enhancement entities can play multiple roles, and avoid inflexible design.
- Ensure that the credit enhancement design is congruent with program objectives.
- Provide for the entity to play a broad role in market development.
- Allow for progressive institutional growth of the entity, with adequate technical assistance initially.
- Accept that enhancement programs take a long time to develop business and become profitable.
- Recognize that committed strong leadership is important.
- Consider the desirability and feasibility of establishing a revenue intercept mechanism.
- Design risk-sharing measures to appropriately fit specific debt market circumstances.
- Promote effective credit assessment, taking into account where such skills can best be developed.
- Provide subsidies and auxiliary services as appropriate.

The paper proposes areas for possible donor support with a view to assisting an emerging credit enhancement entity in establishing its creditworthiness in the local markets and operating effectively.

In fact, several credit enhancement cases examined have benefited from donor assistance. Possible modalities for support include:

- provision of initial capital/reserve
- back-stop for contingency (through partial guarantees, contingent loans)
- parallel long-term loans
- subordinated debt or partial credit guarantee for financial intermediary to facilitate commercial debt financing
- political risk mitigation to encourage foreign investors to take part in the establishment of local credit enhancement schemes.

Credit enhancement techniques can be powerful tools to mobilize and leverage resources, are very cost effective, support market development, are adoptable and precisely targeted and promote hard credit culture. While these advantages are compelling, the degree to which they are realized depends on the specific design of individual credit enhancement programs and their execution.

Foreword

Infrastructure services are essential for growth and poverty reduction and achieving the Millennium Development Goals, yet in many developing countries, there continues to be an unmet demand for such services.

To respond to this situation, there has been increasing interest in sub-sovereign infrastructure financing by developing country governments and their stakeholders, the donor community and the private sector. In recent years, political and fiscal devolution has shifted much of the decision making and financial responsibilities for providing infrastructure services to sub-sovereign levels of government. Given the limited public financing resources available and foreign exchange risks associated with typical donor support, there is growing recognition that mobilizing capital from local financial markets to tap domestic saving is essential in developing sustainable infrastructure financing at this level.

This paper reviews and analyzes a diverse group of innovative local credit enhancement entities and techniques that helped mobilize local debt in the sub-sovereign finance arena in developing countries (Colombia, India, Philippines, South Africa, Hungary, China and Croatia) and also in the developed world. The paper examines key lessons learned with a view to suggesting a variety of potential roles for donor agencies in facilitating the access of sub-sovereign governments and entities to local financial markets either directly or through effective intermediaries. We expect that the paper will provide some insights for policy makers, stakeholders, private financiers and donors in meeting the challenge of mobilizing the financial resources required for infrastructure at sub-sovereign levels in developing countries.

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Introduction

Governments and citizens alike are concerned with satisfying the developing world's enormous unmet need for infrastructure. Over the last 40 years, recognizing that grant and subsidy funding is not sufficient, international financial institutions (IFIs) have lent large sums of money to meet local government needs in the developing world. This support recognizes the important role decentralized sub-sovereign governments can play in providing urban and local infrastructure services, and acknowledges that such projects can be self-financing. This lending has often been accomplished via specialized municipal development funds, yet, the record of these funds over the years in terms of repayment rates and other performance measures has been decidedly mixed. Meanwhile the unmet need for resources to finance infrastructure has grown apace.

There is also a growing recognition that mobilizing capital from private domestic sources is essential to develop sustainable infrastructure finance at the sub-sovereign level. As a result, stakeholders have increasingly looked for ways to tap resources from local financial markets, through bank loans or bond issuances. While sub-sovereign finance is yet in a nascent stage, the risks (actual and perceived) associated with lending to local governments and entities are high. In several countries, innovative local credit enhancement entities or programs have played a role in helping mobilize domestic resources for sub-sovereign infrastructure finance by mitigating those risks.

This discussion paper offers a comparative analysis of a diverse group of cutting edge public and private entities and programs that enhance credit in the sub-sovereign finance arena, and the various enhancement mechanisms they employ.

The aim of this study is to yield insights into how credit enhancement entities and guarantee programs can best support the development of sub-sovereign infrastructure finance in developing countries. The paper focuses on six case studies representing a wide range of credit enhancement programs that facilitate both direct and indirect market access by sub-sovereign borrowers:

- **Colombia**—Territorial Financing Institution (FINDETER), a second-tier specialized development bank, funded partially in the market;
- **India**—Tamil Nadu Urban Development Fund (TNUDF), a state-sponsored municipal development fund transformed into public-private management/funding and loan pooling scheme;

- **Philippines**—LGU Guarantee Corporation (LGUGC), a public-private owned municipal bond guarantee company;
- **South Africa**—Infrastructure Finance Corporation of South Africa (INCA), a pure private specialized financial institution to purchase debt obligations and provide loans, funded by donors on a subordinated basis;
- **Hungary, China and Croatia**—local partial credit guarantee programs funded by the Global Environment Facility (GEF) for local bank loans for energy-efficient (EE) investments;¹ and
- **United States**—bond banks and state revolving funds, which pool loans, provide adequate reserve and issue bonds in the market.

Contents and Structure

Chapter One introduces the uses of credit enhancement by examining the basic debt structure and its associated risks;

Chapter Two offers typologies of (i) credit enhancement mechanisms and (ii) local credit enhancement entities, with examples from the case studies;

Chapter Three presents conclusions regarding the effective use of such credit enhancement mechanisms in developing countries, based on the case studies;

Chapter Four proposes possible modalities of donor agency support;

Chapter Five presents summary conclusions.

Appendix A provides the individual case studies for the credit enhancement entities and programs listed above;

Appendix B offers in summary form key operational parameters for a credit enhancement facility (patterned on LGUGC in the Philippines).

¹ Although these guarantee programs are not for municipal finance per se, they are included here because (i) borrowers under these guarantees are typically sub-sovereign (not national-level) entities; (ii) the municipal sector accounts for a major part of EE investments; and (iii) lessons can be learned from these experiences regarding promoting commercial lending to new types of borrowers with which local commercial lenders are not yet familiar.

Chapter 1

Credit Enhancement as a Way to Mitigate Risk

Credit enhancements are devices and programs that are meant to mitigate the risks in debt transactions that creditors cannot or are not willing to take.² There are numerous risks involved in lending money generally.³ In developing countries the major risks will tend to be those associated with fundamental credit (default) risk (aggravated by lack of borrower financial information), inflation and interest rate risk (thin long-term debt markets), lack of liquidity of investments (thin secondary debt markets) and concerns over political stability.

In the case of lending to subnational borrowers, dominant risks would be borrower credit (default) risk, while maturity/liquidity risk and political risks⁴ would follow. The credit enhancer, an outside third-party entity (e.g., guarantor), or the objective of institutional structure of the borrower that intermediates market debt funds, aims at reducing these risks for the creditors in debt transactions. This paper focuses on those credit enhancement schemes that appear appropriate to developing economies and markets, and the ways in which these enhancements are designed to mitigate a number of specific risks found in sub-sovereign finance.

As to sub-sovereign borrowers, risks vary by type of borrower (e.g., government body, affiliated entity, specific project entity) and type of transaction (e.g., general obligation, revenue-based or limited-recourse based on specific cash flow or assets). This paper focuses on government body borrowers, which have been major focus for credit enhancement entities studied.

Sub-sovereign governments present several special issues in the area of risk. First, the governments themselves may have limited own-source resources (tax and user charge systems over which they have limited control), so they may be highly dependent on sources from higher-level governments for revenues. It is not uncommon in many parts of the world for smaller or more rural areas to depend on central government transfers for 80 percent of their revenues. (See Appendix A for ratio of such dependency for the case study countries.) Furthermore, those transfer payments may be undependable

and irregular, depending on the state of the national economy, the degree of decentralization and the political situation.

In the transaction of “fixed income” debt obligations,⁵ a borrower, especially those with less than adequate credit standing, typically pledges revenue sources that are expected to pay the required debt service. “General obligation” or “unlimited tax” transactions are secured by the unconditional, full faith and credit of the borrower, where essentially all the revenues that flow to the governmental jurisdiction (such as taxes, charges and various intergovernmental payments) are pledged. “Revenue” or “limited obligation” debt of self-supporting enterprises carries security limited to a particular source of revenues. In the latter case, the borrower may not technically be the government itself, but rather a fund or agency of the government or a specialized entity created to carry out the activity.⁶ Thus, the specific debt transaction document will reflect not only the structural elements of the terms of the loan, but also the nature of the security pledged.

The lender itself may take on a variety of institutional structures, depending on the nature of the financial market and the state of its development. This paper focuses on the lender as a private-sector financial institution (commercial banks and other financial institution lenders) or individual bond investor as being part of a broader *capital market*, as opposed to the *financial market*. The reason for this distinction is that in many emerging markets, commercial banks and other such institutions are owned or partially owned by the central government; one impact of this situation is that often access to credit markets by subnational governments is restricted, either *de jure* or *de facto*.

In sub-sovereign finance discussion, the issue of bank lending versus bond issuance often attracts attention. The nature of the lender, and the degree to which there is financial intermediation, will be driven in large part by the financial system in place and the existence of potential investors in long-term debt obligations. Many emerging markets feature a bank-dominated system where loan or bond origination/investment is done by the banking system. On the other hand, mature capital market systems normally depend on major non-bank financial institutions such as insurance

2 In the present paper the focus is on “external” credit enhancements. We do not address “internal” credit enhancements that the borrower may undertake such as making stronger security pledges and providing higher coverage factors. We also exclude from the scope of our study direct guarantees by senior levels of governments.

3 For example, Ravi Dattatreya and Frank Frabozzi, “Risks Associated with Investing in Fixed Income Securities” in Frank Frabozzi (ed.) *The Handbook of Fixed Income Securities* (1997) categorized risks as: market (interest rate) risk; reinvestment risk; credit (default) risk; call (timing) risk; maturity (yield curve) risk; inflation (purchasing power) risk; liquidity (marketability) risk; exchange rate (currency) risk; volatility (basis) risk; political (legal and regulatory) risk; tax treatment risk; event risk and sector risk.

4 While political risks are one of major impediments in lending to sub-sovereign borrowers for private infrastructure projects in particular, credit enhancements covering political risks per se are excluded from the discussion of the paper.

5 The interest rate may be fixed for the life of the debt or may vary over time depending on a reference rate (floating/variable interest rate debt). Principal may be amortized over the life of the debt or be due at the maturity of the debt (bullet maturity). Interest payment and debt structures can be important in the design of various credit enhancements.

6 The same borrower may issue both general obligation and limited-tax obligation.

companies and pension funds for long-term funds. Countries can have both bank-based sub-sovereign finance targeted at smaller, less-frequent borrowers and a municipal bond market for sizable issuers. However, the ultimate development of local bond markets and institutions is indispensable, given needs for long-term debt funds for infrastructure development and the limitations of the banking system to extend long-term loans without developing matching funding resources (e.g. long-term bank debentures).

Default risk, a fundamental concern in lending to sub-sovereign borrowers, can spring from a variety of sources, which essentially can be divided into (i) an inability or (ii) an unwillingness to pay debt service. "Inability to pay" can be caused by a number of factors that relate to a weakness in the revenue base, an inability to collect revenues or the occurrence of extraordinary and unforeseen expenditures. "Unwillingness to pay" debt service can come about from a repudiation of debt or other intentional procedural delays in honoring the debt terms even though sufficient resources are available. In both cases, but especially the latter case, the strength of the legal system in enforcing creditor remedies is of paramount importance.

In developing markets, both the availability and the exercise of the intercept provision have been especially important to promoting credit market access. The intercept provision means that payments from higher levels of government can be pledged to the repayment of debt. In view of the great importance of such payments to most local revenue structures and the ability to divert payments before they reach the locality, the intercept can be a powerful form of security. Intercept provisions have been widely used both by governmental and private financial institutions as a core part of security packages. Several credit enhancement entities discussed in the case studies illustrate the use of the intercept mechanism.

While the intercept provision facilitates, and often serves as indispensable security, for lenders and guarantors in mitigating risk when lending to sub-sovereign borrowers not perceived as adequate credit as is, the use of intercept should not replace rigorous credit risk analysis on the part of lenders/guarantors. The intercept provision should not provide disincentive for borrowers to improve its fiscal management and creditworthiness.

Chapter 2

Credit Enhancement: Cases Studied and Key Findings

In diverse ways, credit enhancements address risks associated with sub-sovereign debt obligations. Below we present typologies of (1) credit enhancement structures, and (2) credit enhancement entities, with actual and tested examples drawn from our case studies. Chapter 4 discusses potential modalities of credit enhancement more broadly.

Types of Credit Enhancement Structures

Comprehensive Guarantees

Guarantees are the most common form of direct credit enhancement for debt providers. The simplest form is the comprehensive or full credit guarantee, which covers principal and interest payment regardless of the cause of debt service default. For example, the Local Government Unit Guarantee Corporation (LGUGC) in the Philippines is a commercial entity that guarantees local government municipal bonds: it provides bondholders with a guarantee of uninterrupted debt service (principal and interest). LGUGC charges up-front guarantee fees from the local governmental borrower at the time of bond issue; and, in the case of default, would draw upon its reserves and reinsurance policies, and exercise an intercept provision as regards to Internal Revenue Allotment (IRA) funds (and other payments). It is important to note that as a commercial entity, the LGUGC guarantee is based on a risk assessment and the application of guarantee fees charged to the borrower that reflects the likelihood of default (taking security into consideration), having been designed following the “bond insurance” model.

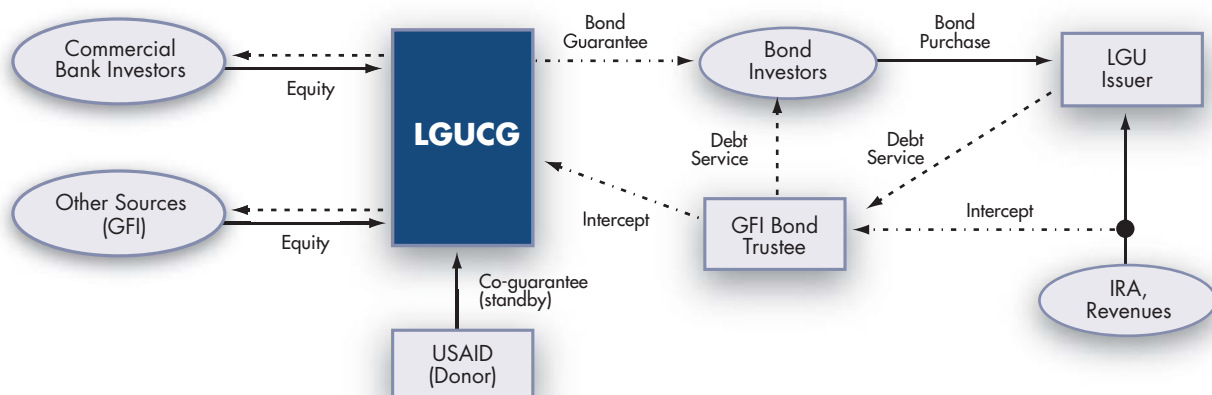
Figure 1 illustrates how this guarantee, which uses an intercept provision to divert local revenue transfers to bondholders in case of borrower inability to pay debt service, is used to enhance subnational obligations:

Partial Credit Guarantees

A variant of the guarantee approach is the partial guarantee, whereby the guarantor shares the risk of debt service default with the lenders on some predetermined basis. Partial guarantees can be structured in a variety of ways, depending on types of the borrower, debt instrument, repayment sources, etc., but essentially the idea is that there will be risk sharing between the lender and the guarantor that effectively mitigates borrower risk to the level absorbable by the lender. *Partial credit guarantees* are guarantees where the guarantor covers a portion of debt service payments (regardless the cause of debt service default). Although not discussed in the case studies, *partial risk guarantees* are guarantees where the sharing of borrower default risk is based on the cause of such default.

For example, the partial credit guarantee programs funded by the Global Environment Facility (GEF) for energy efficiency investments typically provide for a 30 percent to 50 percent guarantee on loans made by participating financial institutions, chiefly on a pro-rata basis. One advantage of the partial guarantee approach compared with a comprehensive guarantee is that, with its own capital on the line, the partially guaranteed lender will examine much more carefully the credit of the borrower or the viability of the underlying transaction. This not only helps ensure that capital is allocated efficiently, but also encourages domestic financial institutions to become more familiar with the workings of

Figure 1. Bond Guarantee (LGUGC)



subnational governments and their entities, paving the way for future market expansion. (See Box 3 in Chapter 4 for further discussion on types of partial credit guarantees; as well as the “partial risk guarantee” where the guarantor covers specific risks leading to borrower default, rather than sharing debt service default risk by all causes.)

Co-financing and Subordination

Debt subordination is a credit enhancement technique that has been used in larger international or corporate transactions and to a limited extent in the area of subnational lending. In this case, the subordinated lender acts as the credit enhancer, taking a junior lien against senior lenders. Subordination can be used in the debt structure of a sub-sovereign borrower, or in the capital structure of a financial intermediary as found in the case of INCA, where the donor provides for subordinated debt to expand the capital reserves of that entity.

Figure 2 illustrates a co-lending relationship where the enhancing institution takes the less-secure position in order to facilitate the mobilization of commercial debt, which is afforded the more secure senior position. These transactions can be market-based (i.e., where a higher interest rate is required to compensate for higher risk), or in some cases may be provided by public parties at subsidized rate. Co-financing debt providers, in addition, may take the longer-term maturities, leaving the shorter maturities of a financing to the private sector senior lender.

Bond Banks and Pooling

In developing country subnational borrowing, many of the individual loans are relatively small — in many cases too small to be of interest to the private capital markets that are oriented to larger commercial borrowers. This situation often commends the pooling of small credits into a larger, more efficient grouping. In addition to achieving the same economies of scale that are possible with larger issuances of bonds, this technique offers a reduction in risk through

portfolio diversification. Ultimately, this pooling results in reductions in the cost of borrowing to the local borrowers.

The technique of bond banking, whereby an intermediating financial entity groups together smaller underlying loans and itself borrows in the financial markets, has seen extensive use in the developed markets (particularly in the U.S., but also in other countries), but only limited use in developing country financial markets.

As Figure 3 illustrates, the bond bank bundles the underlying subnational debt and then sells its bonds to investors in the capital markets. The basic idea behind the pooling concept is to develop a portfolio of loans that can then be remarketed in bulk to the securities markets as bond bank obligations. Bond bank obligations almost always carry with them a variety of enhancements, such as reserves, various intercept provisions and perhaps bond insurance.

The pooling concept also provides a number of inherent enhancements in terms of the size and diversity of the pool’s portfolio, which serve to protect against individual “event” risks. This means that with appropriate design, a specific debt service problem with an individual borrower can be successfully handled through means of reserve funds and various other credit supports. The overall pool’s diversity provides its financial stability, thereby mitigating the pool’s overall credit risk.

In addition, there are typically economies of scale that flow to the pooling intermediary, which are especially important in the financial markets. These economies include the advantages of scale not only in the original transaction (which includes such items as legal, advisory, investment and trustee fees), but also the credit monitoring and data collection that the bond bank does on behalf of the final investors. The Tamil Nadu Urban Development Fund (TNUDF) has pioneered a credit pooling approach in India. (See case studies on TNUDF and on the bond banks and state revolving funds in the United States.)

Figure 2. Co-Financing Arrangements

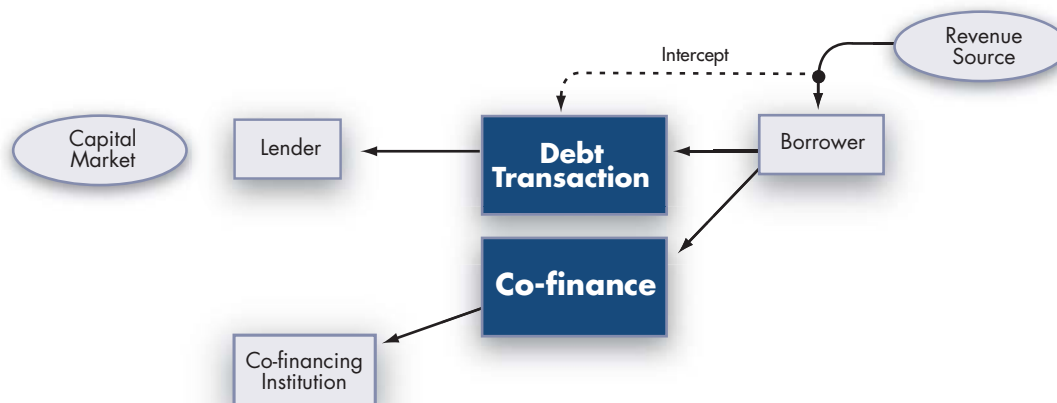
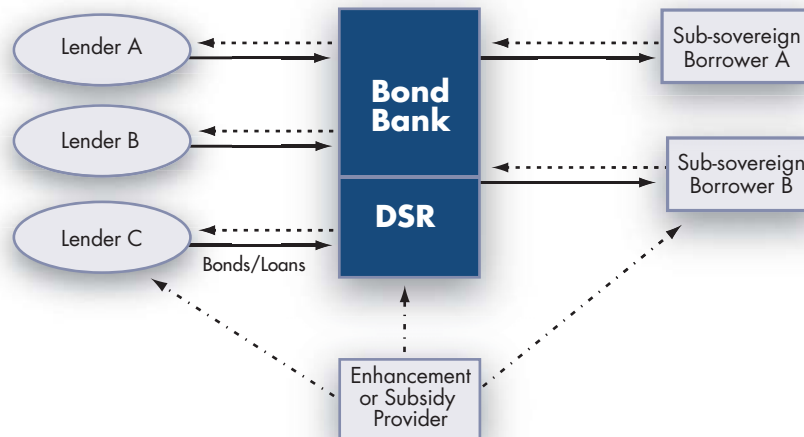


Figure 3. Bond Bank (Pooling)



Liquidity Provision and Secondary Market Support

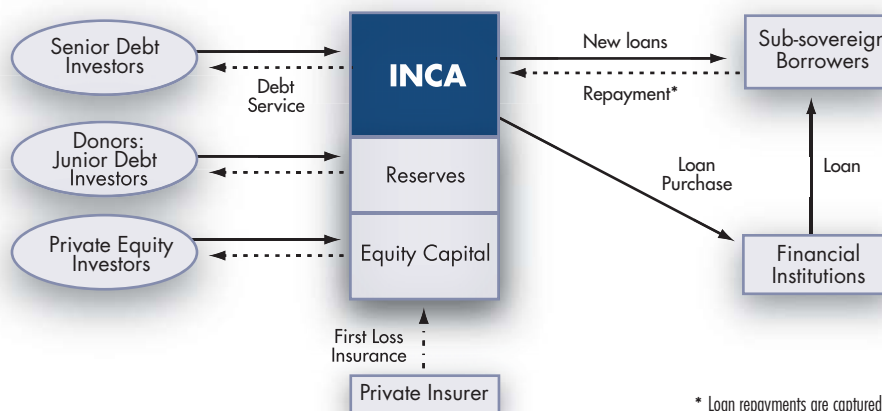
A final form of credit enhancement involves support for liquidity and of the secondary market. Although in developing countries this is seldom the only point of support, it can be important in middle-income counties with active bond markets, where subnational securities present specific liquidity problems for private sector investors. The South African financial intermediary Infrastructure Finance Corporation (INCA) provides an example of this sort of secondary market support for outstanding subnational government bonds, an activity that is combined with bond banking.

As Figure 4 shows, INCA enters the bond market to raise funds. It supplies “new money” by acting as a bond bank and issuing debt in the financial markets against the portfolio of sub-sovereign loans. INCA also acts as a support to the existing market in municipal bonds. It buys outstanding debt, thus providing liquidity to that market. Working through

subsidiaries, INCA also offers complementary services to individual subnational borrowers, such as a special entity for working out distressed borrowers and helping them to improve their financial condition.

When major risks for commercial creditors are liquidity or funding risk for those that originate sub-sovereign lending, a variety of credit enhancement techniques can be implemented. FINDETER in Colombia acts as a “second-tier” bank that discounts qualifying subnational loans made by commercial banks, providing the original lending banks with a source of liquidity on loans they have made to subnational units. The enhancement provided by FINDETER is primarily that of liquidity and the availability of long-term investment funds, since FINDETER discounts are provided for longer maturities than are available in market. The lender retains the primary credit risk, since if the local government borrower defaults, it is still responsible to debt service to FINDETER.

Figure 4. INCA Financial Structure and Flow of Funds



* Loan repayments are captured in DSR for the benefit of bond investors.

Designing credit enhancement for subnational governments and borrowers in individual countries is dependent on both the structure of that particular financial market and the stages of development (and financial sophistication) of both the borrowers and lenders. Furthermore, guarantors/credit enhancers may have parallel responsibilities as providers of grants and technical assistance.

Corporate Structures of Enhancers

The domestic credit enhancers examined in this publication are a diverse group: they have evolved from a variety of origins and feature different institutional postures (see Figure 5). Several (but not all) of the credit enhancement mechanisms in emerging countries directed toward subnational governments have evolved from some form of donor on-lending program, which has been the only source of long-term capital available for such purposes. As such, the original entity overseeing the provision of credit enhancements was a central governmental department, government-owned financial institution or a special-purpose parastatal. In other cases, the institution implementing the program has been a commercial bank, although government-owned banks have usually been chosen. In other cases, the credit enhancement program has been undertaken with the specific purpose of attracting private-sector capital, usually in the form of long-term bank loans. FINDETER was an early departure from the direct on-lending tradition to a special purpose governmental entity, designed to work through the private banking system.

Among the entities studied, two sprang from purely indigenous sources and are predominantly funded by private capital. These are the LGUGC, a public-private bond guarantee company, and INCA, a private bond fund.

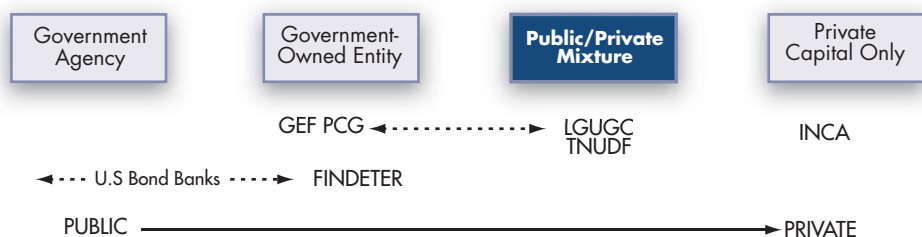
In the case of TNUDF, the original on-lending municipal development fund program was converted into a predominately privately owned corporation, albeit with extensive support from the World Bank. As a predominantly private entity, it has subsequently received assistance from USAID's Development Credit Authority (DCA) program, as have INCA and LGUGC.⁷

Other sector-specific enhancement programs, such as the GEF-backed Partial Credit Guarantee programs for energy efficiency loans, have been managed by either public or private sector financial institutions. (In the latter case, the programs still involved participation by central government agencies as the recipient of the GEF grant funds, with support from the World Bank/IFC). Also, these guarantees have been made on commercial loans irrespective of the ultimate borrower's being in the private or public sector, where subnational governmental units and their agencies or companies have been among beneficiaries of energy saving investments if not direct borrowers.

Still another model of institutional framework is found in the operation of the (U.S.) state bond banks and revolving funds. These are administered by state line agencies or state-owned special purpose entities, such as authorities. While these on-lending entities employ a variety of enhancements in their operations, the bond banks and many revolving funds serve primarily as an efficient intermediary to access the capital markets, which are uniquely wide and deep in the United States.

Figure 5 shows the various credit enhancers arranged throughout the spectrum of possible public and private ownerships. As shown, INCA is purely private in ownership, although it had initial funding from international investment

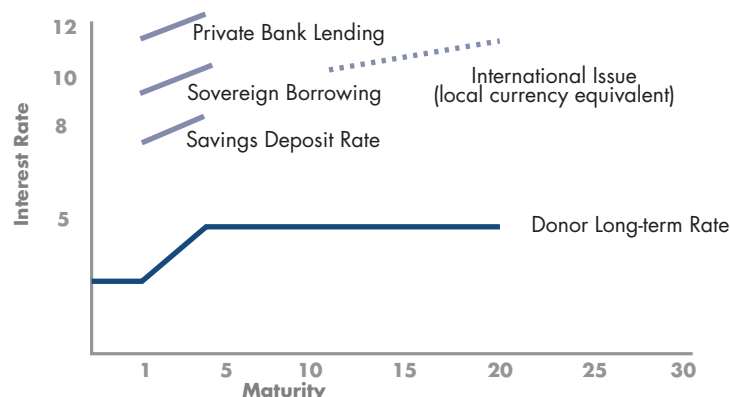
Figure 5. Ownership and Management Structure of Subnational Credit Enhancers



The illustration above relates to the where in the spectrum of ownership the enhancement provider is formally housed in terms of corporate structure. But, legal ownership is not the same as operational implementation: The actual execution of the program may occur primarily in the private sector through use of a private manager.

⁷ It is noteworthy that USAID DCA assistance must be provided to a private-sector entity. Thus, either the enhancer itself must be privately owned or it must enter into a co-financing program with a private sector firm or bank, in which case the enhancement is given to the private partner. DCA thus does not require a sovereign guarantee. It also will absorb exchange risk up to a U.S. dollar cap amount and allow for payments in the local currency.

Figure 6. Interest Rate Yield Curves in Emerging Markets (hypothetical)



groups that had social objectives in mind. On the other hand, the U.S. state bond banks and revolving funds are either run by government agencies or specialized governmental authorities created for the purpose. GEF-funded guarantee facilities are owned by recipient national governments, and managed by a state-owned financial or public-private financial institution (banks, guarantee companies). TNUDF and LGUGC have a slight predominance of private ownership, but are essentially mixed public-private partnership programs.

Credit Enhancement and Domestic Financial Market Setting

Credit enhancements can be used to leverage either international or domestic private domestic capital resources into meeting the needs of subnational governments. With the exceptions of donor-provided capital and major projects of regional or national scope, international capital is usually not a primary source of capital for subnational markets.

A primary problem is that most subnational governments do not earn hard currency with which to repay loans, and foreign exchange risk can cause major uncertainties regarding the future cost of capital and, hence, the affordability of projects. Most local governments are specifically precluded from borrowing internationally in foreign currencies without national government permission. This section highlights the appropriateness of different models of credit enhancement in different settings, i.e., according to the level of development of local financial markets. (See the end of Appendix A for comparative country circumstances of the six case countries.)

Examining the Domestic Financial Markets

Domestic capital markets in emerging economies are typically small and have very limited appetite for absorbing long-term obligations; those long-term funds that have been provided have typically been sourced and on-lent from international donor organizations. There are some examples of the domestic

private financial markets igniting and, sometimes, replacing much of the donor-based on-lending activities. Colombia's FINDETER is perhaps the best example of sourcing the majority of funds for its lending and loan/bond purchase operations from the domestic market. In the Philippines, the LGUGC operates in the domestic bond market, where the guaranteed bond maturity (and funding needs by municipal borrowers) tends to medium-term (five to seven years).

But in order for the domestic financial market to be a competitive source of funding for subsovereign capital investments (assuming the market itself is working and potential borrowers are creditworthy), it would have to offer on-lending interest rates and other loan terms comparable or more advantageous than those found with donor-based sources. Otherwise, the operation of the on-lending program can become predatory (undercutting private market sources) or create incentives for delay and rationing of funds on non-market considerations. In countries with a weak currency and unstable economic and political circumstances, achieving a "proper setting" to encourage private capital to flow to subnational borrowers can be difficult to accomplish. It is also unrealistic to expect subnational borrowers to seek commercial loans as long as deep subsidies in loan terms and grants are available from donor-based sources.

Figure 6 depicts the interest rate term structure (yield curve) often encountered in an emerging economy's financial markets. The sovereign government (or the central bank) often dominates the demand for credit, and borrows at the lowest domestic interest rate. Bank loans to private parties are usually made at a much higher cost for a given maturity. Savings deposit rates (which represent the major in-country investment alternative for non-bank citizens and firms) pay several percentage points less than the commercial lending rate ("lending rate" spread). Banks can exist by holding primarily government bonds and only making a few loans to prime credit risks.

Box 1: European Experience

There are numerous examples in the developed countries of specialized intermediaries specifically geared toward financing local and regional governments. Bond banks are found in the Canadian provinces. Like-crafted financial intermediaries are found in Sweden, Finland and the Netherlands, where state-sponsored local government co-operatives meet local government financing needs by borrowing in the markets and on-lending to individual units. In France, Belgium, Spain and other Western European countries, privatized, but formerly state-owned, specialized banking companies now provide for local government financing. In Europe, there has been a traditional preference for financing local government credits, except for the very largest borrowers, through the banking system, first with state-owned banks, but later with those

banks with traditional “windows” to meet subnational needs.¹⁰ In the European transitioning countries—especially those preparing to join the European Union—there have been recent efforts to better engage the local financial markets and the private banking sector.

The European Bank for Reconstruction and Development (EBRD) has begun operating a Municipal Finance Facility, an initiative of the EBRD and the European Commission, for EU accession countries.¹¹ The facility offers EBRD loans, enhancements and interest subsidies for local government “municipal” utilities in conjunction with local banks. Loans and enhancements are available in either Euro or local currencies. The EBRD will provide up to 25 million for covering up to 35 percent of a participating bank’s risk on a

portfolio of loans to municipal utilities. EU Phare grant support is in the form of fees payable by EBRD to banks to subsidize the extension of maturities.¹² Technical assistance is also provided to partner banks and the municipalities.¹³ Depending on the credit quality and circumstances, sovereign guarantees are often not required.

Note also that loan maturities are short; usually there is limited institutional investor money to invest long-term domestically. The natural long-term investors in fixed income obligations, the insurance and pension sectors, are underdeveloped or controlled by the central government, often investing their funds in sovereign obligations for liquidity and under highly risk-averse prudential guidelines. Moreover, with few, if any, bonds listed and the lack of the over-the-counter (OTC) markets,⁸ the trading markets are not active and investors tend to buy and hold to maturity, which is short. Needless to say, this presents an unappetizing picture for selling long-term obligations that match the economic life of infrastructure investments.

As shown in Figure 6, donor-based loans may typically carry much lower nominal rates of interest in foreign currency (chiefly in U.S. dollars), have generous grace periods and are for much longer terms. If the sovereign government can borrow in the international markets, it often only can do so at elevated foreign currency interest rates to reflect credit premium for its international credit rating (which is typically non-investment grade or low investment grade) and shorter maturities. In most instances, subnational governments can only enter the international markets with a sovereign guarantee.

The above “prototypical” term structure of interest rates is indicative of the constrained and challenging financial atmos-

phere in which credit enhancements to assist subnational borrowers are to be applied. Furthermore, these applications need to be coordinated with policies regarding donor on-lending, which is typically carried out through a municipal development fund or similar entity. For example, one popular option for these funds has been to offer a variable-rate loan that has a substantial mark-up on the cost of donor-supplied funds and to provide long maturity (where the spread is to cover foreign exchange fluctuation risk taken by the sovereign government).

This long-term funding helps keep the annual debt service low. Other options are available, such as “blended rate” programs where grants or sub-market rate loans are given for part of the project, but on the margin the borrower must pay prevailing market rates. This blended rate technique has been used to some degree in the revolving funds in the United States. Whatever the particular mechanics of the on-lending program, it needs to be either (a) integrated into a credit enhancement program or (b), at least, not competitive with it. However, the experience with most donor-backed on-lending schemes to subnational governments has been to implement them without much regard to or involvement by the domestic credit markets, themselves frequently dominated by the central government’s own demands.

Credit Enhancements to Fit Market Conditions

Designing “market-friendly” credit enhancements is not easy in the context of small, short-term oriented and volatile financial

8 In most developed countries, bonds are mostly traded at the well-developed OTC markets among institutional traders.

9 Upon the exercise of a put option by lenders, the options’ counter-party needs to pay out to the lenders as in the case of the guarantor. When the party lacks adequate credit standing, its credit needs to be enhanced one way or another, for example with liquidity support funds. This technique has yet to be used, but is said to be under consideration in the case of TNUDF.

10 See Freire and Petersen, *Subnational Credit Markets in Developing Countries*, pp. 34–35. These include the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia, with Bulgaria and Romania slated to follow.

11 These include the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia, with Bulgaria and Romania slated to follow.

12 The fees start at six years (up to 100 basis points) and run to 15 years (up to 500 basis points).

13 Investments can be in infrastructure sectors such as local transport, district heating, water supply, sewerage, solid waste management, public roads and parking.

Chapter 3

Lessons Regarding Design of Credit Enhancements

Credit enhancements support the development of a domestic market for sub-sovereign finance. These interventions do so not only by helping local governments develop experience in managing debt, but also, more importantly, by encouraging the private sector to risk its own capital in lending to subnational governments, either directly or through market intermediaries. The variety of credit enhancement structures and corporations examined in the six case studies have had varying degrees of success in supporting sub-sovereign finance in their respective countries. The review of the case studies provides a number of insights into how the organization of the enhancement provider and the various techniques it uses can support these objectives. These lessons can be applied elsewhere in the developing world.

Lessons in Designing Credit Enhancement Entities:

Plan for credit enhancement to play a permanent role in a system of sub-sovereign finance.

In the United States, the world's largest market for municipal debt, credit enhancement has played and continues to play an important role. As much as 50 percent of all state and local debt issuances are commercially insured, while another substantial portion receives other forms of external credit enhancement via techniques such as credit pooling. Similarly in developing countries, credit enhancement entities should not be treated merely as a transitory mechanism or "training wheels," but rather as a permanent fixture in a robust capital market. Framing the issue in this way has implications for project design. Donors who desire to provide credit enhancements should identify and work through appropriate local institutions, with an eye to long-term market development. Likewise, project design should provide for the progressive institutional development of the local credit enhancer and the appropriate end-of-project disposition of funds used to enhance credit, etc.

Consider corporate structures where the private sector owns all or a portion of the entity.

A dominant ownership role by the private sector appears to have contributed to the success of LGUGC in the Philippines and TNUDF in India. LGUGC is chiefly (51 percent) owned through the Bankers Association, giving the entity the characteristics of a cooperative operated by part of the guarantee

beneficiaries,¹⁴ and the rest (49 percent) by a state-owned development bank. TNUDF has a similar private/public ownership structure. TNUDF is of particular interest to those seeking to transform existing institutions, in that government officials succeeded in transforming or replacing a public entity (the Municipal Urban Development Fund) into one of mixed ownership. On the other hand, FINDETER has managed to maintain high recovery rates, even while being publicly owned, making it something of an exception to this rule. By the same token U.S. bond banks, which are government owned and operated but which compete for business, offer an example of operational independence. At a minimum, credit enhancers should have effective operating independence from government.

Accept that credit enhancement entities can successfully play multiple roles and avoid inflexible design.

While FINDETER is primarily a second-tier lender, it also plays a retail role by directly providing loans in the financial sector. Even more strikingly, TNUDF seems capable of enforcing a hard credit culture on one hand, while administering grants on the other. Other entities such as FINDETER have found it hard to administer both grants and loans, and so have phased out grant activity. This sort of multiple role-playing represents an entrepreneurial or opportunistic spirit on the part of leadership, which allows the corporations to flourish or at least (as noted above) survive the vicissitudes of unpredictable, nascent markets.¹⁵ It also allows for innovation, as new initiatives can be cross-subsidized by dependable cash cow operations. On the other hand, one should anticipate that a certain degree of specialization emerges as institutions and the markets mature over time. To allow for such entrepreneurship and dynamism, the enabling legislation or articles of incorporation for these entities should allow them some flexibility in the roles that they play (as is the case of the charter for the TNUDF).

Ensure that the design of the entity and its credit enhancement structures are congruent with program objectives.

The design of credit enhancements needs to match both market conditions and the program objectives. For example, a bond bank or credit pooling facility may be more appropriate if one wants to target smaller, poorer municipalities. In contrast, a second-tier credit facility may support a broader objective of developing the entire market for sub-sovereign finance when local creditors can take credit risks of sub-sovereign borrowers. Further, a municipal bond guarantee company may be best suited to allow sub-sovereign borrowers to access institutional investors via bonds, widening the creditor base beyond banks.

¹⁴ Bonds are purchased not only by institutional investors, but also by banks.

¹⁵ One implication of this finding is that it may be "unhealthy" for a young corporation in a nascent market to settle prematurely into a narrow role. Instead of having found its "natural niche," it may merely have marginalized itself by offering uncompetitive financial products.

Provide for the entity to play a broad role in market development. Institutional incentive structures should reward executives for playing a broad role in market development, rather than focusing exclusively on profit and losses from the credit enhancement transactions. The entity's performance should be monitored not only in narrow terms (e.g., the volume of transactions supported), but also in terms of how well the corporation is supporting market development at a broader level (e.g. the number of participating banks). Such a balanced appraisal may be difficult in practice, since bank executives are typically rewarded on the performance of the bank's own balance sheet and loan portfolio, rather than on the growth of an entire market. However TNUDF, FINDETER and other cases offer examples where lead executives have been applauded for their role in spearheading market development.

Allow for progressive institutional growth of the corporation, with adequate technical assistance initially.

In keeping with the ongoing need for credit enhancement as markets mature, credit enhancement programs should build institutional development of the entity into program design. Sufficient resources should be assigned to training of the enhancer's own staff, as well as targeted at clients, the sub-sovereign borrowers and lenders. Product development and marketing are important to the institutional development of the enhancing entity. This may be a good opportunity for collaboration between donors with complementary strength and access to different pots of money (as in the case of the World Bank and the UNDP in the GEF-funded project in Croatia). Development of the credit enhancement entity should be reflected in realistic and staged performance indicators for given target dates. In employing such indicators, it should be recognized that credit enhancements are long-term investments and take time to develop.

Accept that enhancement programs need to achieve a sufficient volume of transactions and typically take a long time to recover costs and to become profitable.

This attribute of "slow-growth" in earnings can be very troublesome in developing economies where the time preference of money is very high and, accordingly, so are required rates of return. In the case of LGUGC, interest income over liquidity reserves account for more than 80 percent of the total income; and guarantee fee income will only be recognized as respective outstanding guarantee policies are amortized toward their maturity. The "patient money" development period before enhancement volume grows is when the low returns on prudently managed enhancement programs (even in the absence of any defaults) makes them financially unattractive and vulnerable. Enhancement providers need to grow from low leverage factors to higher ones, seek risk diversification in the coverage they provide and look to both enhancement fees and the earnings on reserves to become economically viable.

Leadership is important.

While "the human factor" has not been a focus of our case studies, committed strong leadership undoubtedly has played a major role in the success of the credit enhancement entities examined. Among other qualities, the leaders of such successful entities are able to interact effectively with both private sector financiers as well as with public officials at national, local and international levels. The chief operating officers of the LGUGC and INCA have actively promoted their institution's programs, both domestically and internationally. Also, such desirable personal skills are evidenced in, for example, the prominent role of state government in several of TNUDF's pioneering public-private partnerships. Preconditions that allow leaders to flourish include appropriate corporate structures (with independence, a board of directors, etc.) and personnel incentive systems that reward effective innovation.

Product Design and Implementation Arrangement

Consider the desirability and feasibility of establishing a revenue intercept mechanism.

Most of the case studies revealed that an intercept mechanism (whereby creditors receive a claim on intergovernmental payments) played an important role in credit enhancement. Excessive reliance on this device unfortunately may deflect attention away from consideration of the underlying creditworthiness of the borrower or the project; nonetheless, this mechanism has a role to play in sub-sovereign credit and sustainable credit enhancement.

This sort of lockbox approach, which diverts funds before they get into local hands, appears particularly important in countries that do not have a strong tradition of rule of law. Improving legal frameworks to allow for full-fledged bankruptcy and security enforcement mechanisms would take a considerable time. It is important to note that even in developed countries, the use of intercept provisions is widespread and essential to the debt security provisions of local governments highly dependent on intergovernmental transfers. Fears of overuse of intercept provisions to the detriment of providing vital services can be allayed by regulations limiting the proportion of such payments that can be used to secure borrowings. This could also minimize potential political risks for sub-sovereign government borrowers to applying an intercept; and lenders to enforce such arrangements.

Design risk-sharing measures to appropriately fit specific debt market circumstances.

In the cases examined, the degree of credit risk taken by commercial lenders of individual sub-sovereign borrower credit risks differs. In the case of FINDETER, credit risk is fully borne by commercial lenders, whereas in the case of the LGUGC-guaranteed bonds, no credit risk is borne by the bondholders. Further, risk can be borne at differing levels in the

Box 2: Credit Ratings and Enhancements

Credit Rating of Credit Enhancement Entities:

The credibility of guarantee programs depends of the perceived creditworthiness of the guarantor to meet guarantee payment claims. Correspondingly, the ability of credit enhancement intermediaries to raise debt capital in the markets depends on their perceived creditworthiness to service debt on time and in full. In developed financial markets, credit ratings from major independent rating agencies highly influence credit perception by market participants of the guarantor or the bond issuer. This dependency is in part due to various prudential requirements that are written into laws controlling financial institutions and fiduciary responsibilities. Although many developing countries lack independent rating agencies, the use of third-parties in screening credits has not yet been well established in general.

Of the entities studied, the LGUGC is not rated (and has not issued any bonds); nor the GFE-funded partial guarantee programs. In fact, the creditworthiness of LGUGC and its

guarantee programs with it as the guarantor are backed by cash reserve and very prudent leverage (outstanding guarantee commitments versus equity/reserve). TNUDF, INCA and FINDETER have obtained credit ratings for their bond issuances. TNUDF is rated by the Indian Investment Information and Credit Rating Agency (ICRA) and rates at "AA"; by Crisil, the other Indian local rating agency, at A+. INCA is rated by Fitch at AA- on its long-term rand senior obligations and A on its junior obligations. FINDETER's domestic-pay rating of Duff Phelps of Colombia is "AAA." (These are all their local currency ratings, which differ from their foreign currency ratings.¹⁷) The debt issues of bond banks and revolving funds in the U.S. are rated by the rating agencies, but their structures, while informative in terms of security structures and operations, are not comparable in terms of ratings to those found in developing markets.

Credit Rating of Sub-sovereign Borrowers:

Sub-sovereign finance may develop based on the banking system, where banks typically use their own credit appraisal

system and loans that normally do not require borrower rating. At the same time, there are substantial benefits for sub-sovereign governments (and entities) to eventually obtain credit ratings, not only to enable them to access bond markets and thereby access long-term debt to match infrastructure investments, but also to implement a market-based, effective governance tool. Obtaining and maintaining an adequate credit rating by the sub-sovereign government would, for example, facilitate private participation in local infrastructure, which requires a credible local contractual counter-party. Such action would alleviate the fiscal burden of the sub-sovereign government and encourage private investments by lessening concerns for adverse increases in local taxes and charges. (See Box 3 for potential donor assistance in this area.)

partial credit guarantee programs. The appropriate level of partial guarantee depends on circumstances. The goal is to offer lenders a sufficient level of reassurance, while still requiring them to perform adequate due diligence (as they have been encouraged to put their own capital at risk).

Promote effective credit assessment.

At the heart of any credit enhancement technique is the evaluation of the credit risk to the enhancer providing its coverage. The design of the enhancement will influence the nature of the evaluation. For example, where the enhancement is extended to the original transaction itself, the focus is on the borrower and the project. LGUGC, which provides comprehensive guarantees, has established an internal credit rating system to assess the creditworthiness of the borrower and the level of guarantee fees to be charged. INCA also employs sophisticated rating systems. Bond banks, by the same token, must undertake a careful examination of the underlying credits that make up their portfolio in deciding on necessary reserves (or other enhancements) in order to maintain their credit rating. INCA and TNUDF are examples that underscore the significance of credit evaluations, since they borrow in the markets and need to maintain credible portfolios in order

to enjoy their credit ratings. (See Box 2 for a discussion of credit ratings).

On the other hand, partial loan guarantees to the originating banks and certain secondary market supports will tend to rely on the credit appraisal capacity of these banks (in the case of partial guarantees), or focus on that *counter parties'* creditworthiness (when banks take borrower credit risks in full).¹⁶ For example, FINDETER provides long-term capital to lending banks, but requires them to service the loans and to assume the full credit risk. The partial guarantees on the energy efficiency loans means that the lending bank has a risk stake in the performance of the loan. It is intended that these enhancement approaches will encourage prudent behavior by the loan originators.

Provide subsidies and other services as appropriate.

Enhancement providers often find themselves providing ancillary services to borrowers or the financial markets. Where the enhancer is a state-owned entity or department of the national government, it may provide certain levels of training for local stakeholders as part of market development efforts. (See Chapter 4, page 21, types of technical assistance that the government may conduct in collaboration with donors.) In the

¹⁶ Financial institutions are regulated to varying degrees in developing countries. While published bank ratings are available for larger units, sometimes small ones must be examined using some version of the standard CAMEL technique.

¹⁷ Foreign currency rating considers all credit risks including the currency transfer/convertibility risk. To that extent, foreign currency rating is subject to "sovereign ceiling" or foreign currency rating of the sovereign government. The foreign currency long-term rating of India by international rating agencies is A2 (Moody's), BBB+ (Standard and Poors) and A- (Fitch); South Africa is Baa2/BBB/BBB; and Colombia is Ba2/BB/BB.

case of INCA, that private entity, as part of its credit recovery mechanism, will work with consultants in restoring creditworthiness of sub-sovereign borrowers. A credit enhancer may even be involved in the distribution of grants. While this is more common for a state-owned entity, even some private-public partnerships may be likewise employed. For example, the public-private entity TNUDF disburses some grants along with its loans, an attribute sometimes found in state revolving funds in the U.S. However, while such a related activity takes advantage of the enhancer's knowledge of the sector, it may represent a conflicting objective. Integration of loans and grants and the extension of enhancements offers an opportunity for favoritism or exerting influence (although we hasten to add we found no such cases in our reviews). Most important in the regard would appear to be the independence and professionalism of the enhancers. While this depends on the political environment, it is a major argument for having enhancement activities carried out by either a public-private co-operative or the private sector itself.

Chapter 4

Possible Modalities of Donor Agency Support

Category of Donor Support

Previously, municipal finance support from lending donor agencies such as the World Bank has been chiefly in the form of on-lending. The on-lending intermediary has typically been a specialized institution, such as a municipal development fund or a state-owned policy bank, which operates a window for lending to local governments and entities.

As reviewed in this discussion paper, there has been a limited number of local guarantee and credit enhancement schemes in developing countries aimed at facilitating commercial debt access by sub-sovereign governments and borrowers. Many of the guarantee/credit enhancement case examined in the paper in fact have benefited by support from one or more multilateral and bilateral donors in institutional set-up, program inception and operation. The roles that donors can play may be broadly categorized as below:

- *Provision of seed capital to establish guarantee programs and financial institutions that can raise debt capital in the private financial market:* Such seed capital could be used as source of specialized reserves to meet guarantee calls (e.g. GEF-supported partial credit guarantee programs). Or, it can supplement the equity of the financial institutions (e.g. provision of subordinated debt capital for INCA). These capital funds enhance the credit standing of the guarantee programs/financial institution intermediaries.
- *Provision of a back-stop credit access for a local guarantee program to supplement its guarantee reserve (such as in meeting the cash flow needs associated with guarantee calls):* This could be arranged on a risk-sharing co-guarantee or “reinsurance” basis, where a pre-determined share of guarantee claims would be taken by the co-guarantor (e.g. LGUGC co-guarantee agreement with USAID-DCA). It might also be provided by a donor through a stand-by liquidity loan arrangement with triggers for disbursement tied to a certain degree of reserve depletion, for example.
- *Provision of parallel long-term debt financing for the financial institutions to enhance their liabilities profile to match better with their asset portfolio:* This method

employs co-financing approaches by procuring debt funds in the local commercial debt markets (often with shorter maturity), and procuring the remainder as long-term debt through a specialized financial institution. The source of these long-term funds would be donor-based (e.g. World Bank loans to TNUDF and FINDETER). This approach would differ from more-typical donor on-lending via a financial intermediary, in that those sub-sovereign financial institutions are to establish credit standing and raise commercial debt capital in the local financial markets.

- *Provision of technical assistance in the setting up of a guarantee and other credit enhancement programs and financial institution intermediaries:* This assistance includes designing of specific credit enhancement programs and associated feasibility studies, as well as financial support for the initial start-up period until programs and institutions become self-financing.¹⁸

This study has examined the case of mobilizing commercial debt finance at two levels; at the individual borrower level (LGUGC, GEF-supported PCG programs); and at the pool/intermediary level (FINDETER, TNUDF, INCA, U.S. bond banks). Credit enhancement can be conceived at the level of individual debt and at the level of the subnational debt portfolio as a whole; or at the level of financial intermediary institution. Often, the layers of credit enhancement are applied at the same time— as, for example, in the case of a matured guarantee company accessing commercial debt funding to supplement its reserve/operation capital. In fact, financially sustainable schemes are often the result of layers of credit enhancement structure at different levels, depending on the creditworthiness of borrowers and the needs and perceptions of commercial creditors at each level.¹⁹

The next sections enlarges the discussion by schematically examining the possible modalities of donor support for local credit enhancement entities and programs. We also consider the roles donors might play in designing specific support measures for sub-sovereign finance in a specific client country. *While various multilateral and bilateral institutions can provide (and have provided) guarantees directly to specific transactions, stand-alone transactional support without the involvement of the creation of a local guarantee program or financial intermediary is not discussed in this paper.*

18 While donor provision of grant support as operational and/or capital subsidies for certain sub-sovereign infrastructure projects can serve an important role, such grant support is not discussed here as it is not unique to guarantee/credit enhancement schemes.

19 As discussed in this paper, commercial debt normally has the first layer of credit enhancement through security packages for the benefit of lenders including, in the case of municipal borrowers, a tax and revenue pledge, a commitment to intercept central/state transfer, a debt service reserve escrow account, etc.

Donor Support for Guarantee Programs

For credit enhancement schemes at the individual borrower level, which typically are loan/bond guarantee programs, potential modalities of donor support could be as follows:

1. Provision of seed capital reserves to help the guarantor achieve the creditworthiness adequate to perform effectively.

When operating in the market segment where the borrower credit risk is perceived high (e.g. GEF-funded PCG programs for new business, such as energy service companies or for small municipal entities), the guarantor may initially operate prudently with a ratio of one to one leverage. The amount of guarantee commitment outstanding is capped at the disbursed and outstanding capital reserve amount. As the guarantee program sets a track record, such leverage could be gradually increased without undermining the creditworthiness of the guarantor. The initial capital contribution of a certain size is important in providing comfort to guarantee beneficiaries, that is, the lenders and bond investors. It is also indispensable for the guarantee facility to earn investment income to help defray operating costs, which tend to be high in initial years due to substantial market awareness and product promotion activities. During this period, guarantee fees are a limited source of such revenue until the transaction volume increases.²⁰

2. As an alternative to the initial capital infusion, donors can extend a stand-by loan agreement with the guarantor, so that the guarantor can withdraw funds when required.

Triggers for a draw down could be (a) pre-defined growth in the guarantee commitment, or (b) reserve depletion and a resulting need for increased reserves so as not to exceed the pre-defined maximum leverage ratio. The donor would support the creditworthiness and financial sustainability of the guarantor as a whole through such contingent funding support.²¹

Alternatively, a donor may enter into a risk-sharing arrangement with the guarantor to partially backstop the guarantee commitment. This might be at a pre-defined sharing ratio or of varying modality (e.g. pro-rata, first-loss, second loss); or to provide a co-guarantee for only certain qualifying loans enhanced by the guarantor. The difference is that the former is for guarantees issued by the guarantor itself partially backstopped by the donor, and the latter is a separate guarantee issued by the donor for the same loan. These alternative modalities may be suitable when the donor wishes to target its support for certain segments of borrowers or sectors, rather than support all the clients of the guarantee program.

Joint guarantees (that is, one issued by the donor in addition to the enhancer) may be more efficient when the beneficiary commercial lenders view the direct donor guarantees as more valuable.²²

3. “Private” international guarantors have provided some guarantees for local currency debt for sub-sovereign projects.

This form of guarantee support (either through offering guarantees or setting up local guarantee companies) has taken place in some advanced developing countries, including Mexico. Donors can possibly mitigate certain political risks or work with them (and their local counterpart institution) to enable the development of foreign investment in local guarantee companies/programs and utilize international expertise in sub-sovereign credit enhancement.

The cases examined in this paper feature only comprehensive credit guarantees (i.e. covering full debt service payments, such as guarantees offered by LGUGC²³) or pro-rata partial credit guarantees. But, there are other forms of guarantees that may be utilized, if not for municipal finance *per se*, then for various infrastructure financing. They may include variants of partial credit guarantees and partial risk guarantees (see Box 3).

Donor supports, discussed above, are relevant for any guarantee company or guarantee program that line up different local currency guarantee products. Figure 7 summarizes the above potential intervention of donor financial support.

Donor Support for Enabling Intermediary Access to Commercial Debt Market

For credit enhancement at the portfolio level working with a pooling fund or a specialized commercial financial institution, possible modalities of donor support could include the following:

1. The provision of seed capital, reserve or subordinated debt can enhance the credit standing of the fund/financial intermediary in the eyes of senior commercial creditors. This injection could be provided directly by a donor (as was the case of donor purchase of subordinated debt of INCA). Alternatively, this could be done through the provision of a loan to the government, which in turn, infuses capital to the reserve. This solution is especially applicable in the case of a pooling fund supported by the state/sub-sovereign governments,

In the U.S., in order to achieve a triple-A rating in the market, a weaker SRF's loan reserves could be as high as 70 percent of

20 For example, in the area of trade finance/SME support, IDA-funded capital reserve, through up-front disbursement, helped create a regional guarantor, the African Trade Insurance Agency (ATI), which issues political risk guarantees.

21 For example, in the area of disaster insurance, the World Bank (IBRD) provided a contingent loan for the initial capital support for the Turkish Catastrophic Insurance Pool (TCIP), a newly established state-owned and privately managed local insurer in Turkey.

22 The local credit rating of the donor guarantor may be better than that of the local guarantor when the guarantee company is leveraged over one (since the credit standing of the guarantor with cash reserve backing guarantee liabilities one-to-one would be as good as that of any international donor guarantor).

23 LGUGC offers comprehensive guarantees covering floating-interest notes, where interest payment cover, however, is capped at certain rates as part of internal prudential guidelines.

Box 3: Partial Credit Guarantee Variants and Partial Risk Guarantees

Partial credit guarantees can be flexibly structured to mitigate specific credit/liquidity risks for local banks and bond investors in a wide range of modalities, while at the same time encouraging the lenders to take that part of borrower credit risks that they can and willing to take. These variant forms of partial credit guarantees can include:

- pro-rata guarantees to cover a pre-defined portion of debt service payments over the life of debt: this may be appropriate when commercial lenders have general concern for borrower credit risk, expecting the guarantee to share the risk and supplement an inadequate security package;
- late maturity payment guarantees: this may be appropriate when lenders are uncomfortable with the borrower credit risk out into the future; the guarantee can stretch the maturity of loans/bonds;

- guarantees covering a certain amount of debt service payments²⁴ (e.g. interest and principal amortization-payments for two-years' worth); this may be appropriate when lenders have concern about a borrower facing a temporary liquidity crunch for servicing debt over a limited period (e.g., impact of recurring macroeconomic instability on sub-sovereign borrowers);
- a put option or call of take-out financing: this may be appropriate where banks and institutional investors are unwilling to extend long-term credit due to the lack of matching funds.²⁵

Partial Risk Guarantees cover commercial lenders from debt service default resulting from the non-performance of specific government obligations as spelled out in concession and other project/regulatory agreements. They are relevant for commercial borrowing by public-private

municipal utilities/enterprises or private projects at the sub-sovereign level. Government contractual obligations vary depending on project, sector and country circumstances, and may include the following in the case of sub-sovereign infrastructure projects:²⁶

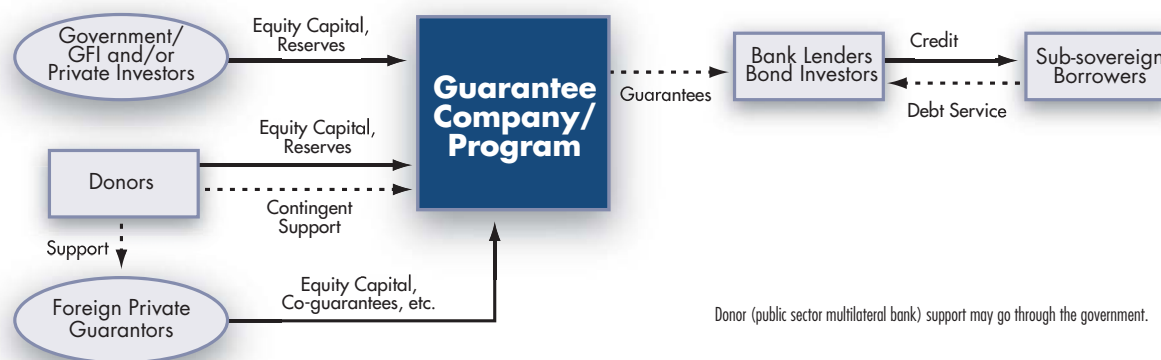
- maintaining the agreed regulatory framework, such as a utility tariff formula
- payment of subsidies; or minimum revenue guarantees for transport projects
- compensation for government actions/inactions or political events having an adverse impact on the project, including material changes in laws and regulations, taxes and incentives, etc.
- certain uninsurable force majeure events; civil disturbance
- expropriation.

its liabilities. In developing countries, a triple-A rating may not be necessary for a SRF when the objective is to allow funding access to municipalities, rather than providing subsidized loans backed by cheap financing costs. Such a fund needs to balance the benefits of higher target credit rating (thus reducing financing costs) versus the resulting loan interest the fund needs to charge to stay liquid. This optimal balance should be tested in the market with prospective lenders to the fund and rating agencies, and in doing so, would decide an appropriate level of over-collateralization required for the fund.

2. Similar to the case discussed, donor support can be through the provision of a contingent loan where draw down can be triggered by, for example, certain levels of reserve depletion.

3. As observed in the cases examined, the provision of a parallel loan with a longer-term maturity may offer comfort to the private-sector creditors of the fund/financial intermediary from the asset-and-liability management perspective. However, when the donor loans are on a senior basis, this is much weaker comfort for commercial creditors, compared with donor

Figure 7. Modalities of Donor Support for Guarantee Programs

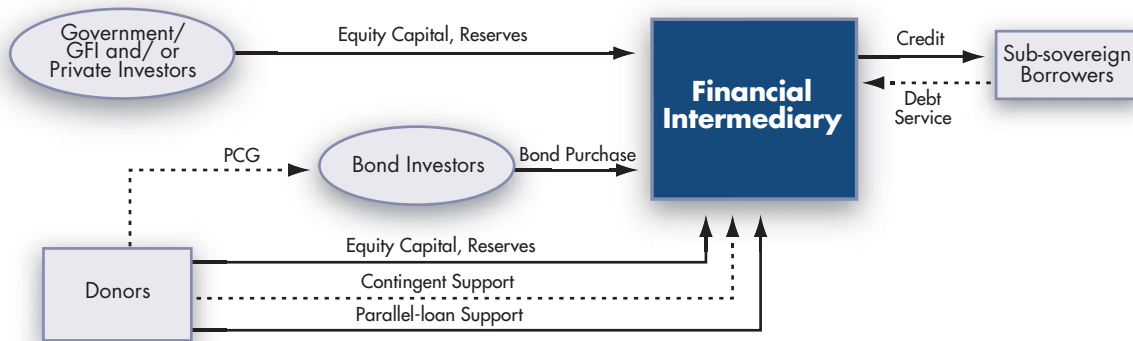


24 This partial credit guarantee may be provided on a rolling basis which, if not called, will be moved to subsequent debt service payments.

25 For example, Brazil's development bank, BNDES, provided put instruments for two power project and two transport project transactions, where the lenders have an option to sell the loan to the guarantor at a certain date. For further discussion on partial credit guarantees, please refer to World Bank Energy and Mining Sector Board Discussion Paper No. 9, Foreign Exchange Risk Mitigation for Power and Water Projects in Developing Countries (December 2003)

26 In addition, foreign exchange convertibility/transferability and civil disturbance risks are standard political risks typically covered under the PRG provided for foreign currency loans.

Figure 8. Modalities of Donor Support for Intermediary



Donor (public sector multilateral banks) support may go through the government.

loans on a subordinated basis, which can improve the debt service coverage ratio for senior creditors.

4. It is conceivable for a donor to offer partial credit guarantees directly to commercial bank lenders and bond investors to the fund/financial intermediary. While the fund/intermediary should be set up with certain over-collateralization with adequate capital/reserve to achieve targeted credit standing, lenders may have concern over the future ability of a newly established fund to operate profitably and maintain over-collateralization. A partial credit guarantee (especially that for the longer-term maturity payments) of a credible third-party guarantor would permit the new fund or the intermediary time to establish a credit record in the market. It would also stretch the debt maturity and lower debt service and interest rate costs below those otherwise possible on their own credit.

Issues in Structuring Donor Support

Donor instruments: A few donors can provide grant funds (e.g. USAID), but the majority of multilateral banks and bilateral agencies provide loans and guarantee products. In assisting various credit enhancement schemes suitable for specific sub-sovereign finance situations in developing countries, the financial feasibility of such schemes need to be assessed up-front. This assessment includes operating and other expenses, feasible product pricing, expected default experience and financing costs for funding, including potential donor support. In the case of guarantee programs, because the guarantor

would earn only guarantee fees, donor support through grants,²⁷ guarantees, contingent loans or concessional credits would be more feasible than standard loan products.²⁸ This is especially true in the initial years of operation when leverage may be limited, thus limiting the amount of revenues and the capacity of the program to repay donor contributors. In the case of a pooling fund or a financial institution intermediary, the asset portfolio of pooled sub-sovereign credits needs to pay down financial costs associated with commercial debt, equity returns (if invested by private investors) and any donor support. Such start-ups may take years to become profitable.

Foreign exchange risk: Most donor lenders primarily provide hard currency loans with a few exceptions.²⁹ However, sub-sovereign borrowers normally have only local currency revenues and largely lack expertise in managing foreign exchange exposure. Liquid foreign exchange hedging instruments do not exist in many developing countries. Although interest rates of hard currencies have been low in recent years, local currency devaluation could make these low interest-rate loans expensive in local currency terms. In some projects, donors, such as the World Bank, have arranged to have the central government take the foreign exchange risks associated with foreign currency donor loans, so that on-lending loans be made in local currency. (It should be noted that because of the absence of market-based hedging instruments, pricing would only be a calculated speculation.³⁰) Multilaterals, such as the World Bank and IFC, are also keen to explore the use of partial credit guarantees more actively in supporting sub-sovereign local currency debt.³¹ Guarantees are more flexible

²⁷ However, grant funds are extremely limited in supply and may not be available.

²⁸ For example, IDA credit disbursed to the guarantee facility up front to build reserve can help supplement the operational revenue of the guarantee facility with a positive interest rate differential between the reinvestment income and IDA fee.

²⁹ Due to internal risk control purposes, multilaterals (only few) would offer local currency loans only when cross-currency swaps can be available to hedge their currency exposure fully, or when the donor can raise funds in the same currency to match the loan exposure.

³⁰ When a liquid long-term cross-currency swap market does not exist in local currency (i.e. against US dollar) to provide benchmarks, such currency conversion or foreign exchange guarantee fees assessed by the government would likely be imperfect.

³¹ Though on a transaction-by-transaction basis, IFC offered a partial credit guarantee along with a private international guarantor to a Mexican municipal water company for their domestic bond issuance. The World Bank is contemplating the provision of partial credit guarantees for local municipal bond issuers on a facility basis in some ECA countries.

Box 4: Potential Areas for Donor Technical Assistance

- Diagnostic study of country's legal, regulatory and institutional frameworks for sub-sovereign finance: to review government structure and fiscal policy, sub-sovereign borrowing powers, budgeting and managing capacity, financial accountability and disclosure, bankruptcy framework, financial market status and regulations, credit analysis capacity; to assess specific impediments and opportunities; to recommend feasible policy action steps to remove barriers; and to identify institutional champions to promote sub-sovereign market access.
- Diagnostic studies of (selected) sub-sovereign governments to review fiscal/budgetary performance, financial/debt information, investment plans, institutional/administrative/legal information, economic/social profile; to assist the client sub-sovereign government to institute borrowing/investment programs in a financially sustainable manner, and to compile information packages required by creditors and rating agencies. To review borrowers' general obligation debt service capacity; to explore feasibility of revenue-based (e.g., special tax revenues, user charges, project revenues) borrowing and assess the feasible/effective modality of security available for creditors.
- Training in municipal infrastructure financing: Conduct training courses on various aspects of sub-sovereign financing as described above and infrastructure financing (including private concessions) to enhance the planning and implementation capacity of sub-sovereign governments, regulatory capacity of government agencies and credit analysis capacity of commercial lenders/institutional investors.
- Dissemination of best practice: to assist the central government in devising effective processes and mechanisms to disseminate the experience of advanced sub-sovereign governments in the country, including the identification of which authorities and organizations (such as associations of cities) are best suited to take such initiatives; and what form of dissemination would likely be most effective to progressively reach out to smaller sub-sovereign governments.
- Designing a workable credit enhancement scheme: Based on country's existing sub-sovereign finance circumstances and institutional set-ups, assist government stakeholders (or a higher-level sub-sovereign government, government-owned or private financial institutions, etc.) to design and establish a credit enhancement corporation and/or scheme(s) to reflect the lessons learned discussed in this paper. Such assistance should address details of implementation issues and marketing strategies to enhance the awareness of sub-sovereign borrowers/commercial creditors.

instruments, in that funding needs would occur only if guarantees are called, limiting the risk of currency exposure of the donors to that extent.³²

The role of sovereign government: The sovereign government, and in some cases, a state-owned financial institution, can play major catalytic roles in introducing guarantee and credit enhancement schemes targeted at sub-sovereign finance. While cream-of-the-crop creditworthy sub-sovereign borrowers can access the market on their own, the credit enhancement schemes discussed here are designed to assist marginal borrowers. In these cases, government support, directly or indirectly, may be necessary. In addition to allowing the use of the intercept for central transfers, which has been the key component of security package for sub-sovereign borrowing, the government can take the lead in the establishment of domestic, self-sustainable credit enhancement schemes. The public-sector window of multilateral banks, which operate through the central government, can provide the government with technical assistance (see Box 4)³³ and the financial support discussed in this chapter.

In structuring credit enhancement schemes, government financial support should be structured to *leverage commercial debt resources*; and the role of state-owned financial institutions

should be to help mobilize private capital sources for sub-sovereign finance, rather than competing with them. When a sub-sovereign higher-level government becomes sufficiently competent and creditworthy (e.g. state government for TNUDF, U.S. states), such an entity may be able to play the leading role. The role of the central government then switches to the mobilization of donor support and dissemination of tested practices to other sub-sovereign governments.

32 The local currency partial credit guarantee operation of USAID-DCA carries the US dollar aggregate cap; the IFC Municipal Finance Group provided partial credit guarantees for the local currency bond issue of a Mexican municipality/municipal water companies with a US dollar cap. The World Bank is exploring local currency partial credit guarantees without a cap; it would be indemnified by the sovereign government for repayment immediately, or as the Bank may otherwise direct.

33 The requirement for sovereign guarantee is nothing new in that public sector multilateral banks have provided loan support to numerous projects at the sub-sovereign level in the past through lending to the central government for on-lending or with the central government guarantee.

Chapter 5

Summary Advantages of Credit Enhancements

As presented in this paper, credit enhancements, that is techniques that are designed to reduce specific risks of debt transactions, have a number of advantages. When well designed and implemented, credit enhancements can accomplish the following:

- *Mobilize and leverage resources:* Credit enhancement programs are intended to leverage limited capital (whether such funding is public or private) by mitigating risk and increasing the overall creditworthiness of a borrower or a specific debt transaction. Depending on the specific approach, the credit enhancement may be efficient in either an economic sense or a financial sense or, best of all, both. Specifically, to the degree that enhancements mitigate risks that are caused by financial market imperfections (e.g., lack of adequate information on sub-sovereign credit standing) rather than substantive “real economy” factors, they should assist in a better allocation of credit. They should pay for themselves by the efficiencies achieved.
- *Are very cost effective:* Related to the previous point, credit enhancements can be extremely economical and efficient. Since the enhancements themselves do not substitute for the provision of the credit — only offset a portion of the risk —, they increase flows of capital considerably, given a small outlay of funds. To the degree that fees charged are reflective of credit risk and costs of operation, a credit enhancement scheme’s capital needs are only a fraction of the overall exposure, depending on the risks of default and the cost of holding reserves.³⁴ Application of the portfolio approach provides a reduction in overall risk.
- *Support market development:* A major argument for the use of enhancements is that they are “market friendly,” and work through the private capital markets as opposed to supplanting them. This strategy has been a shared goal of many international donor institutions and client countries to replace direct lending with use of market mechanism. Ultimately such a strategy would enable client countries to establish self-sustainable financing mechanisms to mobilize domestic capital for sub-sovereign infrastructure investment needs.

- *Are adaptable and targeted:* Enhancements can be designed so as to mitigate a number of specific risks perceived by targeted creditors. They can be employed at the level of individual sub-sovereign debt borrower or at the level of portfolio-based borrower, and aimed at various segments of the commercial debt market. They can be applied to debt for specific sectoral uses or made available for only certain classes of borrowers.

- *Promote a hard credit culture:* More generally in the case of subnational government borrowers, the pillar of many credit enhancement programs is to wean them away from concessional interest rates and terms and to face market-determined or market-clearing rates and terms, and to practice cost recovery policies that entail the cost of capital. Part of this credit culture is instilling the required fiscal discipline in borrowers. This means making them more accountable and transparent in their financial practices and disclosures, factors that will condition their ability to enter the capital markets.

While all these advantages are compelling, the degree to which they are realized depends on the specific design of the enhancement program and its execution. Misapplied, loaded with hidden subsidies or subjected to moral hazard, enhancements can be abused in much the same way as direct lending programs. Fundamental is the concept of proper pricing and adequate provisioning of reserves against risk in the underlying loans.

Furthermore, enhancement programs can present obstacles for existing lending organizations, both domestic and international, that rely on the interest and fees earned in on-lending activity. Such organizations may have either monopoly powers or substantial control over where and how subnational government funds from intra-governmental transfers are deposited, and to which local units lending is done, often on highly concessional terms. As a rule, credit enhancers are purely financial intermediary corporations, short of many other advisory and grant-giving duties. They are tiny in size and staffing in comparison to existing development funds or special window lending programs.

³⁴ This feature is also of importance to some bilateral donors that receive appropriations. The USAID DCA program, following the mandate of the Federal Credit Assistance Budget Act of 1991, only needs to set aside against its appropriation the present value of expected defaults under its program. These charges are small in comparison to the amount of the credit enhancement extended, which means USAID/DCA is higher leveraged from an aid standpoint.

Appendix A: Case Studies

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Unless noted, all dollar amounts refer to United States dollars; a billion in this context refers to a thousand millions (1,000,000,000).

Appendix 1

Case Study: Colombia—Territorial Financing Institution (FINDETER)

BACKGROUND: SUB-SOVEREIGN FINANCE IN COLOMBIA

Colombia is a country of around 44 million inhabitants, 75 percent of whom live in urban areas. In 2002, Colombia's annual GDP per capita stood at \$1,850.

Colombia is a unitary state. It is divided into 32 states (departments). These in turn are divided into 1,064 municipalities, of which four are special districts with the status of department.¹

For several decades Colombia has been engaged in a process of decentralizing resources and responsibilities to the subnational level. The 1991 constitution marked a milestone in that process. It called for transfers of central government revenues to subnational governments to increase from an already substantial 36.5 percent of current revenues in 1993 to 46.5 percent in 2002.

The result of this and other recent fiscal changes has had different results at the subnational level. From 1993 to 1996, departments became more dependent on revenue transfers; own-source revenues (largely from excise taxes on liquor, tobacco, etc.) declined in both real value and relative importance. On the other hand, during this period the municipal sector managed to increase its collection of own-source revenues (largely from property taxes and taxes on industry and commerce), even while benefiting from a substantial increase in transferred resources.²

The net impact of these changes is to make Colombia one of the most fiscally decentralized countries in Latin America in terms of subnational government spending as a proportion of total government spending. It should be noted that these transfers have been heavily earmarked for certain national priorities, including health and education.

Sub-sovereign Debt

Colombia is something of an anomaly in the developing world in having developed an active market in sub-sovereign debt. The market grew rapidly in the early 1990s with market liberalization and the increasing financial strength of subnational governments.

The *Financiera de Desarrollo Territorial* (FINDETER), or Territorial Financing Institution, also played a role in this development, as its financial intermediation helped introduce a number of banks to municipal lending. By 1995 the market for sub-sovereign debt had risen to about \$5 billion. Of that total, the national financing system (including the National Energy Bank but excluding FINDETER) accounted for 56.3 percent of the total. Loans from international financing insti-

tutions accounted for an important, but declining, share of the total (31.6 percent), as Bogota amortized loans from international sources. In 1995 FINDETER accounted for 7.4 percent of the total market in sub-sovereign debt. At present FINDETER has increased its market share to around 13 to 15 percent of the total.³

FINDETER: A Second Tier Lending Facility

Organization and Antecedents

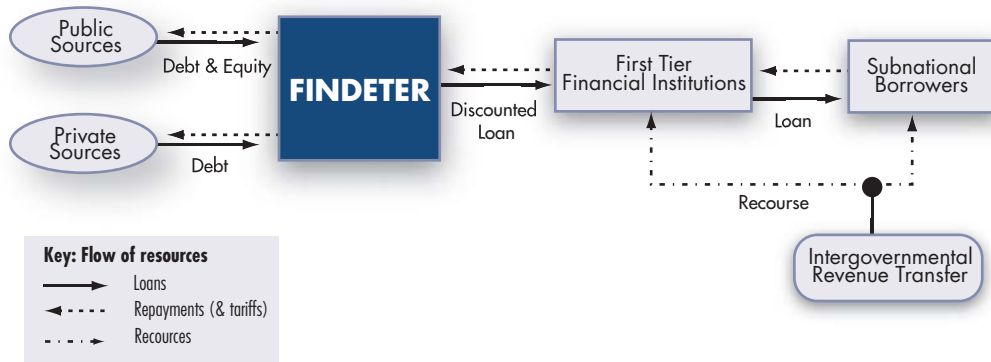
FINDETER was established in 1989 by Law 57, and officially began operating in 1991. Its predecessor was the Urban Development Fund (FFDU), a window for financing infrastructure that opened within the National Mortgage Bank in 1975.

1 Bogotá, Cartagena, Barranquilla and Santa Marta.

2 Echavarría et al, *Decentralization and Bailouts in Colombia*, (IADB, 2000), p. 5. Agglomerated data for the municipal sector, however, tends to mask the fact that these increases were not universal but rather were concentrated in larger cities. See Frank, *The Case of Colombia*, pp. 27-31.

3 Antonio M. Gómez, *FINDETER* (1997); and Juan Carlos Dugan, *FINDETER* (2004). A World Bank consultancy planned for 2004 will further document the current size of the market and FINDETER's share therein.

Figure A-1. FINDETER as a Second-Tier Financial Institution: Flow of Funds



FINDETER is a legally independent, quasi-public financial institution. As of 1998, the Republic of Colombia owned 91.5 percent of its shares, with the remaining 8.5 percent owned by Colombia's departments.

FINDETER's highest authority is a board of directors, composed of four central government officials, with the Minister of Finance chairing the board, and two representatives of subnational entities. The President of FINDETER leads senior management, including senior executives in charge of principal operational areas. The bank's headquarters is in Bogotá, but it is assisted in providing regional coverage via 10 branch offices. A recent reorganization reduced the number of employees nationwide from around 180 to approximately 120.

Role as Second-Tier Lender

FINDETER primarily operates as a second-tier development bank: it rediscounts loans that commercial banks make to local borrowers. Under this arrangement (see Figure A-1), a subnational government (or one of its agencies or enterprises, including private or mixed-capital companies) applies to a first-tier lender for a loan. FINDETER appraises the proposal and authorizes the first-tier lender to lend to the requesting entity. The bank makes the loan to the subnational government.

The bank then receives a loan of that amount at a discounted rate from FINDETER. The subnational borrower continues to repay its debt to the first-tier bank under the terms and

conditions of the original loan. The bank remains responsible for servicing its rediscounted loan from FINDETER, regardless of its own repayment experience from the local borrower. The first-tier bank thus absorbs 100 percent of the credit risk.⁴ This second-tier role distinguishes FINDETER from most municipal development funds (MDFs) that lend directly to local governments and assume the credit risk.

FINDETER's own credit risk is based on the credit risk of the banks whose loans it acquires. For this reason, FINDETER employs criteria to determine to which tier-one financial institutions (FIs) it will potentially lend. While these criteria may vary somewhat over time and by source of funding, eligible FIs typically share the following characteristics:

- habitually receive and invest voluntary savings from the public;
- are supervised by, and are in good standing with, the Banking Superintendency; and
- have been appraised by FINDETER as being creditworthy, able to assess sub-sovereign credit risk and having appropriate financial controls, especially with regard to portfolio performance.⁵

At present FINDETER has signed agreements with some 32 tier-one banks.⁶ During the last 10 or more years of operation, only two participating banks have gone bankrupt, both in 2000, a year of economic difficulty. These events did not have a substantial and long-lasting effect on FINDETER's bad debt

⁴ Examples exist where an end borrower defaulted on its repayments to a first-tier bank (e.g., a troubled public utility in Barranquilla that was ordered by the Superintendency of Banks to temporarily stop making loan payments), but where the first-tier bank continued to make loan payments to FINDETER. Juan Carlos Dugand (2004).

⁵ The World Bank, Project Appraisal Document (PAD) on a Proposed Loan to FINDETER (1998), p. 9.

⁶ Ferguson, FINDETER, p. 5.

Table 1: "Traffic Light" System for Regulating Subnational Borrowing

Rating	Indicator	Restrictions on Borrowing
Green	Interest as % of operational savings* < 40% & debt stock as % of current revenues ≤ 80%	No restrictions
Yellow	Interest as % of operational savings 40 – 60% & debt stock as % of current revenues ≤ 80%	Lending only with Ministry of Finance authorization
Red	Interest as % of operational savings > 60% or debt stock as % of current revenues >80%	No lending, unless agrees to adjustment plan

* Operational savings are the surplus from the operating budget (i.e., what is left over after operating expenditures are subtracted from current revenues), carried over to the capital budget where it can service debt.

Table 2: Credit Activity 1998-2003 (\$US million)

Credit Activity	1998	1999	2000	2001	2002	2003
Approvals	195	235	147	99	142	347
Disbursements	152	111	100	58	46	187

Source: FINDETER, Division of Monitoring & Assistance, 2004. Note that disbursements lag approvals.

Table 3: Rediscounting Activities, by Source (2003)

Source	% of Disbursements
Current Revenues – Automatic Rediscounting*	67.19
Current Revenues – Traditional Rediscounting*	16.27
Refinancing / Debt Substitution	10.22
Second Municipal Development Program (WB)	2.64
Second Municipal Development Program (IADB)	2.39
Current Revenues – Fiscal Cleanup (Compensated Rates)	0.91
Current Revenues – Fiscal Cleanup (Other)	0.37
TOTAL	100.00

* For discussion of automatic versus traditional rediscounting, see below.
Source: FINDETER, Division of Monitoring & Assistance, 2004.

ratios—in part because the institution's portfolio is spread out among many banks (also see enhancements below).

Managing Risk Exposure

FINDETER is constrained in its exposure to risk. Colombian law requires FIs such as FINDETER to maintain minimum ratios of equity-to-total funding of nine percent.

At present (April 2004), FINDETER is maintaining a ratio of around 40 percent. This level is actually lower than peak levels during recent years when FINDETER was less active, but

still is substantially higher than legal minimums. This relatively high level is due to various factors:

- (i) FINDETER does not distribute profits;
- (ii) the Government of Colombia initially serviced a portion of the debt on the World Bank's project lending to FINDETER so as to help to capitalize the organization; and
- (iii) low levels of activity in recent years.

After subnational capital markets burgeoned in the early 1990s, the Government of Colombia tightened the restric-

Table 4: Subject of FINDETER Loans, by Sectors (Disbursements, 2003)

Sector	Volume of Disbursements	
	Million Pesos (current)	%
Transportation	165,613	30.2
Household Public Utilities (water, sewer)	136,172	24.8
Education	67,908	12.4
Debt Management (including refinancings)	62,584	11.4
Telecommunications	35,420	6.5
Health	29,088	5.3
Other investment*	51,964	8.0
Fiscal adjustment	7,773	1.4
TOTAL	548,749	100.0

* 'Other' includes investment in commercial centers, conservation/renovation, recreation/culture, machinery, housing and tourism.
Source: FINDETER, Division of Monitoring & Assistance, 2004.

tions on subnational borrowing. In the mid-1990s it increased debt-service coverage requirements from 120 to 150 percent for banks that lend to subnational governments. It also set the conversion factor for weighting the risk of loans to local governments at 150 percent, in contrast to most corporate loans weighted at 100 percent.

Under Law 358 of 1997, subnational governments operate under a set of debt restrictions known as the “traffic light” system. As shown in Table 1, subnational governments face progressively restrictive limitations on borrowing as their financial positions erode.

Credit Activity

Between its creation in 1989 and 1997, FINDETER financed about \$1 billion in loans to more than 700 municipalities.⁷ FINDETER has approved another \$1.2 billion in rediscounted loans since then as shown in Table 2.

This table reveals FINDETER’s sensitivity to changes in economic conditions. Annual credit approvals declined to \$99 million in 2001—a drop of 58 percent from highs of \$235 million just two years earlier. These declines coincided with a period of deteriorating economic conditions, coupled with high levels of municipal indebtedness.

In 2002, the volume of credit approvals rebounded by 43 percent over the previous year, and again by 144 percent in 2003. A retooled core product (discussed below), as well as stabilizing economic conditions, contributed to this resurgence.

Sources and Uses of Funds

The sources of FINDETER’s capital base have varied over the years. In 2003, the sources for disbursements were as shown in Table 3. FINDETER’s “current revenues” accounted for more than 80 percent of its current refinancing activities.

While FINDETER traditionally has attracted support from international FIs (IFIs),⁸ in 2003 loans from IFIs accounted for only about five percent of rediscountings. This represents a sharp decline from previous years: in 1994 some 37 percent of funds were from donor loans and grants.⁹ This reduction in reliance on international funding reflects in part FINDETER’s growing stock of retained earnings, coupled with several years of slow activity beginning around 2000.

To date, FINDETER has not succeeded in markedly expanding (or recently has not needed to expand) its capital base through domestic capital markets. Domestic long-term borrowing was not a source of funds in 2003. In the early 1990s, FINDETER attempted to sell \$50 million equivalent of bonds in the competitive market, but the nascent organization only succeeded in placing \$10 million, or 20 percent, of the bond issue. Low levels of activity in the early 2000s, coupled with a strong capital base, have kept FINDETER out of the capital markets, and almost no bond is outstanding today (0.003 percent of its total liabilities at the end of 2003.)

The sectors financed by FINDETER in 2003 are shown in Table 4. Most financings (87.2 percent) are for new investments; the remainder are for debt management that includes refinancings

7 World Bank, PAD on a Proposed Loan to FINDETER (1998), p. 9.

8 In 1998 the World Bank approved a \$75 million loan to FINDETER with a sovereign guarantee, Project ID CO-PE-6861, reflected in Table 3 as the WB Second Municipal Development Program.

9 Peterson, Building Local Credit Systems, p. 61.

(11.4 percent) and fiscal adjustment (1.4 percent). As is prudent practice, Colombian law prohibits local governments from using long-term debt to pay for current expenditures.¹⁰

New Investments and Lending Trends

New investments cover a wide gamut of sectors where subnational governments have responsibilities for service provision. The relative importance of various sectors has changed over time.

One general trend is that *lending for water and sewer facilities has declined* in recent years. Between 1989 and 1999, loans to these sectors accounted for nearly half of FINDETER's portfolio (30 percent for water infrastructure and 15 percent for sewer facilities), and rose even higher in the years following. By contrast, in 2003 the funding of household utilities had declined until it represented only 25 percent of FINDETER's disbursements for that year (see Table 4).¹¹

FINDETER has also managed to *broaden its clientele* in recent years. Initially, it focused on departmental and municipal administrations. In the early- to mid-1990s most of these were smaller localities, unable to access capital from either international institutions (like Bogota), or from domestic capital markets via bonds.

In recent years, FINDETER has *expanded in its lending to service companies*. Between 1992 and 1995, FINDETER only provided, on average, between 1.5 and 2.3 percent of the financing for service companies at the departmental and municipal levels, respectively.¹² The World Bank among others has encouraged FINDETER to extend these services: its loan of 1998 includes a performance target for FINDETER to increase credit to service companies to a minimum of 25 percent of its loan volume. FINDETER has well exceeded this goal, and between January 1998 and September 2003, a full 51 percent of lending volumes went to service companies.¹³

Terms of Loans

Traditionally the terms and conditions of loans that qualify for rediscounting by FINDETER were conditioned by the international FIs that originally helped capitalize the institution.

On its loans to FINDETER in the 1990s, the World Bank sought to limit the cost of capital to the end-borrowers. Loans from participating banks to municipalities could be at a rate no more than 5.0 percent above the market average rate for fixed-term deposits. FINDETER then would rediscount all or a portion of that loan amount at the market average rate plus 2.5 percent, providing banks with a spread typically of 2.5 percent.¹⁴ But even as early as 1994, banks were able to offer municipalities loans at similar rates to loans supported by FINDETER, while bonds could achieve even lower rates.¹⁵

As of June 2004, under flexible variable rate terms FINDETER is able to offer attractive refinancing on loans of six years or more. For such loans, banks may typically charge sub-sovereign borrowers competitive interest rates of 800 basis points over the Fixed Deposit Rate (or *Depósito a Término Fijo, DTF*), an index of bank deposit rates. FINDETER may typically rediscount such loans at 650 or 700 basis points over the DTF rate.

From the 1990s until today, the long-term capital available from international financial institutions (with associated conditionalities) has helped extend the tenor of loans to better match the expected life of the asset being financed. Depending on the expected life of the asset in question, World Bank conditionalities provide for loans for up to 12 years. Such tenors (and other terms) compare favorably with conditions that borrowers would otherwise obtain; maximum loan maturities of three to five years without FINDETER support are typical.¹⁶ While municipal bonds can achieve periods of around eight years, typically only the largest cities can directly access those markets.

Procedure for Reviewing Loan Applications: Responding to Borrowers

From the perspective of a potential borrower, the time involved in applying for a loan may affect decision making, just as much as the terms and conditions of the loan itself. An elected official who wants to show results during his or her limited period in office may well opt for a speedily approved loan over credit with lower interest rates that takes months to approve.

Compared to some financial institutions, the traditional review process for FINDETER rediscounting has been excessively time-consuming. Under this process, the commercial bank

10 IADB, *Latin America After a Decade of Reforms* (1997), p. 173.

11 Freire and Petersen, *Subnational Capital Markets* (2004), p. 289; and Ferguson, *FINDETER: A Model Municipal Development Fund?* (April 2004), p. 6.

12 They received most of their funding during this period directly or indirectly from international FIs, as well as other parts of Colombia's financing system. Antonio M. Gómez, *FINDETER* (1997), Cuadro 3.

13 Ferguson, *FINDETER* (2004), p. 5. New and retooled products that have helped FINDETER to woo a broader clientele are discussed below.

14 World Bank, *PAD on a Proposed Loan to FINDETER* (1998), p. 9.

15 Alvarado and Gouarne, *FINDETER*, p. 4.

16 Under current World Bank funding, loans with a tenor of eight years or more qualify for 100 percent discounting; loans with a shorter maturity qualify for up to 85 percent discounting. For rediscounting based on its own patrimony, however, FINDETER will rediscount 100 percent of participating loans regardless of their term. The maximum size of an individual loan is US \$ 15 million equivalent. Program terms also allow for grace periods of up to three years. One can argue that such a lengthy grace period, which exceeds the period of construction for most municipal projects and the remaining terms of many mayors at the time of loan signature, leads to an efficient allocation of capital - it may tempt mayors to overpledge their successors or choose an otherwise unattractive financial product. World Bank, *PAD on a Proposed Loan to FINDETER* (1998), pp. 5 and 9.

performed its own financial analysis while FINDETER reviewed local investment projects from technical, economic and developmental standpoints. At one point, the average wait time for loan approval was 18 months; and even a decline to six to eight months in recent years undoubtedly drove many sub-sovereign borrowers to seek capital by other means.¹⁷

In response to such criticisms, in 2003 FINDETER launched an improved financial product: a streamlined approval process. Loans for projects less than \$2.6 million equivalent now can qualify for a streamlined procedure (known as the *rediscuento automático*); larger loans still entail the more lengthy in-house review (the *rediscuento tradicional* procedure).¹⁸

Under the streamlined process, the onus is on the tier-one banks to confirm that candidate loans meet FINDETER guidelines. In those cases FINDETER conducts only an ex post review of bank-approved loans—rediscounting is authorized “automatically” with no *ex ante* review. This development reflects FINDETER’s increasing comfort with the loan origination work undertaken by banks with which it has developed a long-term relationship.

The innovative process has proved attractive in the market. In 2003, FINDETER approved some 67.2 percent of rediscounted loans via the streamlined process, while the remaining 32.8 percent of loans followed the traditional procedure. Implementation of this measure coincides with the resurgence of FINDETER activity over the past year or two (see Table 2, above).

Internal Credit Enhancements and Other Risk Management Tools

An important credit enhancement both for first-tier lenders as well as FINDETER is a voluntary intercept provision. This requires a municipality “voluntarily” to set up a special account into which intergovernmental revenue-sharing payments flow (see Figure A-1).

Under this arrangement the first-tier lender has a senior lien on the intercepted revenues as long as municipal loan payments are due. The bank in turn endorses these liens to FINDETER. Thus, even if a participating bank becomes insolvent, FINDETER could still collect its dues directly from that bank’s municipal borrowers.

While such a mechanism has strong advantages, there are also disadvantages. On the one hand, for MDFs in developing coun-

tries, intercept provisions correlate with high loan repayment rates.¹⁹ This mechanism undoubtedly facilitates market growth. On the other hand, over-reliance on such pledges tends to mask the underlying feasibility of the projects being financed. The intercept obviates the need for originating banks to “look under the hood” and become familiar with municipal borrowers. At the same time it may lead to an inefficient allocation of capital.

As a second-tier lender, FINDETER also benefits from the oversight and vigilance that the national banking system provides over first-tier banks. Banks routinely report on their financial condition and this information is promptly made public. By using this information, FINDETER can take steps to adjust its portfolio in a timely manner and guard against risk.

This circumstance is in contrast with first-tier MDFs in developing countries that rarely, if ever, have access to such timely information on the financial condition of their municipal borrowers. Such measures have helped FINDETER to maintain low levels of bad debt (currently under two percent).

Institutional Strategy

The earlier discussion revealed that FINDETER’s assets and liabilities are unbalanced: FINDETER is investing short-term but lending long-term. This strategy exposes the institution to interest rate risk. FINDETER has not effectively hedged against such risks, a weakness observed when it lost capital during the reevaluation of the Colombian peso in 2003. The need for further technical assistance in this area as well as others is the subject of a consultancy scheduled for later in 2004.²⁰

In addition to FINDETER’s principal role as a second-tier lender, during its history it has also played a series of other roles, some in response to government mandates and some in an opportunistic spirit. Some of these activities are congruent with its core role, while others perhaps are not.

From the outset FINDETER was charged with playing the role of a “policy bank.”²¹ This role is compatible with the broader role that a second-tier FI should play in supporting the formation of a capital market. Likewise, new second-tier products and lines of activity (e.g., rediscounting loans to public service companies, rediscounting lease-purchase agreements) appear fully compatible with the institution’s second-tier role.

The compatibility of other roles with FINDETER’s primary role requires—and is receiving—further investigation.²² In the past,

17 Trellis, chapter on “Colombia,” in Freire and Petersen, *Subnational Capital Markets* (2004), p. 288.

18 Likewise smaller municipalities that request FINDETER’s help in approaching a bank for a loan continue to go through the slower *rediscuento tradicional* process.

19 Peterson, *Building Local Credit Systems*, pp. 47 and 52.

20 World Bank, *Terms of Reference for Strategic Vision for FINDETER* (2004), pp. 2 and 6.

21 Alvarado and Gouarne, *FINDETER*, p. 3.

22 This topic is the focus of an upcoming World Bank consultancy scheduled for late 2004.

FINDETER played a co-financing role using nonreimbursable government funds: in 1997 it channeled approximately as much in grants as in loans.²³ The distribution of free money makes the organization an attractive target for undesired political influence. Also, by playing the role of grants manager, FINDETER, like any other lender, runs the risk of weakening its reputation as an enforcer of a hard credit culture. Today, FINDETER does not manage grants to local governments, but its charter does not proscribe it from playing such a role in the future.

FINDETER also plays certain first-tier retail banking roles for local governments, such as receiving deposits and serving as a fiduciary. Additionally, in response to national priorities FINDETER has recently ventured into new areas such as micro-credit for housing, in spite of having little prior experience in some of these sectors.²⁴

Finally, in addition to its financier roles, FINDETER has also played the part of financial adviser and provider of training and technical assistance to local governments. Such activities were particularly important in the mid-1990s and they continue today. FINDETER currently collaborates with the *Ministerio de Hacienda* in providing assistance to financially troubled municipalities, and also helps smaller local governments that wish to obtain credit to approach commercial banks.²⁵

Besides these roles, other activities are possible, such as the proposal that FINDETER act as a bond bank. FINDETER is currently weighing such different possibilities for itself.

Assessment

FINDETER has succeeded in establishing itself as a viable financial institution. The institution has rediscounted loans and extended maturities. Its recent success in streamlining its rediscounting approval process appears to have helped revive interest in its product; over time this may lead to larger market share.²⁶ FINDETER has paid off debt from international sources while building up its patrimony over time. Duff and Phelps of Colombia has awarded FINDETER its highest AAA credit rating.

Part of FINDETER's financial viability is due to the fact that it has managed to keep its losses to a minimum. Unlike many first-tier municipal development funds, FINDETER in its role as a second-tier FI appears to have avoided the problem of moral hazard. Along with being positive for the sustainability of the institution, this has also helped local governments to build up solid credit ratings. Ultimately, this has burnished the credit-worthiness of the sector as a whole and allowed a market to flourish (conversely widespread defaults would have tainted the sector's image in the market).

FINDETER's survival has also been due in part to its willingness to take on various roles. While this versatility has helped ensure survival during lean times, ultimately some roles may prove incompatible with the institution's core niche. FINDETER may find that an important part of institutional maturity comes with learning "when to say 'no.'"

While FINDETER is financially and institutionally viable, to date it has not succeeded to any significant extent in expanding its market share or in using its high credit rating to mobilize long-term resources on domestic capital markets. Until recently this may well have been due largely to a surplus of available cash, the availability of long-term money from IFIs and a flagging economy. However, a growing market share coupled with a prudent level of borrowing on domestic capital markets would be an ultimate sign of long-term sustainability.

Turning to FINDETER's broader mandate, the institution apparently has played an important role as a market builder. The institution appears to have encouraged market development by engaging commercial banks to become familiar with lending to subnational governments. The banks' successful experience with municipal lending through FINDETER prompted them to enter the municipal credit market with their own resources, and subsequently led other suppliers of capital to enter the market as underwriters and purchasers of municipal bonds. This impact may have been particularly telling in the early 1990s when the size of the market grew dramatically.

23 Ferguson, FINDETER, p. 5.

24 World Bank, Terms of Reference for Strategic Vision for FINDETER (2004), p. 4.

25 Ibid. and Juan Carlos Dugand, July 2004.

26 The revived interest in FINDETER's rediscounting, coinciding as it does with the launching of the streamlined approval process, reveals an important lesson: the playing of a narrow niche role (as FINDETER did with its focus on rediscounting loans to smaller municipalities in the mid-1990s) may not reflect a maturing and segmenting market, but rather indicate marginalization due to a noncompetitive product.

Appendix 2

Case Study: India—Tamil Nadu Urban Development Fund

BACKGROUND: SUB-SOVEREIGN FINANCE IN INDIA

India is a large, diverse country with a population of more than one billion. While the country is poor (GDP per capita of \$487 in 2002), in recent years with modernization the country has experienced rapid economic growth. Since 1990 the economy has grown, on average, 4.3 percent per year in real terms.

India is a federal republic. The second level of government consists of 28 states and 7 union territories. The third level, local bodies, includes 3,682 urban local bodies (ULBs),²⁷ and around 247,033 rural bodies (panchayats). Prior to the early 1990s, however, the government functioned largely as a two-tier system, with the local level being quite weak. Only with the constitutional amendments of 1992 to 1993 did urban local bodies truly begin to gain substantial autonomy and legitimacy.

States are still heavily favored fiscally, while local bodies are relatively weak. In 1997-98, states accounted for 55.1 percent of total governmental accrued revenues, as opposed to 10.4 percent for local bodies, with the central government making up the rest (34.5 percent). States rely substantially on revenues received from the central government to meet their expenditure requirements. In 1997 to 1998, on average only 62.4 percent of total revenues of ULBs represented own-source revenues, with most of the remainder received via transfers from higher levels of government.²⁸ In 2000-01, shared taxes and grants from the central level made up nearly 40 percent of total revenue for states, little changed from four years before.

This case study focuses on the Tamil Nadu Urban Development Fund, administered by Tamil Nadu Urban Infrastructure Financial Services, Ltd.

Borrowing Structures

The Constitution of India assigns borrowing powers to both the central and the state governments. States may borrow freely, without debt ceiling limits, unless they hold outstanding loans from (or guaranteed by) the central government, in which case they must gain central government approval prior to additional borrowing.

The 1914 Local Authorities Loans Act allows municipal corporations to borrow. They must, however, obtain the prior approval of their state government to acquire debt. Additionally some municipal councils (as well as municipal corporations) have raised loans with state approval, with the states guaranteeing the debt.

Facilitated by liberalizing reforms, India's debt market has expanded greatly in recent years. It now represents the third largest debt market in Asia in terms of outstanding debt issued.²⁹ In the 1990s the government markedly increased its gross market borrowing, with the central government accounting for the bulk of the increase (see Table 1).

Table 1: Gross Market Borrowing by the Government (1990/91 to 1998/99)

Level of Government	1990/91	1998/99
Central	Rs. 80 billion (\$4.4 B)	Rs. 935 billion (\$21.9 B)
State	Rs. 26 billion (\$1.4 B)	Rs. 121 billion (\$2.8 B)

Source: Harwood, *Building Local Bond Markets*, pp. 108-112. Borrowing by local bodies not included.

27 These urban local bodies are further divided into 96 municipal corporations (for large urban areas), 1,494 municipal councils (for smaller urban areas) and 2,092 nagar (town) panchayats. ("Municipal corporations" refer to the municipal governments themselves, not to utilities or enterprises owned by those governments.)

28 Freire and Petersen, *Subnational Capital Markets*, p. 419; and Purfield, *Decentralization Dilemma in India* (IMF, 2004), pp. 6 and 20.

29 Freire and Petersen, *Subnational Capital Markets*, p. 422.

ULBs have enormous unmet financing needs. While state governments and public institutions have provided some credit to ULBs on the basis of state guarantees in the past, it is increasingly recognized that private capital markets may help reduce this financing gap. India has a diversified and sizable range of institutional investors.³⁰

Bond Market Development

Supported by reforms and assistance, in the 1990s a small market for ULB debt began to take root. Beginning with Bangalore (private placement) and Ahmedabad in 1998 (public and private placement with no state guarantee),³¹ cities began to issue municipal bonds. To date, more than 40 cities have sought credit ratings. A total of at least nine cities have raised funds (some Rs. 7.5 billion) from the Indian capital market through municipal bonds. Terms have not exceeded eight years.³² In Tamil Nadu, the Tamil Nadu Urban Development Fund has supported bond issuance by ULBs, as well as other innovative schemes to help local bodies access private capital, as discussed below.

Tamil Nadu Urban Development Fund

Tamil Nadu in southeast India is one of the most heavily urbanized states in the country. The 1991 census found 44 percent of the population living in urban areas, a proportion that grew further in 1994 with the redesignation of some formerly rural areas as newly urbanized.

As in the rest of India, urban financing needs are great. For example, according to recent estimates only 57 percent of persons living in corporations, 32 percent in municipalities and 16 percent in town panchayats enjoy access to safe sanitation. For 2002, the gap between urban local bodies' investment needs and their operating surpluses is estimated at Rs. 551.7 billion (\$11.5 billion). Of this unmet need, 76 percent is concentrated in the smaller ULBs (municipal councils and town panchayats).³³

GoTN and MUDF

To help meet such shortfalls in urban infrastructure finance, in 1988 the Government of Tamil Nadu (GoTN) launched the Tamil Nadu Urban Development Project,³⁴ and at about the same time, established the Municipal Urban Development Fund (MUDF). This fund provided municipalities with subsidized loans, combined with grants, and proved successful. In its first five years of operation, it disbursed about \$63 million for more than 500 sub-projects, while maintaining about 90 percent repayment rates.

At the same time, however, it was recognized that the MUDF and the public funds that it lent did not sufficiently resolve the urban finance shortfall. While it was recognized that, in theory, private sources of capital could help meet this gap, in practice, the private sector was hesitant to invest.³⁵ Nor was the MUDF, with its dependence on government, well positioned to help mobilize private resources.

TNUDF

In November 1996, the MUDF was converted into an autonomous financial intermediary—the Tamil Nadu Urban Development Fund (TNUDF)—and began lending operations in March 1997.

In contrast with the MUDF, the TNUDF is located outside the government. The new entity was established as a trust fund with private equity participation—the first public-private partnership in India to provide long-term financing to local bodies for infrastructure without state guarantees.

TNUDF is administered by a board of trustees, nominated by the GoTN and participating financial institutions. This board determines the funding, lending and operating policies of the fund. The fund is managed by Tamil Nadu Urban Infrastructure Financial Services, Ltd. (TNUIFSL), an asset management company. This company is a joint venture between the GoTN, with an equity stake of 49 percent, and three financial institutions with a collective stake of 51 percent.³⁶ The aim of this structure is to

30 Harwood, *Building Local Bond Markets*, pp. 31-34 and 106-09.

31 While recent changes to the legal/regulatory framework help to clarify that such debt does not carry a state guarantee, analysts disagree as to whether any implicit state guarantee still hovers over ULB debt. For an argument that recent state actions promote bail-out expectations (including, presumably, over any ULB debt defaults), see Purfield, *Decentralization Dilemma in India* (IMF, 2004), p. 5.

32 Infrastructure Leasing & Financial Services Ltd., 2004.

33 Infrastructure Forum, *Experience of Tamil Nadu Urban Development Fund*, and Rajivan, *Case of Tamil Nadu*, p. 9. The responsibilities of ULBs related to urban service provision and corresponding investment were clarified by the Tamil Nadu Urban Local Bodies Act of 1998.

34 This project was funded by the World Bank through its International Development Association.

35 Reasons cited for this reluctance included political risk, difficulties in assessing the financial positions of ULBs, dependence of ULBs on State governments for revenues, and the relatively small size of typical urban projects compared with the time involved in processing and supervising such loans. World Bank, *Project Appraisal Document (PAD) on Second Tamil Nadu Urban Development Project*.

36 These "participating financial institutions" are the Industrial Credit and Investment Corporation of India, the lead managing partner (with a 21 percent stake); the Housing Development Finance Corporation (15 percent); and Infrastructure Leasing and Financial Services (15 percent). The contribution of the GoTN was the net worth of MUDF, Rs. 1.2 billion (\$34 million), while the participating financial institutions together contributed Rs. 510 million (\$14 million). *Ibid.* References below to TNUDF are understood also to refer to TNUIFSL.

Table 2: TNUDF Loan Activity 1999–2000 to 2001–2002 (Rs. Crore)

Concept	1999/2000	2000/01	2001/02
Loan amounts sanctioned	314.28	36.29	1.33
Loan disbursements	56	133	N/A

Sources: Loan sanctions: Peterson. Loan disbursements: Infrastructure Forum.

facilitate a private sector orientation in investment decisions. Further, it is hoped that this leadership will help the fund raise resources from the private sector, both from the participating financial institutions themselves, as well as other investors. In this way it is hoped that the TNUDF eventually will evolve into a self-standing financial intermediary capable of financing urban infrastructure projects.³⁷

The restructured fund has four objectives:

- to finance urban infrastructure projects that improve living standards;
- to facilitate private participation in infrastructure through public-private partnerships and joint ventures;
- to operate a complementary window, a grant fund, to finance poverty alleviation projects; and
- to improve the financial management of urban local bodies so as to enable them to access capital markets.

Eligible borrowers include: urban local bodies, statutory boards, public undertakings (entities in which the government has at least 51 percent ownership) and private investors. TNUDF finances capital expenditures except for land acquisition. Eligible sectors include water supply, sanitation, solid waste management, roads, bridges and transportation, shelter sites and services and integrated area development.

Financing packages depend on the economic characteristics of the investment in question. For projects such as toll roads and bridges and markets, the fund prefers to rely on project cash flows to service debt. Other projects, such as internal roads, must rely on general revenues, while basic environmental infrastructure may require a mix of debt and grant financing.³⁸

Tamil Nadu Urban Development Project II

To support the newly established TNUDF, in 1999 officials launched the Tamil Nadu Urban Development Project II. The

Selected Terms of TNUDF 2000 Bond Issuance

Size of Issue:	Rs. 1,100.5 million (\$23 million)
Final Maturity:	5 years
Put or call option:	None
Redemption:	Five equal annual installments
Annual interest rate:	11.85%, payable annually

project design included \$205 million from: the World Bank (\$105 million), the Indian Government and ULBs (\$50 million), TNUDF (\$25 million) and the above-mentioned participating financial institutions (\$25 million).³⁹

In late 2000 TNUDF issued domestic bonds, which was the first non-guaranteed, unsecured bond issue by a financial intermediary in India. The Investment Information and Credit Rating Agency, Ltd. (ICRA) rated this issuance LAA+ (SO), indicating high safety and modest risk.

While ULB cash flow formed the base of this issuance, ICRA looked favorably upon the issuance's credit enhancement and structured payment mechanism. It included a Debt Service Fund equivalent to one year's principal and interest payment as collateral throughout the life of the bond. ICRA also noted approvingly TNUDF's comfortable financial posture, including its high loan recovery rate (around 99 percent) and low debt-to-equity ratio (2.13).⁴⁰

Commercial banks purchased 70.5 percent of this private placement, with TNUDF's contributors (11.0 percent), regional rural banks (9.5 percent) and insurance companies (8.0 percent) also snapping up portions. Terms are as follows:

To date (2004), under TNUDF-II, \$60 million from the World Bank's line of credit has leveraged a total of \$128 million in urban

37 Freire and Petersen, *Subnational Capital Markets*, pp. 429-31; and Government of Tamil Nadu.

38 TNUFIS, *Pooled Financing: Experiences in Tamil Nadu*, pp. 4-5; and Freire and Petersen, *Subnational Capital Markets*, p. 432.

39 Financial covenants attached to the various tranches of the World Bank funds addressed the mobilization of local resources. The TNUDF met its requirements via a bond issuance; see below. The three participating FIs, however, did not meet their financing requirements. Deregulation of financial markets was seen to have propelled two of the banks away from urban infrastructure finance and back into their areas of core competence, while as of September 2002, the third bank (IL&FS) had not been able to reach agreement with the TNUDF on a project to cofinance. In that month, an outside reviewer concluded that insisting on completion of this covenant was not practicable or even vital to project success, given the more significant success of TNUDF at mobilizing resources from other private sources (see below).

40 All figures for 2000/01. Infrastructure Forum, "Experience of TNUDF." SO = structured obligation.

infrastructure financing, with a debt repayment rate of 99.6 percent from ULBs. Below we review this record in more detail, examining first the fund's experience with direct lending, and then with facilitating more innovative financing arrangements.

Direct Lending

TNUDF has succeeded in financing and supporting the development of urban infrastructure. In a two-step process, thus far the fund has technically approved 181 projects at a total cost of Rs. 727.89 crores (\$151 million), and sanctioned financings of Rs. 459.58 crores (\$95 million) for 174 of those projects.⁴¹

Activity, however, has slowed in recent years; see Table 2 (note that disbursements lag the sanction of new loans).

Analysts have offered various explanations of this recent slowdown, including the fact that interest rates on non-TNUDF loans have been declining. As a result, pricing of TNUDF loans (which are pegged to yields on Government of India 10-year bonds with a one-year lag, plus 200 to 300 basis points as a risk premium) appear less attractive. Another explanation is that local finances have eroded, which has made ULBs reluctant to assume further debt. As a result of this slowdown the fund has had excess cash on hand in recent years.⁴²

Safeguards and Criteria

TNUDF has a number of safeguards in place to ensure that its lending activities remain financially viable. First are its eligibility criteria for potential borrowers. ULBs, for example, need to keep their total annual debt service payments at less than 30 percent of total revenues, while private sector borrowers must keep their total long-term debt at less than 1.5 times their net worth.

Loan agreements also contain various security measures. All of the loans inherited from MUDF are protected by offset agreements, under which TNUDF can tap the GoTN's grant fund to cover shortfalls (up to a certain limit) in loan repayments it receives from ULBs. GoTN in turn deducts the shortfall in repayments from the devolution transfers of shared sales tax receipts it makes to the ULBs. Broadly similar offset arrangements cover the majority of TNUDF's new loans.⁴³ Such safeguards have helped TNUDF maintain in recent years the high loan recovery rates noted above.

Madurai Bypass Refinancing Bond Issuance: Selected Terms

Size of Issue:	Rs. 290 million (\$6 million)
Final Maturity:	15 years
Put or call option:	At the end of the 10th year
Coupon rate:	12.25%, payable semi-annually

Innovative Financing Supported by TNUDF

In addition to its more traditional on-lending activities, TNUDF also has supported several different types of innovative financing schemes to mobilize private sources of capital.

Bond Issuance

First, TNUDF has provided financial advice and, at times, played a trustee role, in helping individual ULBs to refinance in the capital market the direct loans made earlier by TNUDF. Such refinancings allow ULBs to lower their interest payments, while permitting TNUDF to re-deploy those resources. The fund's de facto role in such infrastructure financing arrangements thus is absorbing up-front construction risk that may be unpalatable in the capital market. Once projects are up and running and generating cash flow, they then become candidates for such refinancings.

An example of such a refinancing involves the Madurai Bypass, the first toll road constructed by a ULB in India based on user charges. TNUDF originally signed a loan with Madurai for this project. After the facility was constructed and began to generate toll revenues, Madurai Corporation decided to issue bonds to prepay the TNUDF loan and refinance the debt, at an annual interest rate cost (12.25 percent) with a substantial savings over the 15-year TNUDF loan (15.5 percent). The three participating financial institutions of TNUDF provided guarantees or other credit enhancements to this issuance.

The issuance also required TNUDF to serve as trustee for a bond service fund—equivalent to one year's principal and interest payments—as collateral throughout the life of the bonds. Terms of this issuance are shown below. The bonds, privately placed, were fully subscribed, mostly by banks but also by TNUDF.

Public-Private Financings

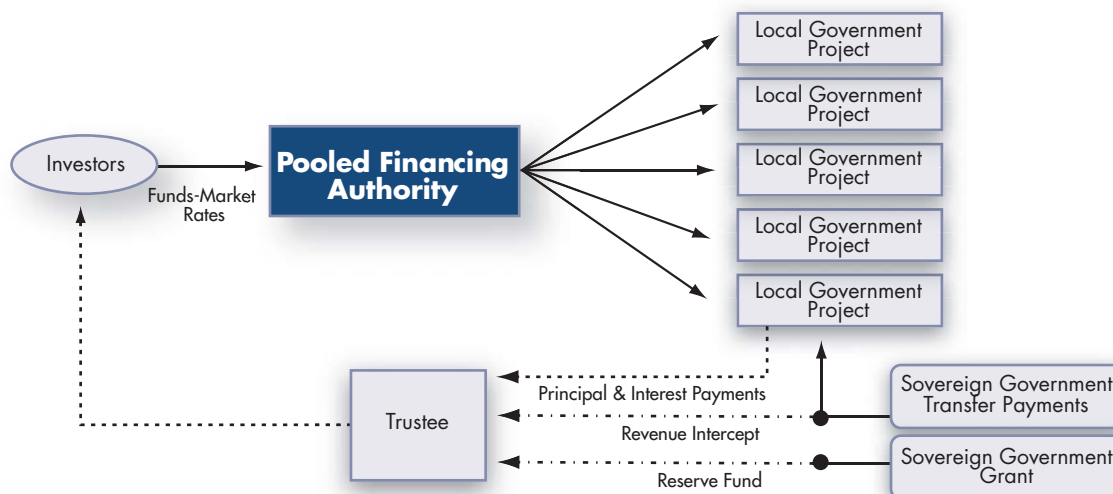
Second, TNUDF has provided financial advice and project preparation services to assist projects financed via innovative

41 Government of Tamil Nadu, Tamil Nadu Urban Development Fund Policy Note, p. 1. One crore = 10 million.

42 Peterson, Note on TNUDF, p. 6.

43 Ibid., p. 3.

Figure A-2. Tamil Nadu Pooled Financing Authority: Flow Of Funds



public-private partnerships. For example, it facilitated the refinancing of Karur Bridge, the first build-operate-transfer (BOT) toll bridge in India. The bond issue is backed by a contract that allows the builder/owner to increase the toll at eight percent a year. The project also includes a substantial equity contribution by the builder/owner. Another example is the wastewater collection and treatment facility in Alandur, the first example of a BOT project in the sector in India.

Credit pooling

The approaches described above may be more applicable to larger municipal corporations that can proceed more directly to capital markets. The third mechanism offered by TNUDF, however, a credit pooling facility (see Figure A-2), may be more relevant for smaller ULBs, who experience much of the shortfall in urban infrastructure finance.

In August 2002, the Water and Sanitation Pooled Fund (WSPF) was incorporated as a trust. Subscribers to the fund include banks and the Provident Trust Fund. Its six-member board of trustees consists of state officials and TNUIFSL's Chief Executive Officer. TNUIFSL manages WSPF. While WSPF is authorized to play a variety of roles, in its initial transaction it played the role of a credit pooling facility.⁴⁴

The WSPF's first bond issuance provided for the refinancing of outstanding loans previously made to 12 ULBs for small water and sanitation projects and one ULB for underground drainage. These projects were all previously completed, with tariff mechanisms in place.

These 13 ULBs ranged in size and type from municipal corporations (one), to municipal councils (six), to town panchayats (six). Sanctioned loans for these projects totaled Rs. 302.2 million, with Rs 275.7 disbursed. Subscribers to the private placement included banks (Rs 302.5 million) and the Provident Fund Trust (Rs 1.6 million). Selected terms of this issuance were as follows:

WSPF Pooled Bond Issuance: Selected Terms

Size of Issue:	Rs. 30.41 crore (\$ 6.4 million)
Final Maturity:	15 years
Put or call option:	At end of 10th year
Redemption:	15 equal annual installments
Annual interest rate:	9.20%, payable annually

The bond is to be repaid through project revenues, such as from water tariffs and interest on the deposit of connection fees from the participating ULBs. These repayment monies go into an escrow account of WSPF. This issuance also included several additional levels of credit enhancement, as follows:

- **First level:** The escrow of the bank accounts of the participating ULBs where their property tax and other collections are deposited. In case project revenue payments are insufficient, the WSPF may withdraw funds from these accounts.
- **Second level:** A debt service reserve fund to be set up by the GoTN. This will have liquid investments of an amount equal to about one-and-a half times annual debt service.

44 To date, assistance to WSPF has come primarily through the U.S. Agency for International Development (USAID). It is currently receiving assistance from the U.S. Trade and Development Agency (USTDA).

- *Third level.* A partial credit guarantee provided by USAID via its Development Credit Authority (DCA), covering 50 percent of the principal. This would replenish the debt service reserve fund as needed. If this guarantee were to become exhausted, the GoTN has ordered that the reserve Fund would be replenished by deducting that ULB's respective share of the revenue transfer administered by the State Finance Commission.⁴⁵

As the security of this issuance is based in the first instance on the underlying obligation of the participating ULBs, the WSPF here is playing a role in pooling credit (similar to that of State Revolving Funds in the U.S.). The involvement of the GoTN is also notable. With these enhancements, this issuance received ratings of LAA (SO) from ICRA, and of Ind AA (SO) by Fitch Ratings. This was the first successful bond issue outside of the U.S. that used a pooled financing structure for financing water and sanitation projects.

On the basis of the WSPF's successful pilot issuance, the Government of India has requested USAID support in developing a national-level pooled finance development fund. Such a fund will make grants to states to facilitate the establishment of state pooled financing entities. In the same vein, USAID is helping develop guidelines to assist states create such facilities. More broadly, it is encouraging the development of a ULB credit market through measures such as its support of the Ahmedabad bond issuance.

Assessment

TNUDF has successfully played a variety of roles in the area of sub-sovereign finance. First, TNUDF has on-lent funds, managed grants and provided assistance to local governments—roles typical of municipal development funds (MDFs) worldwide.

Thus far, the role of grants manager does not appear to have hurt the fund's ability to recover debt, a problem that plagues many MDFs. In this respect, the fund benefits from its access to long-term credit from the World Bank, coupled with independence from government and a private sector orientation.

The fund also operates within a regulatory and institutional framework that is supportive of municipal finance (i.e. in

allowing for effective escrow and revenue intercept mechanisms, in permitting construction of self-liquidating facilities such as toll roads, etc.). More importantly, TNUDF and associated structures have pioneered innovative forms of financial intermediation to attract capital from private financial markets for urban infrastructure—an exemplary accomplishment in the developing world. Resources have reached even to smaller urban areas (town panchayats).

In so mobilizing private capital, TNUDF has been defining the niche role required for financial intermediation: absorbing construction risk for new revenue-generating projects or pooling credit from smaller ULBs. TNUDF also has helped to structure these transactions so that private parties benefit from the same enhancements, such as revenue intercept mechanisms, that the fund itself enjoys in its direct lending to ULBs.

Donor Support

One factor in the success of TNUDF has been the appropriate support from various donors. In addition to the sustained support of the World Bank, other donors have also provided punctual, complementary assistance. It appears that this assistance has not fostered excessive dependency on international funding; rather it has encouraged institutional growth toward private capital markets in engineering the transition from the MUDF to the TNUDF. Likewise it appears that 'training wheels' have been put on—and been taken off—at the appropriate times, as in the one-time DCA partial guarantee for the fledgling issuance of bonds by WSPF.

Having piloted various approaches for financing urban infrastructure, TNUDF and related structures now face the difficult task of determining which successful pilot projects can be scaled up. A large part of this challenge will be in finding roles that allow the fund to become self-sustaining eventually. While the fund's on-lending activities currently may allow it to cross-subsidize its pilot third-party and credit enhancement schemes, eventually the fund will have to be self-sustaining. Part of this challenge will involve increasing the fund's leveraging ratio, and more generally, weaning itself of products that can be said to be over-secured. Current assistance from USTDA aimed at helping WSPF develop along the lines of U.S. bond banks and other revolving funds seems to reflect such an intention.

⁴⁵ Rajivan, Case of Tamil Nadu (2004).

Appendix 3

Case Study: LGU Guarantee Corporation (LGUGC)

Unlike other sections of the document, we prefer not to include a US\$ equivalent here due to the fluctuation of the Philippines currency against the US dollar at the time of the preparation of this paper.

Among Bank clients, the Philippines is unique because it has an indigenously formed company that serves as a guarantor of bonds and loans of local government units (LGUs), the LGU Guarantee Corporation (LGUGC).

BACKGROUND: SUB-SOVEREIGN FINANCE OF LOCAL GOVERNMENT UNITS

The Philippines is a unitary state with a hierarchical system in which LGUs are directly under the control of the national government, though with certain constitutional protections. The LGU sector consists of four levels: the provinces, cities, municipalities and the *barangays* (essentially neighborhood organizations).

The country has more than 1,600 local governments (not counting the 42,000 *barangays*), including 78 provinces, 82 cities and 1,525 municipalities. But, as is true in many developing countries, the nation's economy and politics largely rotate around metropolitan Manila and the island of Luzon.

The Philippines is a lower middle-income country with a per capita national income of about \$1000 a year. During the 1990s, the nation steered a course toward political decentralization, trade liberalization and debt repayment.⁴⁶ The Republic Act 7160, also known as the Local Government Code of 1991, shifted resources and responsibilities to LGUs. Implementing the new code has been a challenge, as the legacy of central government primacy and involvement in local affairs has continued. Also, the country has been plagued by weak tax collection rates, leading to persistent national government deficits.

Under the new code, LGUs were assigned greater responsibilities for service provision and entitled to receive 40 percent of the national government's income and value added tax revenues. These revenues are distributed on the basis of a formula and are commonly called Internal Revenue Allotment (IRA).⁴⁷

In addition, LGUs were granted extended powers for setting local tax rates and collecting own-source revenues. However, IRA revenue sharing led to LGUs largely substituting the new revenues from the national government for own-source revenues, especially the local property tax.

During the period 1990 to 1996, own-source revenues declined from 50 percent of total local revenue to 30 percent, while LGUs' share of total government spending grew from six percent to 16 percent. With spending at three percent of GDP, the size of the LGU sector has remained modest. But, the aggregate revenue numbers mask big differences among the local jurisdictions. As of estimates in 2000, the cities derive about 50 percent of their revenues from own sources, compared with only about 30 percent for provinces.

Borrowing of Local Government Units

A major motivation for adopting the new intergovernmental structure was to get LGUs to assume a greater share of the burden for financing infrastructure. The new structure gives LGUs broad powers to borrow without the approval of the national government, and to achieve this goal, the sovereign government, with consid-

erable donor support, undertook initiatives to expand LGUs' access to commercial credit.

The Local Government Code of 1991 appeared to open several avenues for LGU financing—from bank credits and also from bonds and other securities. LGUs can use such credit for two purposes: liquidity and capital projects. Meeting liquidity

⁴⁶ During this period, the country worked under IMF conditionalities, which helped greatly in its recovery.

⁴⁷ The IRA is a formula-driven revenue sharing scheme whereby 40 percent of collected national internal revenue taxes are distributed, after a three-year lag, to local governments.

needs involves credit financing of an LGU's current spending in advance of expected releases of intergovernmental payments (primarily the IRA) or the receipt of taxes.

Sections of the new code also authorize local governments to issue taxable, revenue-based municipal bonds subject to any applicable rules issued by the Securities and Exchange Commission (SEC) and the Bangko Sentral ng Pilipinas (BSP). Such bonds are specifically the obligation of the LGU, not of the national government.

LGUs may use bonds only for purposes of financing self-liquidating or revenue-generating projects. They may, however, create debt and use other credit facilities for any "infrastructure and other socioeconomic development purpose" as long as it accords with the local development plan. LGUs were also granted wide latitude to enter into public-private collaborative business arrangements.

Despite the potential laid out in the new code, borrowing by LGUs has been modest, accounting for only three to five percent of receipts. Such borrowing is done almost exclusively through two government-owned banks (Land Bank and Development Bank of the Philippines [DBP]) and two other semi government-owned banks (Philippine National Bank and Philippine Veterans Bank).

Private commercial banks carry out almost no direct lending to LGUs. A regulation restricting LGUs' depository accounts to government financial institutions (GFIs), as well as other impediments, has precluded LGU access to private banks. However, when backed by the LGUGC guarantee, private banks have been the main purchasers of the municipal securities. Thus, policy and institutional factors have led to a de facto duopoly by the Land Bank and the DBP in LGU credits, in which the former institution clearly dominates.

Development of a Municipal Bond Market

The Philippines features a small but growing local government municipal bond market. Such a development is a rarity in an emerging economy credit market typically dominated by the banking system, particularly where the credit access of LGUs is dominated by GFIs.

Municipal bonds were expected to become a major source of infrastructure capital. It was hoped that they would promote economically responsive local decision-making and rate setting in the place of central government capital funds.

Adoption of the new code was followed by an extensive effort to inform officials about the opportunities and requirements associated with developing and issuing municipal bonds. This orientation included staff at LGUs, private commercial banks, the investment houses, the SEC, the BSP, the Department of Finance, the Departments of Interior and Local Government, the Department of Budget and Management, the Commission on Audit and other government agencies.

The SEC and BSP formulated rules to facilitate rapid review and clearance of proposed revenue-based municipal bonds. Despite heavy promotion, in the ensuing years of the mid-1990s only four bond issues took place and these were very small (PhP 2 to 15 million). These bonds were exclusively for housing, were of short maturity (two to three years) and had interest fixed for the term. Early interest by the Philippine investment houses in municipal bonds faded until the late 1990s with the creation of the LGUGC, a public-private municipal bond guarantee corporation.

The LGUGC

A primary reason for the revival of growth in the Philippine municipal bond market has been the institutional focus and assurances to investors provided by the LGUGC. Most of the municipal bond issues floated in the Philippine market since 1998 have carried the LGUGC bond guarantee. Approximately PhP 1.6 billion in LGUGC guaranteed debt principal is now outstanding.

Legal Form. LGUGC was formed as a financial services corporation under the incorporation laws of the Philippines and is registered with the Philippines SEC as a financial services corporation. While this law was sufficient to provide it with the basic powers of a corporation, it did not cover the corporation's relationship to guaranteed bondholders.

This was accomplished through the creation of a separate trust document, which specifically gave guaranteed bondholders a beneficial interest in the corporation's reserves and placed these reserves under the control of a trustee bank (the DBP). The trust agreement specifies a maximum gearing of contingent liabilities versus reserves of 10 to one. As of 2002 the ratio was at four to one.

Management and staffing. The corporation's management, directed by the President, is given significant latitude in the running of its day-to-day affairs, with the board of directors convening periodically to oversee the policies and performance of the corporation. The LGUGC has a small professional staff

of approximately 15 employees in addition to the President, Senior Vice Presidents for Operations and Portfolio Management. In the process of marketing its bond guarantee and arranging deals, the LGUGC has built a range of allied services, including the development of an in-house credit screening and rating system, the use of trustee banks and a small fraternity of financial advisers and underwriters.

Ownership and Capitalization. LGUGC ownership is made up of 16 private member banks (represented by the Bankers Association of the Philippines [BAP]) owning 49 percent of equity, Singapore-based Asia Credit Services, Ltd. at two percent and the DBP owning a minority of 49 percent.⁴⁸

The LGUGC was started in 1998 with an initial stock subscription of PhP 250,000, with a call for a second round of up to an added PhP 250,000, if needs be.

As of the end of 2003, it had about PhP 297 million paid in capital and retained earnings.⁴⁹ In 2000, it entered into a co-guarantee (reinsurance) agreement with USAID, which backstops 30 percent of LGUGC guarantees issued for qualifying projects up to a maximum exposure of \$8.5 million dollars (a limit of \$28.5 million on total qualifying debt).

Recently, only PhP 256 million (about \$20 million) of debt guarantees are qualified for the reinsurance. With no default experienced, no claims have been filed.⁵⁰ This USAID backstop guarantee is funded by a grant and does not carry a sovereign guarantee from the Republic of the Philippines. The significance of the reinsurance is not so much the monetary impact of the reinsurance on reserves, as the oversight and approval of the LGUGC. In this respect, LGUGC's role is more significant than USAID involvement.

Guarantee coverage. The LGUGC guarantee is a "straight" insurance of the periodic debt service payments (both principal and interest payments) of the borrower. The guarantee is irrevocable and immediately payable in the event of a notice of default on payment by a bondholder. Upon guarantee call and payment, the bondholder's rights in the guarantee transaction are subrogated to LGUGC, which then steps in to

enforce the bondholders' claims against the security provided by the borrower.

The LGUGC guarantee, which so far has been used only in conjunction with variable-rate debt, carries a cap on the interest component of debt service being guaranteed. This cap has been recently set at 300 basis points above the average of the (a) past 24 months 182-day Philippine T-bill rate and (b) past 24 month 182-day Phibor rate.⁵¹

The guarantee is not accelerable in that payments are made only on the due date, so the LGUGC can carry lower liquid reserves. Thus far, there have been no defaults of LGUGC bonds.

Security. Two key agreements underlie the success of the guarantee process. The first is the assignment of future revenues by the guaranteed LGU and the second is the granting of power of offset against LGU bank accounts to cover debt service payments.

All LGUGC guarantee policies to date have involved the assignment of the project revenues, project assets and the IRA; the most important of these is the right to intercept the IRA payments. To bring about the agreements, the LGUGC uses a trustee, which must be a GFI that can hold local government deposits. Effectively, there are only two such institutions (the government-owned Land Bank and DBP). Both these banks are also evidently the only ones permitted to act as trustees over local government funds.

Guarantee Fee. The LGUGC guarantee fee is payable up front at the time of bond issuance. The fee is set according to the risk characteristics of the LGU and the project that is the subject of bond issue.⁵² The guarantee fee may range from 0.50 percent to 1.25 percent per annum of the face amount of outstanding principal, where the up-front equivalent amount is calculated based on the net present value of the annual premiums.⁵³

Risk Assessment Practices. A key to any market-oriented enhancement corporation is the quality of its risk assessment process and the degree to which fees charged for insurance

48 Under agreement with USAID, the LGUGC is to reduce the equity percentage owned by DBP over a period of time. In addition to domestic commercial banks, some of the LGUGC investors are a foreign-based credit insurer (Asia Credit Services, Ltd.) and two foreign-owned banks.

49 LGUGC 2003 Annual Report.

50 Subsequently, USAID has allowed the initial reinsurance fee paid to it to be used to amortize annual fee payments.

51 Thus, if the bonds were issued at a 15 percent rate and then went to a 20 percent rate applying the variable rate formula, the guarantee of the interest component would be limited to, say, the 24-month average of (a) T-bills and (b) Phibor plus 300 basis points. Were that average to be 13 percent, then the guaranteed portion of interest would be 16 percent (13+3 = 16).

52 LGUGC has a pricing policy for guarantee fees initially instituted in 2000 and subsequently amended in 2002 and 2003. The guarantee fees are largely driven by the LGU risk (45 percent) and project risk (45 percent). Term risk factor is also taken into consideration (10 percent).

53 Thus a five-year term bond with a computed premium of one percent per annum will have an up-front guarantee fee payment due at time of issuance equal to about 3.5 percent of the face amount of the bond issue. In actual guarantees executed so far, the average guarantee fee is 3.18 percent of the bond issue size.

represent a reasonable assessment of the likelihood of the payment interruption or default.

LGUGC hired a consultant to devise an internal credit rating system that generally conforms with international standards on the factors considered and their weighting. Essentially the rating system has two components:

- (a) An initial screening process that looks at a few summary variables and makes a cursory first-pass judgment on the likely credit quality of the issuer. This phase is used primarily for marketing purposes to identify borrowers that might qualify for insurance. Approximately 1,500 governments are in the file as of 2002.
- (b) Upon application for an insurance policy, a second, more intensive examination considers the candidate issuer in the context of the specific proposed debt transaction. The rating is assigned to the issuer in the transaction (not just to the specific project), primarily because the intergovernmental payments (the IRA revenue sharing payments) are usually a highly significant part of the security pledged to the repayment of the bonds.⁵⁴ Projects must be judged as grade B or above in the internal system (which is based both on the rating technique's numeric scoring and a review by a rating committee) in order to qualify for insurance.

Reporting and Monitoring. LGUGC has a computer-based system that tracks applicants through the rating and insuring process and the subsequent payments of interest and principal to the trustee/paying agent. It notes any delays, such as failure to deposit to debt service fund. These duties are carried out in liaison with the trustee.

In recent cases, the LGUGC has also put together an on-going surveillance committee, a Project Monitoring Board (PMB), to oversee the administration of a project. The PMB is composed of representatives from LGUGC (as chair), the LGU borrower, the trustee bank and the underwriter.

Marketing, Technical Assistance, and Advocacy. A major role for the LGUGC is in bond market development and the promotion of private sector financing of local government. LGUGC is able to perform such a function because is a predominantly privately owned.

Having received technical assistance from USAID and other donor organizations, it serves as a champion for the market's technical and substantive development. The LGUGC has formulated a manual on bond issuance and disclosure needs, including standardized documentation. Working closely with private sector advisers, it has generated new business among local governments and has lobbied the government agencies and the central bank to obtain improved regulatory treatment.

In addition, as part of its broader marketing and monitoring program, the LGUGC carries out various technical assistance and oversight activities. For example, large projects are subject to a surveillance activity that detects early warnings of any financial difficulties with guaranteed debt and enables remedies to be put in place in a timely manner.

Key Relationships

Figure A-3 illustrates LGUGC's bond guarantee scheme. Under current operations, the LGUGC pledges its paid-in reserves to repayment of debt, an obligation that is partly back-stopped by the USAID co-guarantee agreement.

Guarantee fee income is accrued over the life of the guarantee/guaranteed bonds (normally five to seven years). As a practical matter, the LGUGC has lived off its reserve earnings in the early years of development and has paid no dividends. In order to strengthen its capital base, the LGUGC board recently adopted a policy whereby no cash dividends may be declared until the LGUGC net worth reaches the desired level of PHP 500 million.

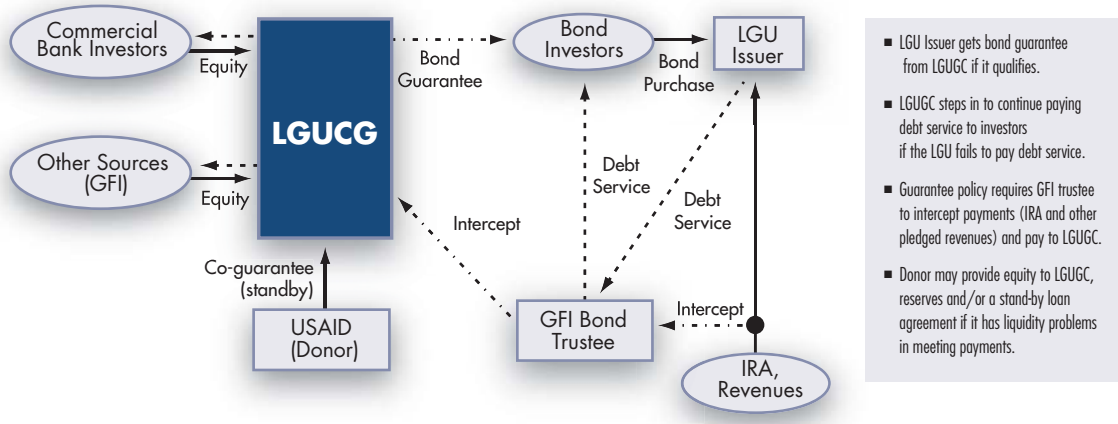
The LGUGC has been desirous of added donor support in the deepening of its capital structure. A variety of avenues for expanding the capital base are possible, including equity injections (perhaps in a limited non-voting stock) and/or the donor acting as a reinsurer or with stand-by credit lines.⁵⁵ The existence of such donor-provided capital or stand-by loans might accommodate other injections of private capital. Another approach is for the LGUGC to receive added contributed reserves, perhaps dedicated for particular sectoral uses.⁵⁶

⁵⁴ There is a restriction on the proportion of IRA payments that may be used for debt service (20 percent), which builds in minimum debt service factor (5:1) from this source.

⁵⁵ We note that LGUGC has already received limited reinsurance support from USAID but that support does not effectively increase guarantee capacity of LGUGC by very much. (It increases it by 30 percent on eligible issues, but the payment is on a reimbursement basis, so that effectively LGUGC needs to have reserves to make payment and then be reimbursed.) Rather, it strengthens the security of the guarantee itself, by the U.S. involvement and association.

⁵⁶ LGUGC is currently preparing to manage a partial credit guarantee program supported by the World Bank with funding from the GEF Trust Facility for a special reserve (to be owned by the government) to support commercial bank loans for energy efficiency projects for electric cooperatives. Though such a reserve will not enhance LGUGC's capital for LGU guarantee operations, associated management fee income and business diversification would help LGUGC expand.

Figure A-3. LGUGC: Flow of Funds



The LGUGC originally had a target of roughly 10:1 for outstanding insured debt to capitalization. Were LGUGC to insure another PhP 2 billion in loans and bonds, it would reach that target ratio rapidly. Moreover, the 10:1 ratio is high for a start-up company that is insuring relatively short-term debt instruments and where there is likely high “systemic” risk. Ideally, no single loan guarantee should exceed 15 to 20 percent of the company’s liabilities; this diversification, however, may be difficult to achieve until the LGUGC increases its size.

As of 2001, its leverage was at less than a 5:1 ratio, but 62 percent of policy exposure was in one bond issue (Coloocan), representing three individual projects; and 32 percent in another (Puerto Princesa.) This concentration was a natural consequence of a start-up where the first issues underwritten necessarily bulk large in the risk profile.

Growth of the LGUGC has not been smooth. Starting in 2000, there arose many uncertainties due to the turbulent political situation, compounded by moves toward possible greater regulation of the municipal bond offerings. Nonetheless, the longer-term prospects are positive and the municipal market should enjoy expansion. As an outgrowth of the recent regulatory discussions, there is the prospect that up to PhP 2 billion in LGU bond issues could be sold, most (if not all) carrying the LGUGC guarantee.⁵⁷ This volume would place

the LGUGC near its limits of guarantee given its existing capitalization.

Assessment

The LGUGC provides a rare example of where the indigenous financial community and the government cooperated in establishing a commercially based guarantee company, run on bond insurance principles, for purposes of expanding private financing of infrastructure. The guarantee has been employed in the development of a bond market, as opposed to the extension of GFI bank loans.

The LGUGC has operated on a commercial basis and has added liquidity (at primary market level) and credibility to the small but growing LGU bond market. So far, this nascent market has been free of any payment difficulties.

By reducing economic risk on individual transactions, the LGUGC has succeeded in channeling private capital into local government capital financing, and built a small nexus between private sector institutions and local governments. A key attribute of LGUGC is the production of homogeneous LGU debt, which should trade at the same level. This is because the primary security will be the guarantee, and the credit risk borne by bond investors is that from the guarantor, LGUGC.⁵⁸

⁵⁷ For example, because of the May 2001 election, there was a moratorium on LGUs signing new contracts (including loans and bonds) starting March 1, 2001. Bond sales not consummated before then were postponed until after the elections. Activity has been sparse since 2002, because of the political situation.

⁵⁸ This is approximately the outcome in the United States where 50 percent of all state/local debt is commercially insured. The insured debt in any one state trades at the same levels, but differing state tax treatments of interest income can account for differences, as can slight variations in the perceived strength of the private insurers (there are five that are active

The role of the LGUGC considerably simplifies the life of the bond investor in monitoring credits by creating a homogenous volume of less risky debt in the market. Private sector investors have no experience with LGUs and have little, if any, access to information about the underlying credits (or ability to analyze the data).⁵⁹

The LGUGC will undertake the onerous jobs of exercising the intercept and dealing with the LGUs, a contract enforcement role that private investors (including PFIs) do not relish from a public relations standpoint.⁶⁰

Outlook

In the future, the LGUGC will continue to grow if:

- (a) it is able to obtain added capital for its reserves against guaranteed bonds; and
- (b) the Philippine municipal bond market is a cost-effective alternative to the dominant GFI loans.

Such capital needs to be “patient,” as the guarantee fees and investment earnings need time to build up reserves; profits can only grow slowly until the scale is achieved. Possible credit assistance rendered by a donor institution, as discussed above, should be complementary to the role already played by the LGUGC, and not undermine its activity. By the same token, the provision of reinsurance, specific reserves or an equity stake would strengthen the capital base of LGUGC and help maintain its future growth.

Despite early successes, continued growth in the Philippine municipal bond market will remain difficult as long as the government-owned banks retain their dominant depository and lending relationships with local governments. The vision formed by the Philippine government in the mid-1990s foresaw the GFIs limiting their lending to short-term financing and small projects that did not qualify for municipal bonds. But the GFIs have found LGU loans, backed by the assignment of tax transfer payments, very profitable and are not anxious to have the LGU debt market made competitive.

Another impediment is the availability of concessionary loans through the Municipal Development Fund or through concessionary loan programs routed through GFIs. These loans create a risk for private lenders, which might develop LGU projects only to see them picked off by GFIs able to lend on concessionary terms (precisely because of the compensating LGU deposits maintained with them). The LGUGC can counter these predatory practices only if the costs of bond flotations can be kept relatively low and access to markets is efficient and fast.

Overall, the municipal securities market in the Philippines, fueled by the guarantee provided by the LGUGC, will remain in its infancy for some time. Steps are still needed to make private sector underwriting of bonds competitive.

The LGUGC has provided an institutional focal point for increasing the competition for lending and for building the foundations of a market. But the LGUGC faces a difficult environment. At the very least, the competitive advantages bestowed on GFIs should be reduced, as should the tax advantages given to investments routed through banks.

⁵⁹ As is true in many emerging markets, local government financial data are hard to come by and often not available to the general public. It must be physically accessed at Department of Finance offices in Manila or acquired directly from the units.

⁶⁰ Several private investors in interviews specifically singled out this lead role by LGUGC in collecting on bad LGU debts and taking the bad publicity as a great advantage to insurance.

Appendix 4

Case Study: Infrastructure Finance Corporation of South Africa (INCA)

BACKGROUND: SUB-SOVEREIGN FINANCE IN SOUTH AFRICA

In the last decade, South Africa has undergone major governmental transformation, highlighted by an integration of formerly racially segregated communities and by a subsequent large-scale compression of the number of governments.

In South Africa's new federated system, the subnational governments are a major component of the governmental structure.⁶¹ Amid rapid changes under a new constitution, South Africa has reduced its local governments from 1,300 in 1994 down to a mere 246 municipalities in 2000, including 46 district municipalities and six metropolitan municipalities. The latter two types are "super" municipalities, which include many smaller municipalities within their borders. Transitioning to the new local government structure is a continuing process, as is sorting out the services to be provided by the newly amalgamated units.

Unusually for a developing economy, South Africa has a legacy of largely self-supporting local governments, with the largest municipalities generating more than 95 percent of their revenues from their own revenue sources.⁶² (The smaller municipalities and the provinces, however, are much more dependent on transfers from the national government.)

Infrastructure transfers from the central government, which has other pressing needs, are very small in relation to the investment need (at Rand three billion a year, they equal to only about five percent of total municipal spending.) Local governments, which have responsibilities for utility services, traditionally have financed much of their activity through utility charges, having local monopolies in electric, water and sewer systems. In addition, the property tax has been an important source of revenues. In the apartheid era, the "white" local governments were generally in healthy shape. The black townships provided little in the way of services to their residents and had very few own-source revenues.

The regime change in 1994 brought early amalgamation within the local government structure, integrating the resources of the wealthy white communes with those of the much lower income black communes. The process not only brought changed priorities for expenditures, but also greatly diluted the resources to provide for them. Localities were also struck by large-scale refusals to pay utility bills and taxes, a tactic carried over from the resistance during apartheid, and one which further limited resources at the local level.

The dilution of creditworthiness arising from restructuring of the local government sector, plus various legal uncertainties regarding debt and creditor rights, have all retarded the use of the municipal bond market to provide new financing to the local government sector.

While some, but not all, South African municipalities currently prepare and use capital and operating budgets and issue financial reports, only a few have comprehensive capital investment programs. This lack of financial expertise was exacerbated by the December 2000 amalgamations of governments. This change required that the new municipalities consolidate financial information of varying quality from several sources, a process that takes time. Furthermore, assignment

⁶¹ The constitution of 1996 also created the provinces as a separate level. Theoretically, the three spheres of government are co-equal and "share" sovereignty. But, the provinces are largely dependent on the central government and have few service responsibilities and fewer still resource bases.

⁶² Local governments in 2001 accounted for R62 billion in spending; the provinces, R110 billion and the national government R85 billion. The national government makes large transfers to the provinces, but relatively small ones to the municipalities.

of specific duties among the amalgamated units is still taking place. Thus, it is difficult for either the municipalities or potential investors to look at trends in revenues or expenses until several years' worth of experience have elapsed. In other words, the large and rapid changes have created a lot of risk for investors.

Nonetheless, in South Africa, official government policy endorses the need for private sector lending to sub-sovereign governments.⁶³ Despite this policy, development of the legal clarifications needed for the restoration of the private market in municipal bonds has been slow, and many investors wish to keep the national government involved in lending to local units.

South African Financial Market

South Africa has an international class financial market, the only one in Africa, and one that shares many characteristics with the developed Western European markets. The nation is officially a middle-income country with the highest national income per capita in sub-Saharan Africa.

South Africa's privately owned commercial banks are highly rated, and the country has a well-developed life insurance and pension sector that acts as a major source of institutional investment. The economy's performance has been episodic, although it currently is enjoying a recovery.

The national government has largely received high marks for budgetary stability and avoiding the lure of deficit spending. Politically, however, tensions continue to exist between those who would see greater state intervention versus those who favor more market-determined activity. This debate encompasses the degree to which subnational governments should be exposed to the discipline of the private financial markets.

An important feature in the South African subnational government borrowing market has been the Infrastructure Finance Corporation of South Africa, universally known as INCA. INCA is a privately owned debt fund that was created in 1997 to help support the country's stalled municipal bond market. The design of the INCA fund, as is discussed below, was to leverage private equity by directly borrowing in the domestic and international financial markets and to fund the purchase of both outstanding and new subnational debt.

Trends in Municipal Debt

The latest available estimate of total long-term municipal debt outstanding in South Africa (end of 2000) is approximately R19 billion (approximately \$2 billion), of which about R2 billion are bonds listed on the bond exchange. However,

this figure has changed little for several years, indicating that the size of the debt market has declined in real terms.

Municipal debt owed to the private sector has changed little in the past several years, generally remaining between R11 and R12 billion (or about \$1 to 1.5 billion, depending on exchange rates). What has changed is the nature of the lenders. Debt owed to public sector institutions, including the state-owned Development Bank of Southern Africa (DBSA), grew from R5.6 billion to R8.1 billion. Basically, public lending has displaced private lending.

As of 2001, the DBSA held more than 30 percent of all outstanding municipal debt, a percentage that nearly doubled since 1997. Although a development bank, DBSA's loan portfolio is filled with large metropolitan municipalities and it is an active price competitor in the loan market. As a state corporation, DBSA has the advantage of reduced-cost capital, and there have been recurring complaints about its predatory practices. In these circumstances, private sector lenders have no incentive to develop potential loans if a government-owned lender undercuts them.

Since 1997, INCA has originated the majority of new private sector lending. It has acquired debt, both through extending new loans and through purchasing outstanding loans. Of the two major institutional investors, insurance companies have sold off most of their municipal holdings and pension funds have been reducing theirs.

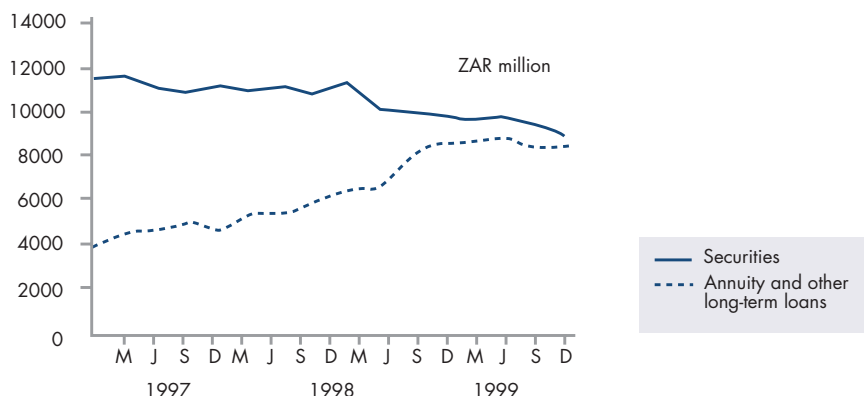
INCA has filled the gap caused by the uncertainties in the South African municipal market. Although in terms of new issues, the market has really not grown, INCA has succeeded in offsetting the exit from the market of private lenders. In the past few years, INCA's market share has increased steadily.

Like the DBSA, most of INCA's municipal loans are to large metropolitan municipalities.⁶⁴ Together, DBSA and INCA holdings accounted for half of all outstanding municipal debt as of

⁶³ Glasser and While, *op cit*, p.327

⁶⁴ Amalgamation has brought about a constriction in the portfolio since many formerly independent issuers were merged into the new larger jurisdictions. See Kruger (2001).

Figure A-4a. Form of Outstanding Municipal Debt in South Africa



2001. The hope is that with the passage of the new local government legislation, there will be increased demand.

Another trend is the changing nature of the municipal debt stock itself. As Figure A-4a below shows, there was a steady decrease in municipal bonds and a marked increase in direct loans. Because bonds can be traded, term risk is lessened where there is a secondary market for the bondholder to sell the bond if need be. This liquidity brings more investors into the market.

The shift to direct loans can be attributed to several factors: first, investors and rating agencies need reliable and public accounting, budgeting and financial information, which is not readily available for most municipalities. Thus, investors' due diligence requires detailed analysis of municipal financial statements. This means that transaction costs in loan origination and transfers between investors are high, and specialized investors with experience in lending to municipalities are favored (as opposed to smaller investors who typically might buy a relatively small amount of rated municipal debt as part of their portfolios).⁶⁵

The growing role of direct loans may also reflect the lack of clear remedy when a municipality defaults. Some institutional investors have dealt with this legal gap by structuring highly secured loans that are specific to the originating institution.⁶⁶ These specialized structures could be securitized into market instruments, but there has been little incentive to do so with

the excess of investment available compared to local government demand for such funds.

Nonetheless, a promising feature in South Africa, in contrast to many other countries, is that municipalities have significant own-source revenue streams available for pledging to debt. South African municipalities, contemplating huge infrastructure needs, evidently have the financial capacity to service more long-term debt, most likely two to four times the current amount outstanding.⁶⁷

INCA's Organization and Mandate

INCA is a private debt fund that was created to bring support to the South African municipal bond market and to provide new capital where possible and prudent. Its target clientele is large: local government units, parastatals and private companies involved in infrastructure development in South Africa.

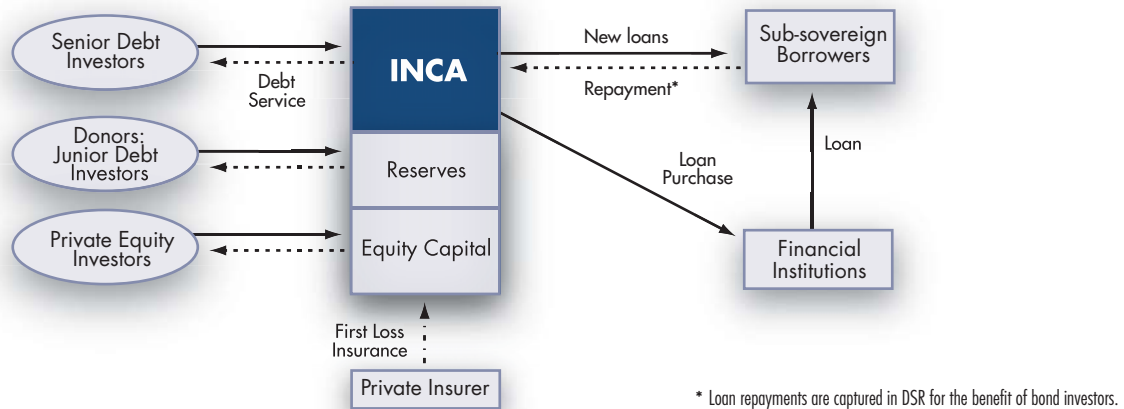
The logic of INCA is essentially one of possessing superior information, with a focus on "hands on" oversight of credits. This is especially important in the South African context, where major institutional investors do not want either to deal with the surveillance of small portions of their portfolio, or to keep track of changes associated with governmental reorganization. With the advent of the new government, the organized municipal bond market lost its liquidity and bond prices plunged. This drop reflected uncertainty associated with the

⁶⁵ The apartheid-era local authorities that originally issued the debt had implicit national government guarantees and thus their bonds were seen as safe investments for individuals and institutions.

⁶⁶ According to Glasser and White, examples include tax-advantaged transactions where a tax-paying institution benefits from the depreciation on municipal assets; pledges by municipalities to banks of tax revenues derived from the banks' own property; and deposits by the municipality with financial institutions that, with interest, equal the principal amount of the loan at maturity, thus protecting investors' principal. These are financial strategies are not usually available in emerging country economies.

⁶⁷ An indication of potential size of the market is possible using aggregate municipal capital budgets. For fiscal year 2001 these came to some R13.7 billion. If half of all capital spending were to be debt-financed, and the other half remained "pay-as-you-go" this would suggest a potential debt service capacity of R5 to R7 billion. Under reasonable assumptions, that debt service could support total municipal debt of between R38 and R85 billion, which is two to four times the outstanding debt of South African municipalities. If we assume municipal budgets will continue to grow, as they have been doing, then debt service capacity will also grow. See Glasser and White, "South Africa" in *Subnational Credit Markets in Developing Countries*.

Figure A-4b. INCA Financial Structure and Flow of Funds



new regime and the rejection of the implicit sovereign guarantee, the amalgamation of local governments and overall uncertainty about the legal standing of bonds. At the time, banks and institutional investors were stuck with large portfolios of old bonds and were not willing to invest in new loans.⁶⁸ INCA, with its focus on tracking municipal credits, brought new capital into essentially a nationwide workout system.

As of 2001, INCA’s capital structure and layers of security were as follows:

- assets amount to some R3,400 million
- the senior debt (R3,200 million outstanding)
- the subordinated junior lien debt (R60 million outstanding)
- equity and retained earnings (at about R140 million).

There is also first-loss insurance (R40 million outstanding) from a private insurer to bolster the position of the liquid reserves (R20 million set aside).

The multiple layers of security increase the level of protection for the senior debt, earning it a AA- (South Africa) rating by Fitch Investor Service. Based on the amount of the senior bonds, a gearing factor of up to 20 to one is possible for INCA.

The financial attractiveness of this high degree of gearing depends heavily on the relative interest/discount rates on the investments it makes and income that can be earned on the reserves versus the cost of capital for the senior and junior components of the debt.

Two factors were critical in INCA’s success: achieving initial capitalization and selecting wise investments. On the first point,

the original organizers of the fund, First Rand Bank (now the First National Bank) and three other major South African institutional investors, were joined by two international investment organizations, the Commonwealth Development Funds (British) and DEG (a German Development Agency). All together, these organizations contributed R50 million (which equaled about \$8 million at that time). The ranks of ownership have changed over the years and have lately expanded to include more South African “empowerment companies,” which have progressively increased their ownership in the fund.

In early 1997, INCA proceeded to raise debt capital through the sale of R500 in the South African market, with two subsequent domestic issues amounting to another R1.1 billion in senior bonds. It then issued subordinated debt, the proceeds of which were not loaned out, but were added to the reserves. The junior debt has been invested by international donors as financial support, allowing INCA to invest in lower-rated or unrated municipal securities.

INCA’s Operations

In 1999, faced with a shortage of new bond issues to buy, INCA acquired a stock of outstanding bonds. These holdings were evidently financed by privately placing INCA senior bonds with institutional investors in exchange for the outstanding municipal debt. This debt was then refinanced with new loan terms so as to restructure the short maturities and relieve the pressure of debt service on the local authorities. Institutional investors were attracted to the transaction because they could rid their portfolios of

⁶⁸ Because bonds had been de facto guaranteed by the old regime, investors had had to expend little effort on research and surveillance. Also, the new banking laws increased the capital adequacy of the loans to a full commercial “hair-cut,” which lessened the profitability of bank holdings of municipal bonds.

notoriously illiquid paper in exchange for highly rated and more liquid INCA obligations.

Figure A-4b illustrates the structure and operations of INCA. INCA appears to be profitable. A new shareholder, Kagiso Financial Services (a South Africa Empowerment Firm), bought a 44 percent interest in INCA for R118 million. The implication is that total equity and retained earnings were worth about R270 million (\$43 million) in early 2004.⁶⁹

The continuing commercial success of INCA is highly dependent on its ability to maintain a margin between its cost of capital and the lending rate of interest (or the rate it can earn on discounted outstanding bonds). INCA senior bonds started at 180 basis points above South Africa Sovereigns when they were first sold in the South African debt market in 1997. That rate premium had fallen to below 100 basis points early in the current decade, along with a general decline in interest rates. The junior debt appears to be placed with donor institutions at concessional rates to encourage INCA lending to less creditworthy borrowers without upsetting the capital adequacy pledges to the senior bond holders.

INCA has a small staff of 10; operating costs were about 25 percent of its operating income, which essentially represents interest income on loans and bonds in its portfolio and assorted fee income. Interestingly, the employees have a small profit-sharing equity interest in INCA. The executive director, in commenting on lessons learned, has stated that INCA achieved early success because of the clear rationale for the intermediary, had “major shareholders” in the early years and was operating in a well-developed capital market. The fact that the major institutional investors were happy to help establish and finance an institution that would help liquefy and patrol their existing heavy (and underwater) municipal bond portfolios was clearly important. Also of importance were its credible risk assessments and its role as an international rating opinion.⁷⁰

INCA has undertaken a measured expansion of activities, including establishing the “bad loan” workout organization, NEWCO. To support this new entity, USAID first provided subordinated capital with a small direct loan of \$10 million to

INCA in 1998. This was followed by indirect support of the NEWCO subsidiary through the provision of credit enhancements to a private bank that invested in the subsidiary.⁷¹ NEWCO’s structure allows for a restructuring of outstanding debt that is “shaky,”—bought at a deep discount—by stretching out the maturity of debt and marking down the interest rate. INCA uses its skills in combination with financial consultants to restore the credits. Existing bondholders that sell into NEWCO are also required to take equity positions in the workout firm.

INCA’s success depends on picking credits that despite the municipal market turmoil would unlikely default. Thus, an important element in INCA’s operation is its sophisticated internal rating system that groups bonds into five risk categories. Each category has a capital adequacy test that requires a certain percentage of the loan value be backed by reserves, so that higher risk categories require progressively higher levels of reserves. The capital adequacy requirement pledge to senior bondholders indicates that the adequacy will not be less than 4.8 percent on a weighted basis, which is equivalent to a BBB rating category in the INCA system. The system employs a large number of factors, and is regularly overseen by Fitch Ratings, which in its earlier corporate form of IBCA was instrumental in the design of the system.

Assessment

In many ways, INCA serves as a transition credit facility in the eye of a governmental reorganization storm. The intermediary was formed to provide liquidity in a municipal bond market that had seized up in the throes of intense uncertainty. South Africa is thus a unique case because it has financial institutions that are rare in emerging countries. It has an efficient and modern bond market, large institutional investors with prior experience with municipal securities and market-oriented policies that are being slowly enacted into law.⁷² Nonetheless, “... the number of lenders to municipalities is shrinking, the amount of private lending to municipalities is stagnant, the government-owned lender is actively competing for the business of large and creditworthy municipalities and the market’s structure is becoming steadily de-securitized.”⁷³

69 All Africa News at www.allafrica.com/stories/20040514. The Rand has appreciated against the U.S. dollar from 10 Rand to the dollar in 2001, to 6.35 Rand to the dollar in July of 2004.

70 Kruger (2000)

71 The NEWCO Corporation was capitalized in 1999 at R120 million and is designed to rehabilitate South African local authority bonds that are near or in default on debt service payments. The capital for the corporation was as follows: half was provided by equity contributions from the INCA corporation, the DBSA (10 percent) and the remainder from the sale of subordinated debt to institutions that currently owned the securities to be restructured (40 percent). The business motivation underlying the deal is that NEWCO, by virtue of its knowledge and market position, could select local authority debt that has a high potential of an “upgrading” when the underlying obligors are upgraded and their debt structures rationalized.

72 Bankruptcy provisions (World Bank seminar, April 2004).

73 Glasser and White in Freire and Petersen, op.cit.

Changes in municipal government borders, powers and functions have made it hard for municipalities or investors to anticipate the future. These changes have made municipal borrowing both risky and expensive, and caused many private lenders to withdraw from the market. But, with the finalization of much of the local government legislation in 2003, the new municipalities and their legal framework is largely settled. The City of Johannesburg sold one billion in debt for a six-year

term at 11.95 percent rate on April 13, 2004, and it is hoped that the private markets will revive. Meanwhile, INCA appears to have a large stable of "workout" situations to which to devote its energy. Over the longer term, it may act more generally as an enhancer or a bond bank, although its long-term relationship with the powerful state-owned DBSA remains to be determined.

Appendix 5

Case Study: Partial Credit Guarantee Programs Funded by the Global Environment Facility to Promote Energy Efficiency Investments

INTRODUCTION TO PROJECTS EXAMINED

One of the main strategies of the Global Environment Facility (GEF) grant program is to promote the use of energy-efficient (EE) technologies. Research suggests that EE technology is often a good financial investment, as the savings from more efficient energy use can be used to pay off debt. Partly for this reason, a full 25 of the 42 EE projects that have entered the GEF project pipeline since 1992 include financing components. These programs have utilized a range of financing instruments; however more traditional programs that include EE lines of credit have met with mixed success.⁷⁴ Shortcomings of past interventions have led to the development of more innovative financing mechanisms, including partial loan guarantees to mobilize commercial debt.

The present case study examines several GEF EE projects that take the partial guarantee approach. While these guarantee schemes do not represent municipal finance *per se*, these cases are included within our overall study because:

- (i) borrowers under these guarantees are often local entities;⁷⁵ and
- (ii) lessons can be gleaned from these experiences related to promoting commercial lending to new segments of borrowers; these lessons can be applied to the sub-sovereign finance arena.

The EE projects examined are as follows:

The Hungary Energy Efficiency Co-Financing Program (HEECP)

This five-year program first launched in 1997 was implemented by the International Finance Corporation (IFC). In 2001, the IFC and GEF launched a five-year extension, HEECP2, with greatly increased IFC support as well as additional GEF funds.

The China Second Energy Conservation Project

This project launched in 2002 is being implemented by the World Bank (WB) over a seven-year period.

The Croatia Energy Efficiency Project

This six-year project begun in late 2003 is being implemented by the World Bank in close collaboration with a United Nations Development Programme (UNDP) project. Both partners will use GEF funds to offer partial credit guarantees to promote EE technologies.

These countries vary in economic conditions (see Table 1). While Hungary and Croatia are neighbors, China, of course, is much larger and is markedly different in history and economic background.

Project resources are shown in Table 2. As can be seen, GEF uses its resources not only to fund credit guarantee facilities, but also

Table 1: Country Characteristics (2002)

Characteristic	Hungary	China	Croatia
Population	10,200,000	1,280,400,000	4,500,000
GDP Per Capita (US\$)	\$ 6,481	\$ 989	\$ 5,025

Source: World Bank, World Development Indicators.

74 Singh, World Bank GEF Energy Efficiency Portfolio Review (World Bank), pp. 13-14 and Annex 1.

75 Borrowers may include Energy Service Companies (ESCOs), which may be municipally owned, as well as equipment suppliers or EE investors. In many countries, municipalities can benefit from investing in EE technologies so as to better provide urban services such as street lighting, district heating, etc.

Table 2: Project Resources (\$US millions)

Project (by Country)	GEF Financing, WB/IFC Cofinancing				Other Co-financing	Total Project Cost
	Partial Credit Guarantees		Other Purposes			
	GEF	Other	GEF	Other		
Hungary (1)	\$ 4.25*	—	\$ 0.75	—	\$ 20.00	\$ 25.00
Hungary (2)	—	\$ 12.0 (IFC)	0.7	0.4 (IFC)	76.55	93.90
China	22.0	—	4.0	—	\$ 255.20	\$281.20
Croatia	2.0	—	5.0	5.0 (WB)	27.80	39.80

*Per original proposal, either for partial guarantees or else for co-financing. (Note this amount carried forward into Hungary's HEECP2.)

to finance supplemental purposes, such as for training and technical assistance (TA) to support development of a market for EE technologies. The projects also have attracted other resources. In Hungary after HEECP1 proved successful, the IFC added \$12 million to capitalize a separate guarantee facility via HEECP2 (see below). In Croatia, the WB has added grant resources. Also in Croatia, the UNDP is developing a parallel GEF-funded EE project (not shown), which will strengthen key implementers of the IBRD project; see discussion below.

The total size of the guarantee facilities varies substantially from country to country, in large part due to the potential size of the market for EE technology. In Hungary, substantial activity under HEECP1 signaled to the IFC that more opportunities existed; hence the establishment of a second guarantee facility under the extension project. In China, program designers recognized that, while enormous opportunities exist in the long-term, market potential is constrained in the medium term by the legacy of a command-and-control economy. In Croatia, project designers sensed less immediate opportunity than in nearby Hungary, which is a larger country with a more developed economy. They

commissioned assessments of the Croatian market and key sub-markets (including localized opportunities for tourism) so as to appropriately design and target the family of guarantee facilities.

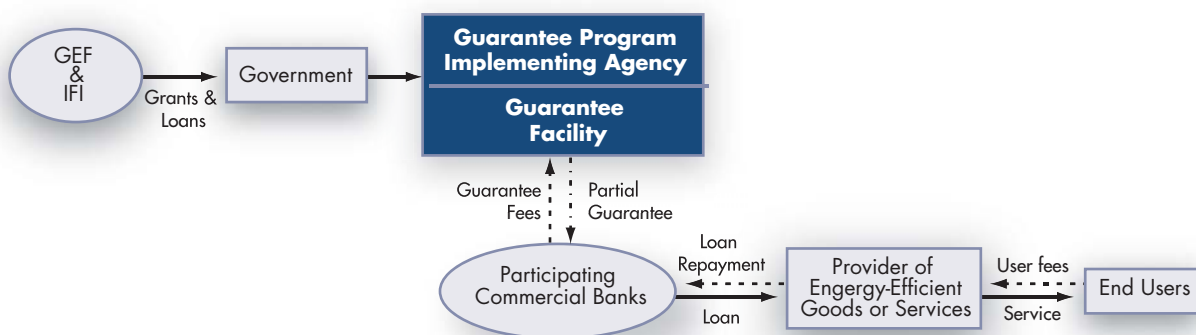
Typical GEF Guarantee Scheme

From these projects we can abstract a typical GEF partial guarantee scheme. As shown in Figure A-5, an agency such as the World Bank oversees project implementation. Grant monies pass through the cooperating government and are administered by the implementing agency, which uses them to capitalize a guarantee facility.

The facility provides a partial guarantee to participating commercial banks that make loans to energy service providers or other local entities for EE investments. Banks pay fees for this guarantee and originate loans. EE service providers invest in EE technologies using the loan proceeds. Borrowers repay loans, ideally out of energy cost savings.

While this is the typical core arrangement, variations exist on this pattern (salient differences are discussed below).

Figure A-5. GEF-Funded Partial Guarantee Programs: Typical Flow of Funds



Key Features of Guarantee Programs

Relevant aspects of these three projects are compared below by topic.

Project Objectives

Statements of project objectives articulated during the design phase offer clues as to the choices made. All three projects under review seek to expand domestic investment in EE technologies via a market approach. This approach is seen as promoting sustainability.

Sustainability goals generally focus on helping domestic banks to become familiar with, and active in, EE lending, so that eventually they can lend *without* external enhancements. Not much attention, however, is directed to the long-term sustainability of the guarantee facility *per se*. This appears to be because designers view the guarantee facilities as transitory mechanisms, established to help banks become increasingly familiar with lending to the EE industry (and it is expected that eventually they will undertake such credit risks without any need for guarantees).⁷⁶ The notion that the guarantee facility is a transitory mechanism appears at odds with the GEF's intent of capitalizing a *sustainable* fund.

Institutional Home of Guarantee Facility

Based in part on project objectives, as well as comparative assessments of alternative candidates, program designers selected an institutional home for the guarantee facility. These facility administrators are as follows:

In *Hungary*, the IFC implementers themselves administer the GEF- and IFC-funded guarantee facilities. This arrangement is in striking contrast with the other two projects examined, which selected domestic financial institutions to administer the facilities.

In *China*, the partial guarantee facility is administered by one or more implementing agencies appointed by the government with the World Bank's approval. The notion of eventually having more than one implementing agency may reflect China's enormous geographic size and diversity. The China National Investment and Guaranty Co. (I&G), the country's only national guarantee company, is the first entity selected. Newer guarantee companies have also formed but were found to be relatively small and of limited geographic scope. Program designers initially considered the option of establishing a new, independent foundation to

operate the program, but later rejected the idea due to legal complexities in the Chinese system.

In *Croatia*, the Croatian Development Bank (HBOR) will administer the guarantee facilities for two parallel GEF-funded projects that support EE borrowing: one implemented by the World Bank and the other by the UNDP.

The WB conducted a thorough assessment of alternative homes for the facility and found HBOR to be the superior alternative. One legacy of the command-and-control economy that operated prior to the fall of the Soviet Union was the lack of a broad range of strong market-oriented financial institutions from which to select a facility administrator. HBOR, while dating from that era, already administers a small and medium enterprise guarantee, and offered relevant experience.

In none of the three cases did project designs explicitly call for a free and open competition to select an administrator of the guarantee facility. Project designers may have considered that their initial studies had revealed the best candidate institution, without the need for a further competitive process.

Plans to Strengthen the Agency that Administers the Guarantee Facility

Program designs offer different plans for strengthening the FIs that will administer the guarantee facility, as follows:⁷⁷

In *China*, the project design does not explicitly detail plans for or assign resources to strengthening the implementing agencies—although presumably some of the \$1.8 million set aside for “incremental operating costs and technical assistance services” could go to this. Designers noted that “excessive loan default rates” are a “critical risk,” and in response provided for intensive TA to the energy management companies and local lenders. Another appropriate response would be to build capacity in the institution that will administer the guarantee facility, so that it can competently evaluate the creditworthiness of potential transactions.

In *Croatia*, both the complementary WB and UNDP projects explicitly provide for capacity building for HBOR, as well as other economic entities. Budgets for training and technical assistance for HBOR and other local institutions are substantial—around \$1.0 million for the UNDP project and \$0.1 million for the World Bank activity.

76 See, for example, discussions of project objectives in the Project Brief for HEECP2 (p. 18) and the Project Appraisal Document (PAD) for the China project (p. 14). Only the Croatia PAD (p. 14) mentions “providing a framework” for EE finance, where the institutional “framework” can be construed to include a guarantee facility.

77 As defined here, “institutional strengthening” refers to efforts aimed explicitly at building institutional capacity - not to the capacity building that will inevitably occur as a byproduct of program implementation.

Table 3: Selected Terms & Conditions of Partial Credit Guarantees

Project Country	Leverage Ratio of Guarantee Liabilities	Guarantee Fees	Percent of Loan Covered by Guarantee	
			Expected Average	Maximum
Hungary	200%, with experience	Reflect prevailing market-based pricing	35%	50%
Croatia	1:1 liabilities-to-reserves ratio, increasing to a targeted minimum of 2:1 after mid-term review	0.25% application, 1% of liability limit (paid yearly)	50% (proposed)	50% (proposed)
China	Guarantee commitments eventually may represent 3-5 times the capital reserve	Eventual goal: risk-differentiated pricing pitched to cover costs, overheads and risks. Assumptions are 1.5-2.7%/year, over time increasing over time to 1.9-3.3%/year	-	Up to 80-90% initially, declining over time

Source: Hungary Project Brief & Summary, Croatia PAD, and China PAD

Despite these varying levels of attention paid to the progressive institutional development of the FI that will implement the guarantee facility, none of the projects reviewed provided for indicators that focused directly on the performance of this critical implementing agency.

Guarantee Instruments

For all three projects, the GEF-funded facilities offer partial guarantees on loans extended by domestic financial institutions for investments in EE technologies. Credit risk over and above the levels of the partial guarantee is borne by the originating banks. The mechanism thus serves banks as a credit risk management tool.

Salient features of these partial guarantees and exposures are summarized in Table 3. As shown, all projects examined provide for eventual high leverage ratios. To date, however, none of these projects (or other GEF partial guarantee programs, for that matter) has yet achieved a one to one ratio of actual EE investments to GEF grant amount. This situation can be attributed to the time taken to create demand for EE loans and/or guarantees.⁷⁸

The terms and conditions of the guarantees seek to reflect evolving market conditions. In Hungary under HEECP2, the expected average guarantee coverage is 35 percent, which represents greater leverage than was sought under the original pilot project where the market was less developed. In Croatia, designers anticipate typical guarantees of 50 percent. In China, however, the nascent market appeared to require stronger incentives, and so the project initially

will allow a maximum 90 percent enhancement, with coverage declining over time. While such a high level of coverage may well be necessary, one downside to this arrangement is the possibility that the originating banks will have less incentive to conduct sufficient due diligence on the underlying transactions, since comparatively little of their own capital will be at risk.

In Hungary under HEECP2, the IFC has been able to expand substantially the program's ability to offer guarantees while minimizing its own exposure to risk. It has done so by capitalizing a new guarantee facility that complements the original GEF-funded facility. Under this arrangement, the GEF facility is in a first loss position with respect to the IFC's guarantee liability. This reduces the IFC's risks: GEF resources would have to be fully exhausted before the IFC would have to pay any guarantee claims. The IFC estimates that, in a worst case scenario, this translates into a 12.5 percent default rate for the IFC.

Establishing two or more separate guarantee facilities within a single program can meet other goals as well. The Croatia project, for example, features two separate guarantee facilities. The facility expected to become active from the outset will support transactions involving the National Power Utility's (HEP's) own Energy Service Company. A second facility that will become active later will support transactions involving other energy service providers. This design helps to ensure that the initial entrant into the EE market will not monopolize the market, as well as all of the available guarantee funds.⁷⁹

⁷⁸ Singh, World Bank GEF Energy Efficiency Portfolio Review (World Bank), p. 20.

⁷⁹ In addition to the partial guarantees on individual loans, GEF has also established loan loss reserve funds. These funds offer full or partial coverage for a portfolio of small EE loans, usually where individual loan guarantees are not appropriate. In HEECP, for example, such an instrument covered a portfolio of small residential loans. Participating banks contributed four percent of the total loan portfolio amount, while GEF provided 11 percent. If defaults exceeded 15 percent, the bank in question would bear the incremental loss. This mechanism is less relevant for our purposes than is the partial guarantee approach.

Assessment

Opportunities exist for collaboration between international agencies in the design and implementation of such projects. This is particularly useful since agencies have access to different sources of monies, and face different priorities and constraints in their activities. Also, the willingness of the GEF grant fund to assume a first loss position on its loan guarantees allows other agencies also to provide partial guarantees at relatively low risk.

Designers should carefully consider whether the guarantee facility will be needed in the long term. If so, the project design typically should provide for a domestic financial institution to manage the facility. If not, the design should otherwise provide for what will happen to the guarantee facility at the end of the project. In situations where more than one domestic financial institution may have capacity to manage the facility, designers should consider selecting a candidate via a competitive process.⁸⁰

Project design should explicitly provide for the institutional strengthening of the entity selected to manage the guarantee facility. A project design may provide for the domestic implementing agency to play a progressively greater role over time, as the market develops and as the agency becomes institutionally stronger.

Establishing two or more distinct guarantee facilities may help provide for long-term market growth. This approach may facilitate the growth of different sub-markets, or make it harder for early

entrants to a particular market to achieve and defend a monopolistic position. At the same time, however, designs should allow for some flexibility in reassigning funds during implementation if some facilities are underutilized.

Partial guarantees should be operated on a commercial basis. Their terms and conditions should reflect market conditions, borrower credits and the availability of security. Care should be taken in avoiding guarantees offering such high levels of coverage that they effectively eliminate the need for banks to conduct their own due diligence of loan requests or they become *de facto* grants.

Project designs should adequately provide for ongoing monitoring and evaluation, including via appropriate performance indicators. In addition to measuring progress towards achieving project outputs and broader market impacts, indicators should also track the progressive institutional growth of the entity that administers the facility. Designs should provide for possible mid-course corrections, based on feedback from this system of monitoring and evaluation.

Project implementers should not necessarily assume that a rise followed by a decline in guarantee activity over time indicates that the market for EE technologies has reached maturity and that it no longer needs the “training wheels” of a guarantee facility. It may just be that the guarantee instrument is no longer competitive and needs adjustment. Periodic monitoring and evaluation can best inform such conclusions.

80 A recommendation also found in Singh, World Bank GEF EE Portfolio Review, p. 23.

Appendix 6

Case Study: U.S. Bond Banks and State Revolving Funds

The United States—with its federated system, large number of local governments that provide for the most day-to-day public infrastructure needs and highly developed capital markets in which governments can borrow—provides many examples of how intermediation and credit enhancements can be used.

The U.S. municipal bond market, through which virtually all subnational borrowing takes place, is by international standards immense.⁸¹ There are more than 60,000 state and local governments technically capable of borrowing and some 13,000 new bond and note issues offered at public sale every year, amounting to \$300 billion or more in sales. Despite its size and sophistication, the market routinely meets the needs of many small, unsophisticated borrowers. Widespread use of various credit enhancements and specialized financial intermediaries plays a large role in the high level of access.

The U.S. experience with financial intermediation and credit enhancements had its origins in the markets of the 1960s and 1970s. Bond banks, which are typically state entities that borrow for purposes of relending to their local communities, were started in the 1960s. The appeal was essentially that of enjoying economies of scale and gaining broader market access.⁸²

The concept of the revolving fund, which is discussed later, was also born in the 1960s, primarily as a way of implementing restricted-fund lending programs with permanent financing sources. It has found broad application in the case of environmental (water and sewer) financing under the auspices of a capital-grant program introduced by the federal government in the 1980s that created the state revolving funds (SRFs).

Bond Banks

There are a number of models for the bond bank, ranging from the numerous examples found in the various states in the United States and the provinces in Canada, to several more structures found in Western Europe. The United States is not unique in applying the bond bank approach, although its experience is deepest. The principal differences among them relate to the nature of the security pledged in repayment of the debt, the nature of the sponsorship and the degree to which their use is voluntary on the part of local unit borrowers.⁸³ Provincial governments of Canada approve local government borrowings and generally require that municipalities borrow through the provincial bond bank, as opposed to the U.S., where use of the bond bank is voluntary.⁸⁴

The expression “bond bank” is used generically. Behind the term is the idea of pooling underlying loans to municipalities for purposes of forming portfolios and, thus, enjoying the

Summary of Advantages

Using bond banks and pools to finance local government credit needs in transitioning and developing economies can have the following advantages:

- They can consolidate many smaller loans into a size that is more readily marketable and adaptable to the credit markets.
- They can help to make uniform the loan documentation and processes and the forms of pledged security.
- There are economies of scale in financial transactions that can lower the cost-per-unit of amounts borrowed.
- They can provide a central and logical point for the application of credit enhancements, either to their own securities and/or the underlying portfolio.
- They can provide, usually as a derivative of their financing activities, technical assistance and training and act as a logical focal point for its application.

Source: Petersen, Bond Banks in Transition Countries

81 Municipal bonds refer to bonds of all subnational governments, both those of the states and their local subdivisions. Most local government debt obligations in the United States are technically bonds.

82 The earliest bond banks were formed in predominately rural states in New England that were dissatisfied with the service they were receiving from the major financial centers.

83 A brief overview of bond banks as used internationally is found in *Municipal Bond Banks Around the World*, Moody's Investor Service (May 2001). That source also references reports on various individual bond banks.

84 It is useful to note that bond banks would likely be used more extensively in the U.S. were it not for special provisions in the U.S. tax code that favor investments by commercial banks in small issues and that also favor the temporary investment of proceeds from small issues. Thus, because of the peculiarities of the U.S. tax law, the real economies of scale offered by bond banks are somewhat masked.

associated economies of scale and risk diversification. A bond bank is a financial intermediary that borrows in the financial markets, and thus should be distinguished from government agency loan programs that do not access the markets. Bond banks are conduits to the markets, as opposed to being substitutes for them; they can help build local credit markets. Bond banks also can act as a convenient institutional point at which to provide loan subsidies and technical assistance for localities that borrow.⁸⁵

Small, infrequent borrowers have special problems in accessing credit markets that can entail relatively high costs for both the borrowers and the investors. Bond banks package smaller borrowers: the assembly and pre-screening of potential borrowers, the use of standard procedures and documentation, flexibility in design available with larger-sized borrowings and the use of portfolio concepts in providing security can bring substantial economies to the borrowing process. (See Summary of Advantages)

Basic Financial Framework

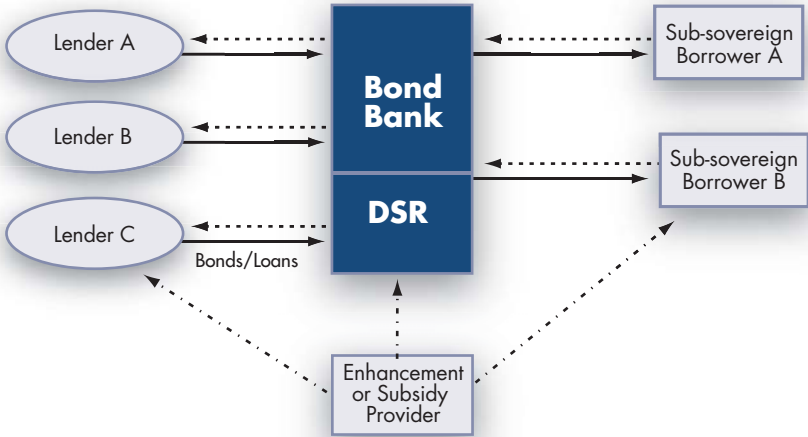
The schematic in Figure A-6a illustrates the basic framework of the bond bank. Local governments borrow from (have their bonds bought by) the bond bank, which in turn bundles them together and sells them to the ultimate investors (or lenders, in the case of a bank loan).

The timing of borrowing can be flexible, since it is common for commercial banks, once a local government has been approved, to receive a bond bank loan, to lend them money for short periods pending the bond bank's sale of its own bonds. (Local governments may also finance early construction costs with cash on hand.) Subsequently, the bond bank issues its own bonds and re-lends the proceeds to the underlying borrowers.

The role of the bond bank is to sell undivided shares in its underlying loan portfolio to investors (as opposed to selling participation in the individual loans). The portfolio represents a diversification of risk for the investor without the toil and cost of holding the underlying small loans. It also affords diversification and liquidity to small investors that otherwise might need to carry small holdings of the underlying small loans.

Bond banks may build multiple and layered reserves, use intercept provisions or buy commercial bond insurance to bolster their credit. As originators of obligations in the market, they have credit standards and perform on-going oversight (and reporting) on behalf of the underlying borrowers. Note that any enhancements, public or private, can be directed variously to the underlying borrowers, the bond bank or directly to the investors. States with intercept provisions may make those payable to the bond bank or make it a direct pay to the trustee of the bond bank's bond obligations.

Figure A-6a. U.S. Bond Banks & Enhancers: Typical Relationships & Flow of Funds



⁸⁵ These features are necessarily approached gingerly because of the continuing risk of moral hazard (associated with the past use of sovereign guarantees) and the dangers of fostering continuing dependency (if the entity acts in a predatory fashion and monopolizes credit market access).

As drawn in Figure A-6a, as part of the loan contract, underlying municipal borrowers typically set aside reserves (debt service reserves, or DSR).⁸⁶ Although the borrowers have pledged future revenues, these might be subject to interruption or delay for any number of reasons. Therefore, the DSR at the local level act as liquidity funds to cover any payment gaps.⁸⁷ By the same token, the bond bank itself typically maintains a DSR. When combined, the two levels of reserves (underlying borrower and bond bank) can effectively represent a year or more of funded debt service needs, depending on the design.⁸⁸

The classic application of the bond bank—but not the only one—is in the financing of infrastructure through long-term loans.⁸⁹ Although some bond pools are restricted to specific uses (as will be discussed below in conjunction with the state environmental revolving funds), most bond banks have a broad charter in terms of purposes for which they can re-lend. And, while the concept has greatest appeal to smaller governments, much larger issuers will join the pool for the economies they represent. Bond bank bond issues normally range from \$20 to 100 million in size, with 20 to 25 years to final maturity, and consist of 10 to 30 underlying loans.⁹⁰

Because of the diversification offered in the pool and reserve fund, investors generally require lower interest rates than they would if they were purchasing a single obligation from an individual locality.⁹¹ In addition, the pooling concept provides economies of scale by spreading fixed costs of borrowing (for example, credit analysis expenses, legal fees and document printing) across several borrowers.

The state sponsors may subsidize the operations in various ways. Several bond banks in the U.S. have the state effectively paying all or a portion of the general administrative costs of

running the bond banks. State sponsors may also initially fund the DSR requirement for bond bank issues on behalf of local issuers. The sponsoring state government may pay a portion of or all of the costs of issuance for local borrowers.⁹²

Many bond banks have covered this subsidy through interest earnings generated by their reserves and investment balances.⁹³ Public contributions to the DSR fund requirement for bond issues reduces the effective interest cost for borrowers. Sponsoring governments may partially cover bond insurance premiums on behalf of local borrowers. Finally, the wholesale packaging keeps specialized professional transaction costs low.

Credit Enhancements

In addition to covering administrative costs and capital contributions, sponsoring governments can provide interest rate savings to borrowers by using various forms of credit enhancement.

“Moral obligation” of State Government to Debt Service Reserve Funds

In case of a default and a draw on the reserve fund, the bond bank covenants that it (or the appropriate state official) will “request” the legislature to appropriate funds to restore the reserve fund to its required level. This is called a *moral obligation*. Investors look to the state as the ultimate credit support for the bank’s issue, although investors still face the risk that a future legislature will not appropriate funds to replenish the DSR.⁹⁴

A variation of the approach is the *state appropriation support*. Under the appropriation approach, bond bank issues are backed by a routine state legislative appropriation of debt service every budget cycle, which means that there is no need

86 The DSR is a special account held to meet the contingency of a shortfall in funds for debt service. It is typically funded at the level of the maximum periodic (annual) debt service or 10 percent of the amount of the issue. This would be used where the underlying local borrower has sold a “revenue bond” to the bond bank that is secured on enterprise earnings or other “limited” obligation. In the case of the general obligation pledge, the use of the local DSR is not typical.

87 The reserves are invested in interest-bearing accounts and typically are taken as a first appropriation in any budget

88 The discussion assumes a long-term loan structure, with serial maturities of principal. Short-term loans do not have reserves but can have a mandatory setting aside of the pledged revenues when they are received (a form of interception). These funds are a first appropriation, meaning they are paid before any other expenditure can be made.

89 Bond banks are also used for cash-flow financing through the issuance of short-term pooled issues that provide localities with interim funding until operating revenues are received. Typically, these short-term issues are secured by the locality’s pledge of operating revenues (perhaps with an explicit sequestration of first revenues as received) and also by the ability of the bond bank to intercept state aid in the event of nonpayment on the obligation by the locality.

90 In the United States, bonds usually have a serial maturity structure so that principal payments start immediately and there is little or no grace period in repayments. Certain revenue bonds may capitalize early year interest payments, but these borrowings normally do not qualify for bond bank loans.

91 The credit rating agencies explicitly acknowledge the portfolio aspects of risk diversification in calculating needed reserves funds and the assignment of ratings. See Standard and Poor’s Public Finance Criteria (New York, 2000), pp. 116-121.

92 Costs of issuance are broadly the professional and financial costs that go into preparing for the bond issuance. These vary greatly as a percentage of bond proceeds because of the large economies of scale in financial transactions. Thus the subsidy is relatively most important to very small borrowers.

93 Early on, bond banks were able to pay most of their costs through interest rate arbitrage due to the tax-exempt nature of their debt versus their ability to invest in higher yielding securities. This ability was greatly limited by federal legislation in the early 1980s and curbed the growth in bond banks.

94 Generally, this moral obligation pledge to replenish the debt service reserve fund results in a credit rating that is one category lower than the state’s general obligation rating. Were a state not to honor the moral obligation, it would be downgraded (this has happened once in the case of Minnesota). No bond bank in the United States has ever called upon the moral obligation and none has defaulted.

to trigger the appropriation by as an act of default and a draw on the DSR. The annual appropriation pledge of the state mitigates the risk of local borrower defaults, but investors still bear the risk that the legislature will fail to enact the appropriation.

State Government Guarantee Support

In the U.S., a few states have pledged their full faith and credit guaranty to either the underlying loans to local governments or to the bonds issued by the bond bank itself.⁹⁵ For example, the state of New Hampshire provides a direct guarantee of the underlying bonds of the localities and provides for a moral obligation make up of the reserve fund. But, the vast majority of states *do not* pledge their own full faith and credit because they have statutory limitations on the amount of general-obligation debt they can issue, or because they prefer to retain that debt capacity for statewide projects.

Intercepted Aid Provisions

Many bond banks have the statutory authority to intercept state aid to a local government that defaults on its obligations to the bond bank. In other words, the bond bank has the authority to instruct the state to pay directly to the bank state aid scheduled to be paid to the defaulting local government.

The intercept mechanism is most powerful when a local government depends on state aid for a large proportion of its revenues because intercepted payments can be redirected immediately from the bond bank to investors. The security conferred by the pledge depends on the design and predictability of the state assistance program. The size and pace of future aid payments, even if constitutionally man-dated, will likely depend on the future economic, financial and political position of the state. For this reason, state aid payments, which are almost always subject to annual appropriation, are not viewed as having the same dependability as a direct guarantee by the state. In the United States, most states have provisions to intercept state aid paid to local school districts in support of local education debt. Since state aid makes up over half of their revenues, the local education debt is seen as highly secured.

Bond Insurance

In the United States, there has been some use of commercial bond insurance by bond banks, although most banks are highly rated enough on their own merits to make insurance

unnecessary.⁹⁶ Bond banks with credit ratings of “A” or better usually find such insurance is not economical as the premium offsets any possible interest cost reduction.⁹⁷

Credit Standards and Procedures

The underlying creditworthiness of the local government is usually fundamental to the repayment capacity of bond banks. Most bond banks operate on the premise that the borrowing locality either will have its own stable and sufficient revenues to repay debt or will be able to pledge intergovernmental payments.

Debt service at the *local level* must be a regular and sustainable part of the budget. There must be sufficient margins available at the local borrower level to afford comfort to creditors, including the bond bank. The role of the rating agencies is critical in that they set requirements on the quality of the underlying pools and size of needed reserves for the bond bank to achieve target credit rating.

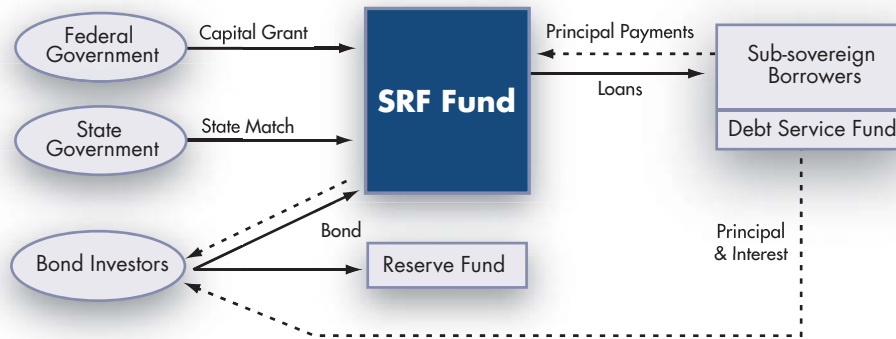
As a result, bond banks have application forms and review processes that mirror those used by the credit rating agencies themselves. These processes examine factors such as the financial condition of the issuer, the use of proceeds and general information on the local unit’s economy and demographics. In the case of enterprise activities, information on the facility, activity and the market area are required, usually in the form of engineering reports from consultants. Local government debt issuance is governed by laws that define required procedures, allowable purposes and instruments and acceptable forms of security. These laws also place limitations on the amount of debt that can be outstanding or debt service payable in any year. Such limitations are usually expressed as a ratio of debt/debt service to total available revenues, or as a percentage of total expenditure. Thus, local governments in acquiring a bond bank loan must file financial statements and have legal opinions, which are much the same as if they were to borrow in the market directly. These activities can be overseen by the bond bank and done “wholesale,” helping to achieve economies.

95 In Canada, the provinces make a sovereign pledge to back the bond bank’s debt. In the U.S., only certain uses may receive a general obligation pledge, while others may not. This results in different bond series issued by the same issuer bank being rated differently.

96 For example, bond banks in the United States can buy commercial bond insurance “wholesale” from bond insurers at smaller premiums, since they have (a) their own credit standards, (b) carry out on-going surveillance and (c) themselves represent a diversified portfolio.

97 Maryland purchases insurance for its bond bank issue in lieu of using another form of state pledge.

Figure A-6b. U.S. Blended Rate SRF Model: Typical Flow of Funds



State Revolving Funds

Various state financial entities, including bond banks, may operate revolving loan funds. These funds support loans (usually subsidized) to local borrowers; the ensuing loan repayments to the fund are then re-lent to other borrowers over time.

Thus, there is a permanent capital base, and monies in the loan fund constantly revolve to new projects.⁹⁸ Revolving funds have typically been capitalized by a state (or federal) appropriation, or receive a dedicated, on-going revenue stream from the state to support subsidized programs on a sustainable basis.⁹⁹ The most important use of the revolving fund has been in the area of water pollution control and, more recently, drinking water supply, in both cases under the auspices of federal programs.

Starting in the late 1980s, the U.S. Environmental Protection Agency (EPA) began disbursing capital grants to the states for financing the Clean Water Act pollution control construction programs by local governments.¹⁰⁰ These federal seed grants, which were matched by 20 percent state contributions, were dedicated to setting up restricted revolving funds for loans and other credit enhancements, popularly known as the SRFs.

Any loan repayments or other earnings on the seed money were dedicated to reinvestment in future water pollution

clean-up efforts. The broad parameters of the SRF program left great discretion to the states and they have come up with a variety of programs.¹⁰¹ The 20 percent state match, for example, could be raised however the state selected, either through annual appropriation or through the sale of bonds. States, likewise, have used a variety of approaches in setting the terms for the loans made from the revolving funds. Loans made directly from the SRF grant may not have a maturity of greater than 20 years. However, longer terms can be given on that share of funds that are recycled from earlier issues or that are derived from leveraged borrowing.

States have the option of either restricting their lending program to the corpus of the SRF grants (and state matching share), or leveraging more funds through borrowing. The latter involves pledging all or part of the capital endowment to the repayment of the bonds, and then leveraging up by borrowing in the markets (usually in a revenue bond structure) and making more loans.

Figure A-6b provides a schematic of a popular approach to leveraging called the blended rate method. In this example, a portion of loans is made directly from the SRF, which is then supplemented by the proceeds of a revenue bond issue that are used to make another portion of loans. The principal of loans that represent the SRF capital (grant and match) are recycled back into the SRF, while the revenue-bond component of loans have interest and principal flowing back into the debt service

98 Note that a revolving fund has a “permanent” capital base from which loans are made and into which repayments are recycled. Most state bond banks are debt conduits in which almost all of the capital is borrowed in the market and loan repayments are paid back to the holders of the bond bank securities. However, financial administration of the revolving fund for a particular purpose (environmental is the most important area) is given over to the bond bank, which has a more general mandate to assist local borrowers.

99 Poland created revolving lending funds capitalized by the receipts from national and regional environmental payments. The funds are specifically used to finance environmental improvements and have been the largest source of loan capital to Polish cities.

100 The program supplanted a construction grants program under the original Clean Water Act of 1972 that had provided grants that met 70 to 90 percent of eligible costs of public-owned sewer treatment plants. With few exceptions, these facilities were owned and operated by local governments. States have administrative roles in the program and also frequently provide matches to the federal assistance.

101 Title VI of the 1987 Act, which set up the SRF program, provided for a multiple of ways in which the federal capital grants could be used by states: 1) make low interest revolving loans; 2) buy (or refinance) municipal bonds; 3) guarantee (or buy insurance for) local governmental loans; 4) serve as source of revenue or security on bonds sold for purposes of making loans; 5) earn interest on the invested accounts; or 6) cover reasonable administrative costs.

fund for the bonds (any interest payments can also be flowed back into the debt service fund). Other variations allow for the pledging of the SRF fund itself to the revenue bond issue.

The credit enhancements discussed above in conjunction with the bond banks are also applicable: from intercept provisions, to bond insurance, layered debt service reserves and forms of direct and indirect guarantees.¹⁰²

In 2000, about 57 percent of all the state SRF programs had used direct loan programs without leverage and 43 percent had used leveraging.¹⁰³ As of 2001, 23 states had issued bonds secured on SRF funds. Combined with other sources, this means that the total amount of funds lent or available for lending (\$34.3 billion) is about 1.9 times the \$18.3 billion in federal capital seed grants made as of that date. Overall, the use of leveraging has been modest, although it is substantial in some cases. Annual new borrowing from the SRF funds is in the range of \$3 to \$4 billion, which is about the size of the federal construction grant program that it replaced.

Generally speaking, leveraging of the SRF fund accelerates the amount of funds available for projects, but the payment of interest and principal on borrowed funds ultimately can reduce the size of the fund. The rate of attrition in the fund depends heavily on the relending rates and maturity structure of the sub-loans as compared to that of capital borrowed in the market. Most SRFs have opted to keep their lending rates below those in the markets in order to subsidize certain borrowers on the basis of hardship, and to keep up demand for the funds.¹⁰⁴ National survey work indicates that the average SRF loan rate is typically 300 basis points below the going market rate.¹⁰⁵ This means that SRF loans are attractive to even highly rated borrowers in many states, although many states do allocate more favorable treatment to hard-pressed borrowers. Overall, because of the great flexibility afforded the states by the underlying federal program, there has been a broad range of applications and experience.¹⁰⁶

Innovations in Credit

In 1996, building on the experience of the SRFs, the program was expanded to provide for similar federal seed grant assistance to the area of drinking water supply. Operationally, the capital grant concept was the same, but the clientele differed. Unlike sewer treatment, which is almost wholly a government function, water supply involved many small not-for-profit and a few for-profit private water systems. The Drinking Water State Revolving Funds (DWSRF) entailed new issues regarding borrowers and security pledges, with loan funds being used in novel ways (such as watershed protection through buying land or development rights).¹⁰⁷ The Drinking Water Act of 1996 also allowed the clean water and drinking water funds (albeit used for separate purposes) to cross-collateralize their obligations and to transfer limited amounts among accounts.

Another innovation supported by the water supply SRFs has been the use of linked-deposit programs, particularly in the case of small not-for-profits, farmers, private firms and individuals. In this approach, states use SRF funds to purchase certificates of deposit from local commercial banks at low rates of interest. The bank, in turn, uses the deposit to make loans (or buy bonds from) qualifying projects at reduced rates. The banks must administer the loans and typically take on the risk of repayment.

Similar wholesaling approaches have been used in conjunction with local programs that receive money from the state fund and then re-lend it to private parties, absorbing the administration and credit risk themselves.¹⁰⁸ In these cases, the SRF is using its funds as investments in (and subsidies to) third parties that in turn operate the final lending operation.

102 See Christopher Mauro, *Guide to State Revolving Funds* (New York: Merrill Lynch & Co, 1995).

103 All 50 states and the Commonwealth of Puerto Rico have SRF funds.

104 The state of Utah SRF adjusts loan terms to estimated sewer charges as a percent of median adjusted gross income, after figuring in O&M costs, existing debt service and the impact of any grants. The re-lending rate then varies from 0 to five percent (market rates). See U.S. EPA, *SRF Fund Management Handbook*, p.3-5

105 In 2001, the average SRF loan rate was 2.4 percent, while the average rate in the municipal bond market was 5.3 percent. See Norfleet, p.9.

106 Managing a revolving fund can be complex, especially if there are multiple possible uses of the capital (leveraging techniques, providing for reserves and their investment, design of loan or re-lending terms, blending lending rates, etc.). The U.S. EPA has published extensive guidance for the program, including a detailed handbook on revolving fund management and design, including electronic spreadsheets.

107 A new manual for credit evaluation was designed. Government Finance Group/ARD Inc.

108 Arkansas, California, Maryland, Minnesota, Missouri, Ohio and West Virginia use the linked-deposit approach. See Norfleet, p.23.

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