



## Prospects of The Financing of Small And Medium Scale Industries

\*P.Balasubramanian

\*\*\* Associate Professor, Department of MBA, Siddharth Institute of Engineering and Technology, Narayanavanam Road, Puttur

Introduction:

### POTENTIAL SOURCES OF FINANCING FOR SMALL SCALE INFRASTRUCTURE

In developing countries, funding for capital expenditures on infrastructure can come from a number of sources. The primary ones are:

- ❖ **Public sector budget**
- ❖ **official development assistance (ODA)**
- ❖ **Private sector**

The public sector provides the largest share of funding for infrastructure. It is comes either from current revenues or public borrowing. In low-income countries, a significant share of funding comes from ODA, mostly in the form of grants. The private sector's share of infrastructure funding in low-income countries is also important, although it tends to be concentrated in specific sectors such as ICT. It is provided in the form of equity or debt invested primarily in large infrastructure projects. Public-Private Partnerships (PPP), where the private sector participates directly with the public sector in projects, is another form of financing. According to data compiled by the Africa Infrastructure Country Diagnostic (AICD), capital expenditures for large-scale core infrastructure projects in Sub-Saharan Africa in 2001-2006 averaged \$24.9 billion annually. Of this 38% came from the public sector, 24% from ODA (both OECD and non-OECD countries) and 38% from the private sector. If small-scale infrastructure spending were included, the public sector's share would likely be significantly higher (World Bank, 2009, Table 0.4, page 9).

Given the nature of infrastructure—high initial sunk cost and long service life—most public and private sector expenditures come not from current revenues but from longer-term forms of financing and the bulk of this financing comes from domestic sources (Irving & Manroth, 2009) In developing countries the

**Table 1**

Deposit money bank assets/GDP by income group (averages)

Country income group	Deposit money bank assets/GDP	
	2000	2009
High income	88%	129%
Upper middle income	45%	63%
Lower middle income	36%	48%
Low income	16%	25%

**Source: World Bank, 2010.**

institutions that can best serve as the channels through which private domestic savings are gathered and then allocated to

productive long-term investments of various types are banks, pension funds and other institutional investors.<sup>7</sup> Banks have served as the primary source of financing for infrastructure in developing countries (Sheppard, 2003). Moreover, their assets have grown significantly, in relative and absolute terms over the last decade (table 1).

However, they are limited in their ability to provide long term financing as their major source of funding is short-term deposits. To avoid maturity mismatches banks normally cannot provide loans with tenors of more than five years. If banks receive longer term funding, most commonly via long-term loans from development finance institutions (DFIs), they can provide longer tenors. However, the amount of such DFI funding is limited. To circumvent the maturity mismatch problem, banks can offer short term financing that requires that the loans be refinanced in the future. Yet, this exposes the banks to refinancing risks that must be passed on to the infrastructure project through increased risk premiums on the loans (Rostogi and Rao, 2011).

An important potential source of long term financing for infrastructure are pre-funded pension plans that have experienced rapid growth in many developing countries in recent years. Pension funds in developing countries have risen from an estimated US\$422 billion in 2001 to US\$1.4 trillion at the end of June 2010 (JP Morgan, 2010) (figure 1). Following the advice of international financial institutions, particularly the World Bank, many developing countries have established such pension systems. Given the rather young population of most of these countries and the recent introduction of such pension plans, the assets held by such pension funds are accumulating very rapidly in many countries.

Since payments from these funds occur over a long term and are highly predictable, these pension funds should be investing in long-term assets. Thus, they are an appropriate source for funding for infrastructure, which can provide stable long-term returns. However, in many countries pension funds do not have the skills needed for investing in infrastructure projects. And in most countries, the government regulates pension fund investments and often limits their ability to invest in infrastructure projects directly. To the extent that they are engaged in funding infrastructure it is most commonly through the purchase of government bonds which are then used by the government to fund projects.

In addition to pension funds, there are other institutional investors, such as insurance companies, mutual funds and other collective investment schemes that may invest in infrastructure projects. Usually some portion of their assets needs to be invested long-term in order to match their liabilities. Assets from whole life insurance policies are a particularly appropriate source of funds for long-term investments.

Whether these entities do invest in infrastructure is determined by the regulatory guidelines under which they operate, their ability to analyze infrastructure projects and the availability of creditworthy infrastructure projects of offering good returns.

In many developing countries the growth of pension funds and other institutional investor assets has been so rapid that they have outstripped the capacity of the local markets to provide the types of investments such institutions need. Lacking suitable long-term investment options, these assets end up being deposited in banks, earning relatively low rates of return and even distorting the local financial markets by creating excess liquidity. If these assets could instead be used to safely finance small scale infrastructure projects this would not only help develop the economy but it would strengthen the local capital markets as well.

The question is whether the domestic savings held by institutional investors in developing countries can be mobilized to provide long-term funding for small infrastructure projects.

**A proposal for a pooled financing facility to tap domestic capital**

To facilitate financing for small-scale infrastructure projects in a developing country setting we propose using donor resources to leverage domestic savings. A pooled financing approach designed especially for financing small rural infrastructure on a multi-sector basis was developed in 2009 by the UNCDF "Local Finance Initiative (LFI)" in partnership with the Global Clearinghouse for Development Finance.<sup>8</sup> This approach includes technical assistance, risk mitigation tools and incentives that can mobilize private sector finance, banks as well as institutional investors, including pension funds, over the longer term. All the elements of this proposal have been tested in infrastructure financing programs already carried out in a number of countries. Some of these programs are described in the appendix to this paper.

The above structure illustrates how the projects are financed through a pooled facility by the domestic debt markets. This basic structure would be modified as needed to fit the country requirements, targeted investors, and projects sponsors from the public and private sectors.

Development finance institutions would provide the technical assistance and funding necessary to develop "bankable" project proposals. These projects would need to be able to generate sufficient revenue to cover the projected debt service payments. The revenue can be generated by market sales, offtake agreements, user fees, output-based aid payments by donors, etc.

Local governments would not borrow themselves. However, they could identify the small infrastructure project most critical for local economic development. They can also facilitate and support the projects or even invest in them (in cash or in kind, for example by providing land or access/usage rights).

In many instances, private companies would also play an important role. They can contribute their knowledge and skill in arranging for financing, in carrying out construction projects and in operating infrastructure facilities. Moreover, they can provide equity investment for projects or they may provide offtake contracts to help secure future project revenues.

A number of projects would be financed through a pooled financing facility, or similar credit enhancement financial mechanism. The investors in the facility would have support from one or more development finance institutions that would provide credit enhancement (such as partial credit guarantees or a first-loss facility).

The facility would be structured using a non-recourse project finance approach, whereby loans made by the facility would be repaid solely from the cash flows generated by the projects—not from the general financial resources of the project sponsors or local governments. This would shield local government revenue from external creditor claims. Individual projects would be structured so that certain risks, such as construction cost, technical performance, and environmental compliance, are mitigated through contractual undertak-

ings by third-parties. The pooled financing facility would be managed by a strong local bank (the Fund Manager), that would take the principal responsibility for credit analysis of prospective projects. The Fund Manager would seek to obtain participation in the facility from several other local banks and institutional investors. This would spread the credit and reputational risks of participation and enable the participants to improve their skills in credit analysis of project finance.

After the initial portfolio of projects has been operating successfully for a few years, it may be possible to restructure the loans into securities that could be financed on the local capital market. Pension funds and other institutional investors could invest into senior tranches (those tranches that have the highest repayment priority) thus freeing the banks funds to be redeployed in additional projects. The projects being refinanced would have established good payment performance records and thus be viewed as lower risk, which would make them more attractive to institutional investors such as pension funds.

This model stands in contrast to the more traditional on-lending model of assistance: In order for on-lending to work, there is a need for a lender who has the ability and willingness to make the necessary loans. The proposed mechanism assumes that there are few local banks that are prepared to help local governments identify projects, find private sector project sponsors and prepare "bankable" projects. It is too costly for the banks to do this and often the necessary skills are in short supply. Thus, we propose that donors take the lead in the area of project preparation. We are also assuming the local banks have no experience in financing small rural infrastructure projects and will require incentives to provide the funding on acceptable terms unless the donor community is willing to assist them in overcoming this barrier. Hence, we propose that this can be done by risk sharing between banks and donors and/or DFIs.

Overcoming technical and capacity challenges to financing small-scale infrastructure projects in developing countries  
To illustrate the benefits of our proposal we will discuss how the mechanism would help overcome typical financing constraints for small-scale infrastructure in developing countries.

Financing infrastructure projects is seldom easy—anywhere. In part, this is because of their "lumpiness"—they require the commitment of a relatively large amount of capital at one time—and their uniqueness—every infrastructure project is different due to the necessity of engineering for local conditions, dealing with local actors and serving local customers.

Additional problems may arise with financing small-scale infrastructure projects in developing countries.

#### **High transaction costs**

When infrastructure projects are small (say below the equivalent of US\$30 million), it is especially difficult to engage banks and institutional investors. The costs of evaluating, executing and monitoring infrastructure projects are always high. For small projects, the ratio of such costs to the returns that can be earned is simply not very attractive to lenders.

#### **Financial sector impediments**

Domestic bank and capital markets are usually underdeveloped and are ill-prepared to channel domestic savings into financing for local governments to fund small-scale infrastructure projects needed for local economic development.

#### **Lack of project development capacity**

Local governments usually have difficulty in formulating "bankable" projects, in part due to their inexperience and in part due to the lack of precedents upon which to base their projections of costs and revenues.

#### **Lack of credit history**

Lenders are wary of infrastructure financing because there is

little historic evidence concerning the credit risks that local infrastructure projects will entail.

### Cost recovery challenges

The cost of financing may be too high to allow for politically and socially sustainable pricing of infrastructure services in developing countries.

Below we discuss each of these barriers and outline how they could be broken down with the help of the proposed pooled financing facility in order for domestic savings to be channeled more freely into small-scale infrastructure projects.

### High transaction costs

Efforts related to identifying and bundling viable projects, matching potential investors with project owners, and the securing of experts needed to prepare the necessary market, engineering and financial analyses to prepare “bankable” projects create large up-front costs for small-scale infrastructure projects. These costs represent a much larger share of the overall costs in small projects compared to large-scale projects. Thus donors will need to cover a significant portion of these costs. In addition these transaction costs are lowered if a common project development team is established. Then the process of project formulation and documentation can be standardized, local expertise can be developed and utilized effectively and overhead costs can be spread across a number of projects. Pooling projects can also make it more economical for investors to evaluate, execute and monitor the projects.

### Financial sector impediments

While the assets held by banks and institutional investors in developing countries are growing rapidly, very little of these assets are being channeled into small-scale infrastructure. Based on the experience of the developing economies, financial systems evolve over time to a stage where local governments have the ability to borrow on their own and fund the small projects they feel will promote local economic development. Normally, the process of establishing a relationship with the lender or obtaining a credit rating to access capital markets takes decades. However, there may be opportunities for accelerating the process. Rather than waiting for local governments to become creditworthy on their own, it may be possible for small-scale local infrastructure to be financed using the “non-recourse” project financing approach proposed here. Instead of lending decisions being based on the ability and willingness of local governments to repay, it is the financial viability of the infrastructure projects themselves that is paramount. If a project fails (does not service its debts) the burden is shared among the participating parties. The lending banks and any providers of credit enhancement would bear the costs of the payments not made. The local governments and private sector project sponsors would lose the equity they put into the project. Thus the risks are shared in such a way that there should be little risk of moral hazard.

The approach proposed here can also be a bridge to more traditional funding of infrastructure via the domestic bond markets. In recent years, many low income countries have achieved the necessary regulatory and legal environment and sufficiently credible monetary policies to allow issuance of long term, fixed rate local currency bonds.<sup>10</sup> Once pools of small infrastructure loans have been established and financed, the next step could be to re-structure these loans into asset based securities that will be attractive to long term investors such as pension funds and life insurance companies.

### Lack of project development capacity

Local governments are in a good position to identify projects that are needed to support local economic development. However, they are often not capable of identifying those projects that can be financed by banks and institutional investors or of preparing projects for such financing. This is an impediment that outside intervention can help overcome.

If a project is to be funded on its own, there must be sufficient revenue generated to cover its operating costs and to service the debt that will be incurred to pay for the capital costs. (The revenues can come from sales, user fees or governments payments for services or capacity.) Thus, there needs to be a detailed and realistic financial analysis of the project. Inputs to this financial analysis include a marketing study to establish the likely project revenues and an engineering/design study to establish the likely project costs. There is also a considerable amount of legal work needed to establish the rights and responsibilities of the various parties involved in the project, and to define ownership rights to the financial flows and assets associated with the infrastructure.

These countries have shown that it is possible for even lower income countries to escape the domestic component of so-called “original sin” (Mehl and Reynaud, 2005). For example, at least four low income countries in Sub-Saharan Africa (Burundi, Kenya, Mozambique, Tanzania and Uganda) and five lower-middle income countries (Angola, Cape Verde, Lesotho, Nigeria, and Zambia) have issued government fixed interest rate bonds with tenors equal or greater than 10 years (AfDB, 2010). Issuance of such government bonds leads the way for the issuance of longer tenor non-sovereign bonds.

Non-recourse project financing normally requires the establishment of a special purpose vehicle (SPV), a legal entity created to fulfill a narrow, specific function while isolating the associated parties from financial risk.

The costs of putting together a “bankable” project proposal for an infrastructure project can therefore be substantial. Thus, there may be a need for external assistance in order for local government to be able to deliver “bankable” project to lenders. The proposed arrangement in Figure 2 illustrates that development partners could help with the formulation of “bankable” projects, through targeted technical assistance. Over the longer term, local governments and other project sponsors would gain experience in project development, without being at risk of having to pay project debts. Moreover, to facilitate project preparation and to reduce their costs, “project development facilities” can be created. A project development facility can take a variety of forms and perform different roles depending on the need. In smaller or centralized countries, the facility may be national in character. In larger or decentralized countries, the facility may operate at a regional or state/provincial level. For instance, the Municipal Infrastructure Investment Unit (MIIU) in South Africa provided financial, technical, and managerial support to municipalities to secure financing for infrastructure projects. (See appendix for more details). A project development facility may also help to structure and market structured finance securities to pension funds and other domestic investors seeking long term assets.

### Lack of credit history

Whether funding can be secured from the financial system—and at what costs—will be determined in large part by the risks creditors think the project entails. Often the level of risk is estimated by looking at the experience creditors have had with similar projects in the past. However, since little non-recourse project financing has been undertaken for infrastructure projects in developing countries, particularly in low-income countries, history cannot provide much guidance. Instead, the project’s creditworthiness will likely be judged based on (1) a critical analysis of the information provided in the project proposal and (2) the availability of assets pledged by the borrower. Lenders are normally cautious and focus on all the problems that occur in the construction and operation of the infrastructure project and they are likely to require collateral that can be taken in the event of default. (In fact, banks often make lending decisions largely based on the value of assets pledged by a borrower rather than a borrower’s expected revenues and cash flows. Borrowers such as small businesses often must satisfy collateral requirements well in excess of 150% of the loan amount.) Even if lenders are willing to finance the project they may charge a high risk premium, which pushes up the cost of financing and may make it non-viable.

from the perspective of achieving socially and politically sustainable service pricing. In consequence, for some projects to be financed, it may be necessary for some external group to assume part of the credit risks. The proposed mechanism meets the lack of credit history with extra measures to reassure investors wary of venturing into the largely unknown territory of small-scale infrastructure finance. Project performance would be ensured through independent consultants (including engineers) who would perform market assessment studies (including capacity to pay) and audit the costs of construction. Segregated accounts would control cash flow and insure that cash is used to pay, first, operating expenses; then maintenance expenses; next, debt service and, finally, dividends to project owners. The syndicated lenders would assure financial accountability and transparency to the pooled financing facility, which would be at risk and would use typical project finance structures to protect their interests. Over the longer term, lenders would gain experience in project finance credit analysis and, having gained a better understanding of project risks and how they can be mitigated, these lenders would eventually be able to provide financing with lower or no credit enhancements.

#### Cost recovery challenges

Revenues generated by small-scale infrastructure finance projects may be relatively modest. In order to have politically and socially sustainable pricing of infrastructure services subsidies may be necessary to finance the spread between lending interest rates and feasible borrowing interest rates. Development Finance Institutions (DFIs) could help subsidize the cost of financing through output based aid. For example, a programme for small community managed piped water projects in Kenya uses output based aid payments, combined with technical assistance and subsidies to mobilize market based financing from a domestic private sector microfinance institution, K-Rep Bank. (K-Rep Bank is a licensed commercial bank that specializes in microfinance products and services.) The output-based subsidy repays up to half the loan which makes the monthly repayments more affordable for the community. The subsidy payments are made upon successful

delivery of the outputs. Outputs are measured by change in the service coverage and change in revenues collected, as a result of increased service and improved payment collection (see appendix for more details). Moreover, DFIs could help strengthen revenue collection capacity where the autonomy of the local government or project owner may be limited.

#### Conclusion

While funding for traditional large infrastructure in developing countries is still inadequate, the mechanisms for providing such funding are well established. It is the "last mile" of infrastructure needs—small-scale infrastructure essential for local economic development—that now needs to be addressed. Financing for small infrastructure presents special challenges that will require new financing mechanisms. Little fiscal autonomy and insufficient fiscal transfers from the central government have left local governments with few resources to finance small-scale infrastructure. We have argued that a carefully calibrated pooled project finance approach combined with technical assistance and credit enhancements as set forth in the UNCDF Local Finance Initiative, could help generate the necessary resources. For our proposed mechanism, local governments would not take on loans they could not shoulder (or could not access due to low creditworthiness). Rather, they could work with donors and private sector companies to identify and put together bankable infrastructure projects that can be financed by local banks and capital markets on a non-recourse basis. Consequently, those projects would benefit local economic development without an increase in municipal debt.

While we believe this financing approach holds significant potential, it would require a concerted and well-coordinated effort of a range of stakeholders and the private sector. In this connection, DFIs and donors have an important role to play. In the context of this proposed finance approach, DFIs and donors could significantly leverage their limited funds by using them to mobilize funding from local institutional investors through partial guarantees, loan subsidies, technical assistance and capacity building.

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