



Chapter 12

Designing and Implementing Credit Assistance to Subnational Governments

Chapter 3 identifies three groups of subnational governments based on their readiness to access private financial markets as indicated by their financial condition, managerial skills, and (to a certain extent) size. The first group includes jurisdictions that already have access but could enjoy more and better options given a more supportive regulatory and policy environment. The second group could achieve access with help, including credit assistance that complements the operation of credit markets. The third group cannot access financial markets, even through market-oriented intermediaries, because of inadequate revenue sources. Borrowing programs should not be created for these subnational governments because borrowing will not solve this problem and could even exacerbate it.

The question then is how to assist subnational governments that do not now have the resources to be self-financing, possibly because they do not have an adequate tax base. If the central government chooses to assist these jurisdictions by establishing a predictable and stable system of intergovernmental transfers, even smaller governments can have adequate local revenues. Revenue streams from both local sources and intergovernmental transfers can be used for capital investment, with or without borrowing.

Once a subnational government has reliable revenue streams, it has the potential to support debt. Access to borrowed capital should be available to the extent that the amount of borrowing represents an acceptable level of risk. Private markets still may not serve these jurisdictions because of the small size of their financing needs, their inability to conduct analysis and planning, or their inability to deal with capital markets concepts and prac-

tices. For this group, market intermediaries and technical assistance could be made available to bridge these gaps. This middle group of potential borrowers is the major focus of this chapter.

National governments can provide an environment that promotes the marketability of local debt by implementing good macroeconomic and regulatory policies. Beyond that, several questions arise when considering assistance for subnational governments that do not have access to financial markets. Should assistance be given to help subnational governments gain access to credit? If so, what form should the assistance take in order to encourage private capital market participation and to minimize the crowding out of private capital providers? While designing national credit assistance programs that concentrate on the most needy governments seems a worthy policy objective, making cheap credit available from the central government is not without hazards. Whether as loans or grants, assistance programs have the potential to undermine private credit markets (see box 12.1).

Assistance can take several forms, ranging from technical assistance and financial assistance to direct lending and interest rate subsidies to encourage private market participants to join a transaction. At least three basic questions should be asked to determine whether to use a given technique:

- Does the assistance technique leverage private sector investment?
- How likely is it that the assistance will crowd out private sector capital?
- Does the technique increase the risk of moral hazard? How likely is it that it will be misinterpreted as a central government guarantee?

These questions are explored in the context of several forms of assistance that might be provided to promote private capital market development.

Technical Assistance

Technical assistance to help subnational governments become familiar with credit market practices and to become more creditworthy is the most likely form of assistance to attract private sector interest and the least likely to crowd out private capital. It is also the least likely to raise the risk of moral hazard. Technical assistance and training in accounting and budgeting, identifying and analyzing capital investment projects, and operating and managing facilities expand managerial skills and encourage more efficient financial practices.

Box 12.1. The Subnational Government Retreat from the Private Credit Market in the Czech Republic

Sometimes progress to more open markets for subnational governments can be reversed by national government policies, as happened in the Czech Republic. Immediately following liberalization commercial bank loans to subnational governments began to grow in the early 1990s. This growth was soon cut short by competition from state-based loan funds and capital grants.

Commercial loans to subnational governments had been encouraged through the formation of the Municipal Investment Fund, a USAID-supported project that provided a discount facility to commercial banks. Czech cities tend to have heavy urban infrastructure responsibilities, and capital spending accounts for a large share of their budgets, typically about 30 percent. However, the national government then chose to follow a less transparent capital grants policy, which together with low-cost loan programs that ignored creditworthiness undermined the emerging bank lending market. The soft loans from the state created moral hazard, and as conditions deteriorated, cities began to default. An estimated 73 percent of the State Environmental Fund loans to subnational governments were nonperforming, for example.

Finally, to meet the EU pre-accession Maastricht convergence requirements on government debt limitations and to conserve credit access for national government use, the central government ruled that it must approve all subnational government loans. This effectively stifled subnational government borrowing from private sources.

Source: Czech Republic case study, chapter 28.

Technical assistance works much better with practical applications than with abstract principles and when focused on creating local institutional and technical capacity. Technical assistance in capital planning, cash flow projections, and project management are particularly supportive of in-

creased capital market access. These skills allow the subnational government to work within budget constraints, to match revenues and expenditures, to figure out how much to borrow and for what purposes, and to determine how quickly it can and should repay loans. Either public or private lending entities can help provide access to markets, especially if standardized documentation and processes are developed. Standardization helps to resolve questions of security and keep costs down.¹

Financial Assistance

Financial assistance to help subnational governments gain access to private credit can take several forms. However, direct financial assistance that is insulated from market testing has significant drawbacks and risks, because the risks of adverse selection and moral hazard (see chapter 2) are always involved. To the degree that assistance from the center is institutionalized, it can foster a culture of long-term dependency and impede market development.

The lure of cheap credit provides an incentive for subnational governments to be or appear to be needy rather than self-sufficient. Direct assistance also creates hidden subsidies in the form of contingent guarantees and enhancements. It can crowd out the private sector, which typically sets higher credit standards and charges more for lending. Direct assistance usually is less efficient at leveraging private sector resources than is technical assistance.

Concessionary financing (with terms and conditions more favorable than those available in the commercial market) can also distort choices. Financial assistance reduces only capital costs to the borrower, not future facility operating costs, which will increase with the new investment. A borrower whose only source of credit is through preferential assistance, rather than capital from hard credit sources, may not have been required to fully investigate operating costs or to build them into budget planning. The governmental borrower may have little or no capacity to properly operate, maintain, and ultimately replace the facility, which then rapidly slips into decline.

However, concessional finance for subnational governments continues to have a role in most economies, either to encourage desirable activities or to surmount barriers. Furthermore, careful design can reduce the drawbacks and risks, even if it cannot eliminate them. Fundamentally, direct financial assistance should always have an exit strategy and a plan for shifting obligations to commercial credit markets. The assisting government can thereby

absorb some of the risks that are unacceptable to the private credit market. This might mean finding a way to eliminate a narrow risk (such as environmental risk) by providing risk insurance. Alternatively, it might mean taking a junior lien in order to comfort potential private lenders or providing a guarantee on the “long end” of a debt structure if commercial lenders are able to provide short- and medium-term principal maturities.

Direct Lending

Direct lending can be an inefficient form of financial assistance and is likely to crowd out private lenders and invite moral hazard. Many direct lending programs aimed at subnational governments have been directed from the center. These loans are often made to unwilling and inattentive subnational governments, which end up treating them as grants. However, there can be constructive direct lending roles. The International Finance Corporation’s A/B loan syndication and certification structures have demonstrated that leverage efficiencies can be achieved in the private sector with such instruments, if they are well designed.

To increase leverage and reduce crowding out and moral hazard, direct lending should be designed to induce cofinancing by commercial lenders. The smallest possible direct lending role required to achieve this objective will minimize the risk of crowding out and maximize the efficiency of the assistance rendered. Thus, for example, if a 5 percent junior lien position will induce the private sector to join in cofinancing a loan, the provider of this form of assistance should be prepared to forgo a larger loan program.

Although direct lending programs have had a poor record of loan repayment, the tide appears to be turning in some countries (see box 12.2). Credit discipline, if it is instilled into direct lending programs, can help prepare borrowers for the realities of the private market as long as sufficient economic inducements can be designed to enable borrowers to graduate to private market access.

Debt Service Subsidies and Public-Private Cofinancing

Debt service subsidies resemble direct lending in that they constitute ongoing payment streams to support subnational borrowing and so can be inefficient. They are more likely to lead to moral hazard than are more indirect or softer forms of financial assistance, such as insurance, partial guarantees, or technical assistance. Nonetheless, they can be useful tools if they are

Box 12.2. Moving from Soft to Hard Credit through Enforcement of Loan Collections: South Africa's Experience

Development banks have had a very poor loan repayment record, which has made many observers skeptical of the ability of subnational governments to make the transition into private markets with hard credit demands. However, some countries are seeking to correct the situation by holding delinquent borrowers responsible. South Africa demonstrates one way of doing this.

In January 1996 the Development Bank of Southern Africa (DBSA) inherited the Ministry of Finance's development loan portfolio for subnational governments. The portfolio consisted of some 390 loans representing about 900 million rand (\$50 million) that had been made to subnational governments primarily under the pre-1994 regime. At the time of the transfer most borrowers were on time with their payments.

Amid the turmoil of the transition to the new governmental structure, many of the subnational government obligors began to go into default. The DBSA, which saw itself as a bank with commercial incentives and a capital position to protect, recoiled at the growing delinquency rate. While the original terms of the loans might have been concessionary, the DBSA's role was to keep the payments on schedule and to instill discipline into borrowers. DBSA was not expected to lose money and erode its capital base; its goal was to make reasonable returns to capital, while promoting longer term, socially useful development.

Accordingly, DBSA moved to deal with the subnational authorities to bring loan payments back on schedule. Loan officers were assigned to each region and given procedures for going after overdue loans. In three provinces, 32 of the 40 loans that had defaulted were put back on a timely basis using technical assistance and the threat of closing off future credit. In South Africa both government and private lenders have the power to seize assets of borrowers.

Source: Petersen and Crihfield 2000.

well designed to provide the smallest subsidy necessary to induce private capital market participation and if they are used solely when this is the only tool that will make the borrower creditworthy.

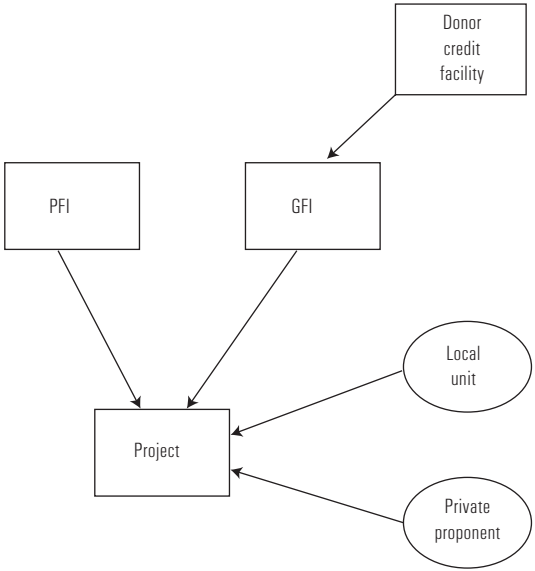
Linked deposits and co-lending programs are two devices used to subsidize interest costs through the private credit system. With linked deposits, a commercial bank might receive a deposit from a government intermediary that agrees to a reduced rate of interest if the bank agrees to use the deposited funds to make a loan for a particular purpose to a subnational government. The private institution still takes the credit risk, does the credit analysis, and administers the loan. With co-lending, the government intermediary makes a loan for a portion of the principal amount at a reduced rate of interest, while the private lender makes its share of the loan at the conventional rates. The borrower gets the advantage of the blended rate on its loan. The private lender, however, still has its principal at risk and administers the loan, with the intermediary as a partner in the transaction.

Major public-private infrastructure projects often have capital needs that exceed the financing capacity of a developing country's nascent credit market or banking system. A cornerstone of a credit assistance program should be a lending facility designed to attract rather than supplant private capital in financing subnational government infrastructure projects. Thus, in another creative use of cooperative devices, donors could require recipients of their credit to design loans to attract private sector participation in infrastructure projects. This participation might be by private financial institutions or by project proponents that may bring their own equity and debt financing, such as in a public-private project-financing scheme.

Such loans could be coursed through a government financial entity (GFI), which could retail the loan directly to a qualifying project (figure 12.1) or wholesale the loan proceeds to a private financial institution (PFI), which would then on-lend to a project (figure 12.2). The government finance institution, as a condition for receiving the loan from the donor, could be required to construct deals that attract private sector participation in infrastructure projects. The cofinancing approach could entail bank loans or bond issues where there are different tranches with different lien positions, maturity structures, and loan repayment mechanisms.² The idea is for the government finance institution to leverage private sector funds by taking various cofinancing positions in the transactions that provide comfort to the private participants or by taking positions with greater risk or less liquidity. The government finance institution is able to better absorb the added exposure because the donor credit line has been constructed for that purpose.³

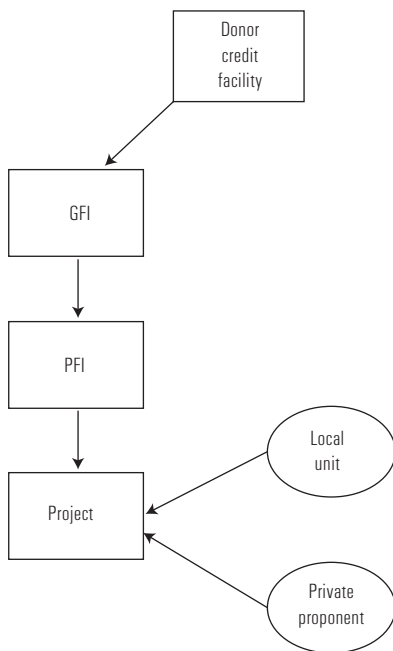
For these “market-friendly” co-participation variants to succeed, the return on investment to private sector participants needs to be competitive with that obtainable elsewhere. Thus, the government finance institution, in taking the long view and acting as a catalyst for financial market development, would need to act as companion and facilitation lender and design issues that would stimulate private participation. For many such institutions, accustomed to market monopolies when lending to subnational governments, this would be a difficult role.

The use of an on-lending facility is customary practice for donor-based loans, but the active engagement of private sector banks and financial institutions is not. Getting the government finance institution to behave in this market-building way, perhaps compensating it for its catalyst role, would need to be wired into the donor’s loan conditions.⁴ A combination of inducements and requirements might be built into the loan, to encourage use of the facility while ensuring that the government finance institution does not gain all the advantages of long-term money and drive out investment through commercial banks and the bond market.



Note: In this example, a subnational government and a private participant join in a project, financed by funds from a private finance institution and from a government financing institution. The government financing institution looks to a donor credit facility for loan funds or enhancements.

Figure 12.1. Retail On-Lending by the Government Financing Institution



Note: In this example, a subnational government and a private participant join in a project, financed by a private finance institution from funds that have been on-lent in part from a government financing institution. The government financing institution looks to a donor credit facility for loan funds or enhancements.

Figure 12.2. Wholesale On-Lending by the Government Finance Institution

Guarantees, Insurance, and Intercepts

Guarantees are a traditional and important form of financial assistance (see chapters 5 and 10). Their contingent nature makes their cost difficult to measure at the time the guarantee is given. While guarantees can lead to lax lending practices and impede the development of effective private markets, guaranteeing specific risks or specific maturities may be worth consideration. The ability of a credit assistance provider to reduce or eliminate specific risks in a transaction (such as certain environmental hazards or the repudiation of certain contractual obligations) or to back maturities that the domestic private sector is unwilling to provide can leverage private capital investment. Properly designed and implemented such use of guaran-

tees can reduce the risks of crowding out and moral hazard. Some of the World Bank's guarantee operations have begun to demonstrate the utility of guaranteeing specific risks or maturities as a means of inducing private capital providers to participate.

One way to reduce the risk that such credit enhancements will crowd out commercial lenders is to price them according to the degree of risk presented by each borrower. In this way local borrowers and commercial lenders see the costs involved in securing guarantees and so are more likely to treat the guarantees as having a cost. When this is done according to commercial standards, with costs and expected losses reflected in the fees charged, the guarantee is transformed into a form of insurance. While some might oppose the idea of charging needier borrowers more than those that are better off, there must be incentives to improve financial operations if subnational governments are ever to stand on their own in credit markets. Buying down part of the costs with grants but making the issuers borrow at risk-adjusted rates on the margin may be one way to force governments to pay attention to market interest rates and to scale projects accordingly. Another option is to price enhancements with "seasoning" premiums that can be partially rebated as borrowers live up to their obligations and see their circumstances improve.

As discussed in chapter 5, intercepts of national payments to subnational governments are a form of financial assistance that need not have any significant cost to the national government.⁵ Intercepts can be a powerful credit enhancement—and an almost essential one, given the highly centralized system of tax collection in many emerging market economies.⁶ A stream of stable, predictable intergovernmental transfers can be made pledgeable and interceptable, which can enhance creditworthiness so long as the use of the transfer is not overly restricted. Significant penalties or administrative fees when the intercept is exercised could encourage subnational governments to manage the debt payments in a businesslike fashion and not to misuse the intercept mechanism to cover lax practices. An intercept mechanism can leverage private sector funding rather than crowd it out. In the Philippines intercepts are being combined with guarantees, in the form of bond insurance, to enhance bonds sold by subnational governments (see box 12.3). To qualify for insurance, borrowers must achieve a minimum credit rating and pledge a portion of their future intercept payments to debt service. In case of default, the insurance company continues to pay the debt service to investors and assumes their rights to receive the intercept.

Box 12.3. The Philippine Local Government Unit Guarantee Corporation

Under the sponsorship of the Philippine Bankers Association, a banking consortium of 22 domestic and foreign banks has created the Local Government Unit Guarantee Corporation to provide guarantees on loans made by participating financial institutions to local governments. Some 230 million pesos were raised by subscription from the participating banks, deposited into a special account, and made available for backstopping the guarantees.

The guarantee is expected to stimulate private commercial bank interest in local government credits. For institutional and regulatory reasons, local governments have been borrowing only from government financial institutions. The government and government financial institutions are under pressure to open up the local government debt market to greater competition and to develop a municipal bond market. The government financial institutions are being privatized.

The guarantee program gives comfort to the private banks as they start lending to local governments. The program is expected to serve as an enhancement for bond issues. The guarantee depends in large part on the pre-assignment of the local government's intergovernmental transfers to the corporation, so that the transfers can be tapped in the event of default. The initial program was geared to the 120 largest local governments; once the guarantee system was in place, however, the program soon reached down to smaller government units.

As of early 2003 the corporation had insured 11 bond issues amounting to over 1.6 billion pesos (about US\$35 million). Bond issue activity slowed during the political turmoil and economic slowdown of the early 2000s, but the insured bonds are paying debt service on time and in full. As a result, the use of the program in the case of a default remains to be tested.

Source: Philippines case study, chapter 26.

Intermediaries for Small Borrowers

Should a special intermediary be created for jurisdictions that cannot access credit markets through existing market mechanisms? Special intermediaries should complement rather than replace existing commercial lending and underwriting institutions. In some countries the private sector may be able to provide such intermediation, without the need to create a new government agency or function. While this may be desirable in principle, a small issue may not attract the market's attention because it would not be economical to finance in the formal securities markets.

Many intermediary models are available, including bond banks (see below), bond pools, revolving loan funds, and municipal lending institutions. Such an institution might borrow in its own name and use the proceeds to purchase debt instruments of subnational borrowers (bond banks), or it might assemble and repackage municipal debt instruments and make them available to the market (bond pools). A major attraction of such structures is that they can provide economies of scale in issuance and, because of the larger size of issuance, improve the chances of attracting interest from secondary markets.

Any intermediary function has costs, which may include administrative costs, subsidized re-lending rates, or credit enhancement costs. However, with a properly designed and efficiently run intermediary, the costs will likely be less than those involved in outright capital grants. Intermediaries have the additional virtue of helping local officials understand the trade-offs involved in debt finance (Noel 2000).

Intermediaries can be designed to provide several services to subnational governments (see box 12.4), including access to capital markets for governments that otherwise would not have access, savings on the fixed costs of debt issuance, streamlined and standardized borrowing procedures and documentation, assistance with capital planning and cash-flow projections, and pre-structuring of loan packages. The higher-level government also may decide to offer direct financial assistance, such as credit enhancement (see chapter 11) or the re-lending of intermediaries' funds at subsidized interest rates. The more passive the financial assistance and the more it is used in tandem with normal credit channels, the better, to avoid the moral hazard risks associated with direct financial assistance that is insulated from market forces. Overall, it is better to expose the novice borrower to the actual costs of capital and the discipline of the market, at least on the margin.

If the objective is to promote local self-sufficiency, it is generally advisable to avoid enhancement methods that are nontransparent, reward dysfunctional governments, or crowd out private investment. If there is a stream of stable, predictable intergovernmental transfers for jurisdictions lacking the resources to be self-sufficient, these transfers could be made pledgeable and interceptable. This would enhance creditworthiness and leverage private sector funding at little or no cost to the national government. However, the extent to which otherwise impecunious governments should be encouraged to borrow remains a judgment call. For subnational governments with slim prospects for financial self-sufficiency, it may simply be a way for the higher level providing the transfers to pass the buck of indebtedness.

Box 12.4. The Tamil Nadu Urban Development Fund, India

The Tamil Nadu Urban Development Fund evolved from a municipal trust fund to a fund financed and managed by the public and private sectors. The initial fund was financed entirely by the public sector, and while it was financially viable, it was too small to meet the demand for urban infrastructure investment.

To increase the impact of the fund, it was converted into an autonomous financial intermediary. The new fund has 30 percent participation by the private sector and is managed by Tamil Nadu Urban Infrastructure Financial Service Ltd., a private management company. Operations have been widened to include urban infrastructure projects sponsored by private investors. To further pursue the project's objective of poverty alleviation, a new grant fund was established to finance poverty alleviation projects for specific low-income populations. In addition, the participating financial institutions have committed to contribute an amount equal to 44 percent of the Tamil Nadu government's initial contribution. The ultimate objective of the fund is to provide self-sustainable financing while mobilizing private savings for urban infrastructure investment.

(Box continues on the following page.)

The fund is administered by a board of trustees nominated by the government of Tamil Nadu and the participating financial institutions. The participating financial institutions include Industrial Credit and Investment Corporation of India, Ltd., the leading managing partner of the Tamil Nadu Urban Infrastructure Financial Service Ltd.; Infrastructure Leasing and Financial Services, a leader in the development and financing of private infrastructure projects in India on a limited recourse basis; and the Housing Development Finance Corporation, a leading finance corporation in housing and regional development. The strong reputation of these institutions in India's business and financial community should help the fund raise additional resources from other private investors.

Source: India case study, chapter 24.

Securitized Loan Pool

Another mechanism for credit assistance to subnational governments is the securitized loan pool. *Securitization* means the sale of a bundle of future cash flows arising from a specified underlying pool of loans. Proceeds from the loan payments are passed through to the investor in the form of interest and principal payments. Several variations are possible: the debt service payments may or may not be secured by the underlying loans themselves (and the underlying security that they individually provide) and may or may not have recourse to the issuer.

Certain restrictions are placed on the loans admitted to the pool, either for the benefit of the investor (nonrecourse) or at the insistence of the pool sponsor or enhancer (where the pool is enhanced). The pool can be accessed either directly by individual subnational governments borrowing or indirectly by borrowing from a government finance institution (GFI) or private financial institution (PFI) that holds the pooled loan portfolios (figure 12.3).

Several configurations of securitization are possible, from pooled issues carrying an "umbrella" guarantee or access to a liquidity facility or bond insurance to strictly nonrecourse pooled securities that provide an "over-

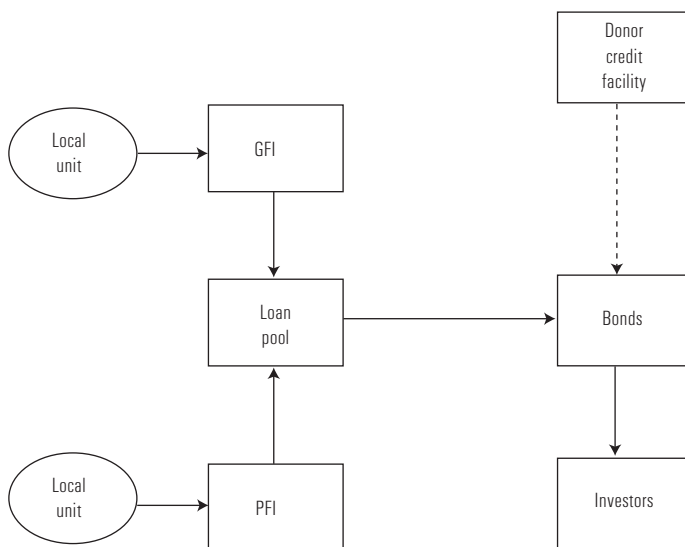


Figure 12.3. Securitization of a Loan Pool

pledge” of revenues to the underlying subnational government securities. An overpledge means that the flow of payments on the underlying loans is fractionally higher than that on the securitized debt. Thus qualifying loans would generate more debt service than the bonds sold by the pool. The excess earnings over the debt service could be used to pay the debt off faster or could be retained as income by the government financial institution that originated the pool. The pool of loan obligations can be open or closed, with an open pool permitting replacement of debt that matures or defaults with comparable loans. As depicted in figure 12.3, the pool could be backed up by a donor-based enhancement to increase the marketability of the bonds.

Securitization makes possible relatively large bond issues that create the potential for large trading volumes. Bond pools help investors become familiar with subnational government credits and provide comfort for entering into future transactions. For example, the prospect of future pool financing would permit banks to extend the maturities on the new subnational government underlying loans. The pooling and securitization technique could be especially useful in devising standard form documentation and in providing better market access to small borrowers. The pool approach would provide economical access to the credit markets for smaller

localities that are creditworthy, extend maturities on loans, and ultimately work to reduce their loan costs.⁷

A bond pool has potential drawbacks, however. First, sale of the subnational government loan assets might encounter resistance from existing lenders, in some cases eroding balance sheets by reducing the stock of performing loans among their assets.⁸ Thus, successful bank lending experience can work as an impediment to expanding the market options for subnational government borrowers. A second concern is the need to establish the legal status of a bond pool with respect to securities and banking regulations.⁹ This proved to be an impediment in efforts to create a pool of loans to subnational governments in Poland (DeAngelis and Putnam 1999).

Bond Banks

Another mechanism for assistance to subnational government is the bond bank, which borrows in its own name and uses the proceeds to purchase debt instruments of subnational borrowers. Bond banks originated in the United States to improve access to the financial markets for small local governments. The operation and scope of bond banks have varied, depending on relative financial priorities and their legal and political environments. As the bond banks gained experience, they frequently took on specialized areas of activity, such as financing environmental activities, local schools, short-term borrowing, and equipment leasing. They also moved into limited obligations, structured transactions, and credit enhancements (see box 12.5).

A survey of state bond banks in the United States shows a variety of administrative and program structures and financing experience that can be useful to municipal credit markets in emerging market economies (Petersen 1998). Because bond banks compete with private lenders and dealers and often can finance at lower costs or on better terms, bond banks have been resisted by commercial banks and securities dealers in many states.¹⁰ After early adoptions in several states, the bond bank movement in the United States slowed in the face of opposition from competing interests and concerns about stretching state credit enhancements too thin. More recently, interest at the national level in replacing recurring capital grants from the central government with revolving funds has reactivated interest in state-based financial intermediaries, including the traditional bond banks.

The bond bank concept has been slow to catch on in developing and emerging market economies, for a variety of reasons. First, in transitioning economies subnational government credit needs have been an orphan. The

Box 12.5. Assisting Small Bond Issuers: The Bond Bank Option

The United States is often thought to have a highly sophisticated financial market, with knowledgeable and skilled investors and issuers. However, that is not necessarily the case for the estimated 40,000 subnational government issuers in the U.S. bond market, many of them small and unsophisticated. Their access to markets has improved as a result of well-established legal and regulatory processes, the availability of skilled advisers, and competition among potential lenders. A combination of state-backed financial intermediaries such as bond banks, private bond insurance, and preferential federal tax policy keeps competitive pressure on dealers and banks to provide services to small issuers. As a result, the typical U.S. small local government credit has become very competitive in the markets.

To encourage this largely market-driven process, a good deal of attention has been given to upgrading local government financial management practices and reporting. States have long had an oversight function for local governments in their jurisdictions but have worked at it with increasing vigor in recent decades. Bond banks, bond insurance, and other organized lending and credit enhancing programs have required local governments to report their financial condition regularly following generally accepted accounting principles. These developments, along with the widespread use of credit ratings and recently adopted securities-related reporting requirements of the U.S. Securities and Exchange Commission, have also worked to standardize and regularize financial reports.

Source: Petersen 1998.

initial thrust was to create equity markets to handle the new private interests, and the need to finance the central government has taken precedence in debt markets.

Second, disruption in the political and fiscal structures in transitioning economies has made subnational governments appear to be poor credit

risks. There was no clear sense from one year to the next just what responsibilities and powers subnational governments would have in the emerging regime. Such issues as ownership of property, for example, placed a cloud over lending practices that traditionally had been tied to the provision of physical collateral. In the absence of information and experience, the “name” and size of a subnational government have had disproportionate importance. Third, the economics of transactions—it is more efficient to do the due diligence and promotion of one large loan or bond deal than to round up several smaller transactions—has resulted in a strong tendency to leave the smaller subsovereign loans to the commercial banking system or municipal development funds and to use the bond markets only for larger, more profitable transactions.

Fourth, in many transitioning countries domestically derived or donor-induced development funds offering loans on concessional terms and associated grant programs have effectively undercut competition from the private sector. Long-term loans, much larger and on more favorable terms than commercial markets can offer, are frequently tied into grants.¹¹

Fifth, a legacy of protection afforded by “special” municipal borrowing windows, such as development funds, have shielded local governments from the temptations and tribulations of private sector financial markets. The difficulty is that the new fiscal order calls for local governments to be more self-reliant and market-oriented. The bond bank approach offers an opportunity for smaller subnational governments to enter the market together, enjoying the benefits of a broader market appeal while minimizing the risks of a single mistake or misfortune. With experience, stronger governments may find it better to borrow on their own in the markets. These and other inducements to prudential behavior by governments can be built into the mechanics of the bond bank operations.

Liquidity Facilities

Various credit enhancements can be used to help financial markets mature and better meet the needs of subnational borrowers. Emerging markets are chronically short of long-term investible funds, as both institutional and individual investors are leery of making long-term commitments of their cash. Thus, one approach is to enlist their short-term investments into long-term capital for borrowers. A useful tool is the “put” or “tender” option, which allows investors to cash in their holdings of bonds at set dates prior to the debt’s maturity date. Put options are usually found in variable-

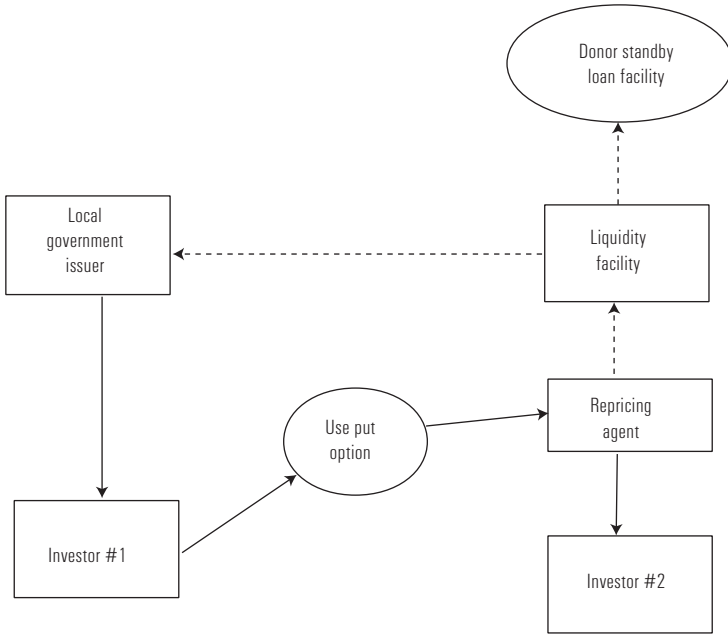
rate interest markets, where bonds are repriced on a recurring basis according to interest rate fluctuations.¹² Bonds carrying the option, no matter what their final maturity, trade like comparable obligations that are due at the next put/repricing date.¹³

Put options allow investors an “early out” and so, by definition, provide market “liquidity.” The presence of the liquidity facility, which is typically a bank stand-by loan agreement or letter of credit, ensures the current bondholder, if it elects to put the bonds, that a purchaser for the bonds will always be there and the money will be returned quickly on demand. Unless the issuer pays off the bond, the bond that is put back can either be resold by a repricing agent (usually a securities firm hired for that purpose) at the prevailing rates of interest or converted into a bank loan from the liquidity facility to “warehouse” the security until a buyer is found.¹⁴

There are many mechanical details in designing and operating a liquidity facility, but where markets are thin, the put option can provide investors with liquidity where a secondary market has yet to take root. It provides some intriguing possibilities among the arsenal of forms of donor credit assistance. For example, a credit facility provided by a domestic bank might be backed up by a donor-assisted loan facility. Under the terms of a “put” option that would be incorporated into bond issues, the liquidity facility could be availed by “qualifying” subnational government bonds.¹⁵

The basic mechanics of a liquidity facility are depicted in figure 12.4. The figure shows the alternative pathways that a bond might take, depending on borrower needs and market conditions. The issuer first sells bonds with a put option to investor 1 (pathway A). Under normal circumstances (pathway B), the repricing agent reprices the bonds to maintain a market acceptance for them, and if investor 1 puts its bonds, they are resold to investor 2. However, if the repricing agent is unsuccessful in immediately reselling the bonds, the liquidity-providing bank provides a loan to pay off investor 1 (pathway C). Were the liquidity facility itself to be incapacitated for some reason, the stand-by loan agreement, in this case provided by a donor providing a stand-by commitment, would be activated (pathway D).

Put options and liquidity facilities involve fees, and the economics of such a device are improved when there is a relatively large volume of securities involved, such as with a pool or a bond bank. The repricing of bond issues at the time of the put date means that the debt service payments will change for the underlying borrower after each put and repric-



Explanation:

- A. Issuer sells bonds to Investor #1 that have a put option.
- B. If investor elects to exercise put, bonds are placed with repricing agent and resold to Investor #2.
- C. If repricing agent is unable to place bonds with an investor, the bonds are placed with the liquidity provider, which in turn activates a loan to the issuer. The loan is repaid when the bond is resold or paid off.
- D. If liquidity provider has insufficient assets to carry the bond until it can be resold, then it can borrow from donor standby loan facility.

Figure 12.4. Mechanics of a Liquidity Facility

ing. However, repricing reflects only changing interest charges, and the changes in debt service are easier to absorb if the principal component is much smaller in the first place; that can happen if the maturity of debt is stretched out.

The great advantage to the put option is its ability to extend the maturity of debt. A liquidity facility allows the bond, if it is otherwise creditworthy (current in its debt service payments) to be priced as short-term debt, while it allows for a longer maturity, that is, the date when the issuer must by contract repay the principal.¹⁶ Having a bond’s principal payable in a series of installments over 10 to 15 years, as opposed to 2 to 3 years, dramatically lowers the annual debt service.

Grant and Loan Integration

Of great importance in inculcating credit market discipline is to ensure that the availability of grants does not undercut the use of credit at market rates by subnational governments and projects that can afford it. Grants should be tailored to meet the needs of projects that are not creditworthy or that have capital costs that, once sufficiently reduced through grant assistance, can be partially financed at market rates.

Capital subsidies come in a number of forms, from paying explicit subsidies to offset interest rates, to extending credit on very favorable terms, such as below-market rates and with extended grace periods, to providing longer maturities than are available in capital markets. The form of the subsidies has operational implications.

Gains from Integrating Loans and Grants

Encouraging efficient use of resources and access to credit markets argues for integrating grants and loans.¹⁷ A conscious regimen of exposing subnational governments to private market demand and credit expectations will benefit the development of both private lenders and government borrowers. To foster that process, grants generally should take the form of an initial capital grant that lowers capital costs to levels that can be financed by a loan. The conditions on the loan should be similar to those in private markets, with the exception that the loan will likely be of longer maturity. While the concept is generally applicable to both revenue- and non-revenue-producing projects, the initial application will likely be limited to non-revenue-producing projects. The grant also might take the form of loan “forgiveness,” with a proportion of the original debt principal written down if the borrower meets its debt obligations on time. The idea is to create positive incentives for the borrower to be faithful in meeting its obligations.

While the advantages of integrating grants and loans are easy to see, actually accomplishing the integration requires technical guidance and data on project costs, benefits, and the resources of customer groups (see box 12.6).¹⁸ Such data are likely to be sketchy, but formulating general parameters will help in decisionmaking. Perhaps one of the more straightforward applications of integration would be in such utilities as water supply and waste disposal, typically large users of capital. However, the integration concept should be applicable not only to most enterprise activities that generate some revenues but also to social or non-revenue-producing facilities that are supported by general revenues and transfers.

Box 12.6. A Brief Illustration of Grant-Loan Integration: An Example from Indonesia

It is useful to illustrate some of the concepts and terminologies of the grant-loan integration concept. The example is based on Indonesia, although the technique is generic in concept.

Determining “market-proxy” costs. Suppose that constructing and equipping a facility will cost 20 billion rupiahs (Rps) if it is built in an efficient manner to meet projected demands. Suppose also that its annual operating (*O&M*) costs (labor, materials, energy, routine maintenance) will be Rps 1 billion, again with efficient operation and adequate maintenance. These construction and operating figures are derived from a feasibility study conducted for the project. Note that the cost figures are calculated irrespective of how the facility is financed and are based solely on technical and economic efficiency grounds. In addition to the annual operation and maintenance costs, there is a potential annual debt service (*DS*) component. Thus, were the project to be totally financed at “market rates” and on a long-term basis (the economic life of the asset), then the full “market-proxy” annual debt service would be DS' , applying a standard level debt service schedule.

Leaving aside any equity contribution to be made by the community, the capital cost is first estimated at 100 percent debt-financing over the useful life of the improvement.

$$K = D'$$

where K is the capital cost of the facility and D' is the debt amount. An annual cost to repay the debt can now be derived, depending on the interest rate and the maturity. For comparison purposes using the market proxy approach, an annual level debt service factor can be applied that is designed to pay interest and principal at approximately constant amounts over the life of the loan (see chapter 6).

A 20-year loan at a 15 percent rate of interest would require an annual payment equal to 0.1598 of the principal each year. At

level debt service the “market proxy” annual debt service cost is about Rps 320 million a year on a 20-year Rps 20 billion loan.

Thus, with the market-proxy financing calculation, the annual total combined operating cost (Rps 1 billion) and capital cost (Rps 0.32 billion) of the facility (E') would be

$$E' = O\&M + DS'$$

or total annual expenditures of Rps 1.32 billion.

This annual market proxy cost is a standardized starting point of the analysis. It is intended to replicate what the full costs would be annually were the project financed at market interest rates. Therefore, it represents a proxy for the cost of capital in the economy, making allowance for the fact that long-term financing (that is, financing for the useful economic life of the facility) is unlikely to be possible in the immediate future. The next step is to compare this full cost concept with what is affordable.

Determining affordability. The project’s full annual cost needs to be compared with what the community and users can afford. This can be the most difficult part of the process. Assume that the facility will charge tariffs based on charges to residential and commercial sectors and their expected volumes of usage. The first step is to determine whether annual revenue, R , would cover the full market-proxy costs, E' , which includes the market proxy debt service, DS' .

While a certain portion of users will be able to afford the costs at the stipulated rates and volumes, there may be a large number of users who will not, and cross-subsidization may not be practical or may be too burdensome. Adjustment of the revenue for the means-tested revenue constraint shows that it is feasible to raise annual revenues only to equal R^* .

The amount of debt service that is affordable under the projected performance of the project and the affordability revenue constraints is calculated as affordable annual revenue minus

(Box continues on the following page.)

Box 12.6. *(continued)*

operating costs ($R^* - O\&M = DS^*$). The constrained value can then be used to determine the amount of grant that is needed to make the overall or “blended” annual cost of the project affordable.

Amount of the capital grant. Assuming that the affordable margin of debt is borrowed on market-proxy terms, the ratio of affordable debt service to market-based debt service (DS^*/DS') also yields the ratio of affordable debt service in the project to debt services that would be required at full market rates. Accordingly, the ratio of D^*/D' (where $D' = K$, assuming that the project were to be fully debt financed) represents the ratio of affordable debt to the entire project cost, which is equal to the ratio of affordable debt service to the market-based debt service. Thus, if $D^* = 0.5$ of D' , the capital grant will need to equal half of the initial project costs. The capital grant is calculated leaving the interest rate, maturity, and debt service structure unchanged. In other words, the debt borrowed *at the margin* is on market terms (with the notable exception that the maturity is longer than normally obtainable).

The affordable annual debt service (and hence overall annual revenue) is achieved by buying down the capital cost of the project through a grant. The capital grant to fill the gap equals the full capital cost minus the amount of debt that can be borrowed under the affordability criterion: $G = K - D^*$.

If the community can afford only Rps 116 million a year in total revenue, the project will need a capital grant that will reduce the debt service to half the market-proxy level, or a capital grant of Rps 10 billion. The facility’s operating costs would be the same (Rps 100 million), but the required debt service would be Rps 16 million instead of the full market proxy amount of Rps 32 million.

Technical and Market Analysis

Subnational government projects need to be subjected to an affordability analysis. This “means testing” of project costs against reasonably available local resources helps ensure that the availability of grants does not discourage creditworthy governments from borrowing and does not create a culture of subsidy dependence that retards the development of capital markets. In a variant of adverse selection (see chapter 2), projects that could be financed at least partially at market rates in commercial markets elect not to borrow because they believe they can get grants. This not only reduces the overall grant funds available to needy subnational government projects, but it delays realization of projects. Grant funds should be reserved for needy projects and for projects that would become affordable to subnational government with a partial grant subsidy. Grants can also assist subnational governments to fund projects that may not be affordable in their early years but become so as they mature and as financial markets develop.

Technical and affordability analysis has two phases. First, technical parameters, based on engineering best practices, are needed to determine the most efficient operation at various scales and alternative processes and the associated reasonable costs for constructing the facilities. This analysis is the stuff of standard feasibility studies and yields a standardized annual cost function and the required capital stock investment and its cost.¹⁹

The second phase is the most critical in establishing the needed amount of the grant. The required capital investment is translated into a standardized annual debt service cost by applying a factor that reflects a commercial cost of capital on the assumption that the debt could be borrowed for a period of time that corresponds to the useful life of the project. Thus in addition to the facility’s operating and capital cost figures, studies are needed of the likely usage and applicable rate structure in order to project operating revenues. Facilities that have a high proportion of low-income users are the most likely candidates for grants.²⁰ The subsidies to facilities will be “means tested,” and the subsidy will come from lowering (or in some cases removing completely) future debt service through a capital grant that reduces the amount to be borrowed. This up-front grant is suggested rather than subsidized interest rates or operating subsidies, which require ongoing administration and surveillance and tend to conceal the amount of subsidy (Varley 2001).²¹

To decide how large the capital grant should be, an objective measure is needed of an “acceptable burden” of user charges that may be paid annually by the poorest users (residential and commercial). These constraints on the affordable charges then are converted into a constraint on the overall

annual revenues that will be available to pay the operating and debt service costs. This constrained sum is then compared with annual operating costs (assuming efficient technical and economic operation) and the prototype “market-proxy” annual debt service, for a combined annual revenue requirement. The excess of annual revenue requirements using market proxy values over the needs-constrained revenue projections is the proportion by which the annual debt service must be reduced to qualify the project for debt financing. Where the acceptable level of annual charges is equal to or less than anticipated operating costs (excluding any debt service), it is unlikely that any part of the project should be considered for debt financing.

Planning projects on a self-sustaining basis depends heavily on the ability to develop skills in engineering and financial consultancies. Often the subnational government is unable to fund the study from the project’s own resources. However, if it did, this might present a moral hazard problem, since any subnational government will prefer grant to loan funding. The long-term efficiency of an integrated grant-loan program might best be served by having the central government commission and pay for an objective third-party analysis of need and affordability. Sometimes standardized “prefeasibility” analysis provides an acceptable level of analysis. Such studies are routinely done by registered engineering firms that use cost curves to estimate facility costs under varying conditions and sizes. Costs are often adjusted for local factor costs and specific items such as land.

The analysis should be required for all capital grant programs seeking project financing. For determining the amount of the grant, project costs should be calculated at the annual amount of revenue that would be needed in the absence of the grant at some “indicative interest rate.” Only after the affordability test has been applied, taking into consideration the likely amount that could be charged in tariffs or taxes, should the amount of the grant be calculated. If the independent feasibility or prefeasibility study finds that the subnational government and its enterprise can pay for a portion of the facility through a loan, then receipt of the grant should be contingent on also taking out a loan (or finding another way to pay for its share of the project).

Notes

1. The costs of developing pioneer bond issues are considerable since they represent for public and private parties alike a heavy investment in learning skills, developing documentation, and charting new procedures. In the Philippines, these costs for four relatively small bond issues ranged from 4 to 5 percent of the total issue proceeds. Bond issues are very much subject to economies of scale since the novelty and complexity of a deal may have little to do with the size of the issue (see Financial Executives Institute of the Philippines).

2. For example, the Asian Development Bank advocates the use of public-private financing vehicles. See Asian Development Bank *Commercial Co-financing and Guarantees* (1999) and ADB, Office of Co-financing *IED Seminar on Commercial Co-financing and Guarantees* (12 May 1999). Similar structures are used by other international agencies, including the World Bank, USAID in its Development Credit Assistance program, and by various state governments in the United States.

3. It should be recognized that the credit line in this case amounts to a letter of credit or stand-by loan facility. The donor then looks primarily to fee income from the credit line, not the actual exercise of a loan. Any loan would be at commercial rates set high enough to discourage use of the facility except in emergency. By its very presence, the facility is intended to lend confidence to the market and obviate its use. Furthermore, having the imprimatur of a highly rated bank and its surveillance of the arrangements creates a halo effect in ensuring the markets of the facility's prudent operation.

4. It is useful to note that some roles can be accomplished under existing domestic market conditions, but others may be more realistic with the Bank's employing credit line assistance.

5. If the aid is to be provided anyway, making it pledgeable and inter-ceptable does not add to the cost. Any administrative costs could be borne by the borrower.

6. Traditionally, rating agency analysis gave intercepts of intergovernmental transfers only modest credit-enhancing power in the United States. However, the power of an intercept is substantially increased if the flow goes through a trustee-administered "lock box" arrangement in which debt holders have first access to the revenue. This provision, coupled with the historical record of intergovernmental payments, led to the intercept gaining greatly in stature as an enhancement device. It is almost universally used for local school financing in the United States.

7. This has been the experience with pools and bond banks in the United States, which are usually run by state entities. Some private banks and investment firms have formed pools (mutual funds) as well.

8. In the Philippines, one of the major government finance institutions, the Land Bank of the Philippines, for example, had high nonperforming loan rates for commercial loans (17 percent) and agricultural sector loans (34 percent) as of 2000. The nonperforming loan rate for local governments, by contrast, was virtually zero.

9. The Philippine securities and exchange authority declared that local government securities are “exempt” entities for purposes of registration but that securitization of private sector loans is subject to special registration procedures that can make securitization a cumbersome and lengthy process, with tax implications as well.

10. Because they aggregate small issues into one large issue, bond banks can provide economies of scale, but that process reduces the amount of business available to regional dealers and banks. On the other hand, large money center dealers may support the creation of bond banks if they think they will get the underwriting business. The money market dealers have little political influence, however, compared with local investment firms.

11. For example, loans from the European Bank for Reconstruction and Development are frequently tied to grants that reduce the effective interest costs to very low levels. This is advantageous to the few subnational governments that get the financing but not to the governments that press ahead for loans that do not fit into the donor’s particular game plan (Noel 2000).

12. The pricing can be based on a formula relating to the reference rate, such as short-term government securities. A problem with that approach is that the rate may go out of touch with the market if the government refuses to accept bids for its notes. Another approach is having a repricing agent set the rate at whatever level it takes to sell the bonds. If a buyer cannot be found, the repricing agent puts the bonds to the liquidity facility, which lends the money to pay off the investor that is cashing in the security.

13. Puts may be at any prestated value and a put at par or a slight discount is commonly used. For example, a put at a discount is one way to discourage puts from being exercised too often.

14. The loan rate from the liquidity facility is usually set at a market index plus several points. There is also a fee for making the facility available.

15. Qualifying obligation might be defined to be bonds sold for infrastructure purposes that are timely in payments and that meet certain dis-

closure and credit criteria. An important by-product of the liquidity facility is that it can help generate demand of disclosure and for credit ratings.

16. For example, there might be substantial investor interest in fixed-rate investments of a medium maturity (five years). A 15-year bond with a one-time put at year five would be attractive, and the annual debt service much lower. To work, the liquidity facility must be backed by a very high-grade credit so that there is no doubt that the facility will be there to operate. It is for this backing that a donor stand-by loan could be very effective. It is difficult to see how the systemic risk would be any greater than with a direct loan made by the donor. Also, the private sector would be stakeholders, unlike the direct loan scenario.

17. Analysts looking at Indonesia have argued that the availability of grants can be a significant disadvantage in starting a credit market culture (see Smoke 1999, pp. 1561–85). On grants undercutting loans as a problem in credit market development (see Weitz 2001, p. 5). Lewis (2002) encourages the use of market-proxy loan rates on on-lent donor funds in order to help develop private market access by local governments and discusses the need to blend loans and grants, with the size of the grants conditioned by national priorities, benefit spillovers, and the fiscal capacity of the local governments. A recent World Bank (2002a) Project Concept Document states approvingly that it appears that capital grants for the Specific Purpose Grant Fund (Dana Alokasi Khusus, or DAK) would depend on the income of governments and the nature of the project, with wealthier governments eligible for only limited grants since they qualify for commercial borrowing on most investments. The report also looks at improved integration of municipal credit with the capital market, “including closer to market determined rates” (p. 22).

18. To the extent that certain projects might be considered national public goods, they might be candidates for a national subsidy irrespective of local resources. These are points of judgment and national policy, but the initial assumption is that most projects will have large components of local benefit and that these benefits should be weighed against local resources to pay for them.

19. These technical studies often result in “cost curve” studies that provide a baseline for the costing of services and facilities under specified conditions. Deviations in individual projects are obviously to be expected, but there is a baseline from which to start.

20. Note that there may be a good deal of cross-subsidy at the local level as richer users subsidize poorer ones. The idea is that there are limits on

how much cross-subsidy can occur in a locality without driving out the richer ratepayers and that in some localities there will be too few rich users to offset the costs of serving the poor.

21. Varley (2001, p. 5) argues that subsidized rates and other soft terms lead to buildups of hidden liabilities and crowd out private sector suppliers of credit.