

**Private
Infrastructure
Financing
Facilities**

**A Review of
Experiences in
South Asia and
Africa**

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Per Ljung

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Development Alternatives, Inc.
7250 Woodmont Ave. Suite 200
Bethesda, Maryland 20814

FORWARD



Collaborative Approaches for Resolving Water Issues

The FORWARD Team

Development Alternatives, Inc., Bethesda MD (Prime Contractor)
Arab Scientific Institute for Research and Transfer of Technology, Ramallah West Bank/Gaza
Camp Dresser & McKee International Inc., Cambridge MA
CDR Associates, Boulder CO
Conflict Management Inc., Washington DC
EnviroConsult Office, Amman Jordan
Environmental Quality International, Cairo Egypt
HDR Engineering, Inc., Austin TX
In Search for Common Ground, Washington DC
Khleif and Company (KPMG), Amman Jordan
Management, Planning and Research Consultants, Beirut Lebanon
National Center for Middle East Studies, Cairo Egypt
Optimal, Sharm El Sheikh Egypt
PM Global Infrastructure Inc., Washington DC
Training Resources Group, Alexandria VA

EXECUTIVE SUMMARY

Over the last decade, there has been a virtual explosion in private infrastructure throughout much of the developing world. However, the pattern of development is highly skewed. Three upper middle-income countries, Brazil, Argentina and Mexico, accounted for 37 percent of the total investments in private infrastructure facilities during the 1990s. In contrast, the low-income regions of South Asia and Sub-Saharan Africa together attracted only about 8 percent of all investments. Lagging investments in these regions and in North Africa and the Middle East have been partly due to slow changes in their infrastructure policies and levels of private participation, but largely due to their shallow domestic capital markets and the reluctance of international commercial banks to lend for projects located in countries with less than an investment grade credit rating.

It is clear that some infrastructure projects are easier to finance than others. Telecommunications sectors attracted 43 percent of the total private investment, followed by energy, mostly power generation, with a 34 percent share. Investments in transport facilities, including ports, railways, airports and toll roads, accounted for a 17 percent share, and water and sanitation trailed with a 6 percent share.

In response, the donor community adapted and created a number of instruments, like the World Bank's partial risk guarantees, to help catalyze private infrastructure investments. Special financing facilities were created for channeling donor funds to infrastructure projects owned and managed by the private sector. This report reviews the experiences gained from the following five operating donor-supported facilities, including two facilities that operated without any significant donor funding, and one proposed donor-supported facility. In addition, some lessons are drawn from several facilities that were proposed during the 1990s but never materialized.

Facility Name	Country	Instruments	Management	Sponsors
Private Sector Energy Development Fund	Pakistan	Subordinated debt	Public Sector	IBRD and bilaterals
Private Sector Infrastructure Development Company	Sri Lanka	Subordinated debt	Public Sector	IDA and KfW
Infrastructure Development Company Ltd	Bangladesh	Subordinated debt	Public Sector	IDA
Infrastructure Leasing and Financial Services Ltd	India	Senior debt, equity and credit enhancements	Private Sector	IFC and IBRD
Infrastructure Development Finance Corporation	India	Senior debt, equity and credit enhancements	Mixed public-private	IDB and IFC
Africa Private Infrastructure Financing Facility	Sub-Saharan Africa	Senior debt, equity and credit enhancements	Private sector	DFID and SIDA (proposed)

Overall Assessment

The review clearly demonstrates that donor-financed infrastructure facilities can help overcome the financing constraints prevalent in many developing countries. Furthermore, they can have an impact that goes well beyond the sum of the individual subprojects by providing strong incentives for governments, like those in Pakistan and Bangladesh, to undertake policy and institutional reforms.

These facilities can also provide strong incentives to private sponsors to go through the time consuming and costly process of developing and/or bidding for projects in countries with limited access to international capital markets.

The facilities also represent an efficient way of leveraging donor resources. Well-structured facilities encourage commercial lenders to provide project financing that otherwise would not be forthcoming. By wholesaling and delegating most of the due diligence/appraisal work to local institutions, and requiring the ultimate borrowers to pay for the due diligence, the budgetary burden on the donor is reduced.

However, in the eyes of donor institutions that set rapid disbursement of funds as a major criterion for measuring lending success, these facilities have not always been seen as successes. In Pakistan, it took over five years before the first disbursement was made from the facility. In most other cases the lag between establishment of the facility and the first disbursement exceeded three years. The main reason for the lag was the many hurdles pioneering transactions encountered in the host country, related to the constraints discussed above. Gordon Wu, the “father” of build-operate-transfer (BOT) schemes in Asia, often said that you spend more time negotiating a deal than building the project.

Supporting Environment

Prerequisites for early success include:

- *A sound and transparent legal and regulatory framework;*
- *Financially-sound key government agencies* able to meet any potential off-take obligations;
- *Political commitment* to establish policies, institutions, laws, and regulations supporting private participation in the infrastructure field and to “steamroll” the vested interests and overcome the many hurdles that tend to crop up during the development of pioneering projects;
- *A political heavyweight*, either a civil servant or politician, spearheading the government’s efforts, without such support, even the most well designed schemes are likely to fail—or at least take an exorbitant amount of time;
- *A local institution that can actively promote private participation*, serve as liaison with potential investors, identify generic legal and regulatory bottlenecks, and

advise line ministries, etc., while the exact form, function, and location of the promoting agency will change from case to case, it should be high profile and proactive, preferably reporting to the political heavyweight referred to above; and

- *An institution that takes a lead in advising government agencies* on the structuring of private infrastructure projects as well as on policy issues related to private participation. The financing institution should not carry out the advisory role. Rather, this role could, as in Bangladesh, be assumed by the promoting agency. The outreach function is especially important in the case of decentralized services, as usually is the case in the water and sanitation sector.

International donors can play an essential role in providing technical assistance to both the central promoting agency and the line agencies. The line agencies need to be fully involved and have ownership over their programs for private participation. The technical assistance should also cover the cost of preparing project proposals for private participation.

Basic Design of the Facility

As noted above, a consistent problem found in many of the facilities is the long lead-time until the first project is approved. Furthermore, many potential projects fall by the wayside during the development phase. Thus, the establishment of a financing facility needs to be combined with the development of a robust pipeline of potential projects.

In designing the facility it is essential to analyze the nature of the financing constraint. Is it primarily a problem of access to foreign exchange loans for import of equipment or is it a lack of long-term domestic finance? How large is the financing gap?

Facilities designed to overcome the constraints associated with a lack of long loan maturities on the local market by providing various forms of guarantees—rather than loans—have been less successful than loan facilities. Indeed, most proposed guarantee facilities have died at the planning stage. The reason is often quite simple: even short-term interest rates tend to be too high in nominal terms. Guarantee facilities are likely to succeed only when domestic financial markets are fairly well developed, inflation and interest rates are reasonably stable, and the volume of medium-term lending is fairly strong. However, if that is the case, the need for a guarantee facility might only be temporary and might disappear, as in Colombia, by the time the preparation of the facility has been completed. A priori, guarantee facilities for infrastructure bonds sold to institutional investors, such as insurance companies and pension funds, might be more attractive than guarantees for commercial bank loans. It generally makes more sense, however, to have the financing facility mobilize funding by placing bonds, which would reduce risks to the bearers of the bonds and, probably, also overall transaction costs.

Thus, the basic and most successful approach is for the facility to focus on providing long-term debt. Besides the issues related to guarantees presented above, another

argument in favor of keeping it simple is the general complexity of project finance operations. Introducing new instruments and additional actors adds to this complexity, making it even more time consuming and difficult to bring a transaction to financial closure.

A fundamental problem with facilities borrowing in international currencies is the potential foreign exchange risk. In most cases, the facilities pass on the foreign exchange risk to the borrower. The traditional approach for internationally financed BOT projects have been to price the projects' output in US dollars or in local currencies but with indexation linked to the dollar exchange rate. This has proved to be of limited value if a drastic devaluation takes place, as was the case in Indonesia in 1997. This dilemma can be solved if the facility can benefit from donor grants converted into local currencies when the facility is capitalized.

One of the long-term development objectives for the facilities should be to enable them to mobilize additional funding from domestic or international sources.

Lending Terms

Implicit in the preceding sections is that financing facilities—as far as they depend on donor money—should be lenders of last resort. Generally, they should not represent a cheaper alternative to commercial financing that might be available. This, of course, is somewhat contradictory. On the one hand, the rationale for the facilities is they should be a response to market failures, for example, when private financing of appropriate maturities is not available. On the other hand, we argue that the lending terms should be market based. In practice, this is resolved by looking at the financing terms offered by quasi-commercial institutions such as IFC and the private sector windows of the regional development banks. Similarly, the infrastructure financing facilities should not offer significantly lower interest rates than the effective rates of commercial bank loans covered by export credit guarantees. For most countries where donor supported infrastructure financing facilities would be considered, this is likely to imply a rate in the range of LIBOR plus three to five percent.

The financial viability of private projects and the affordability of tariffs to consumers are generally more sensitive to loan maturities and grace periods than to interest rates. In developed countries, infrastructure projects typically obtain 15-30 year financing. In developing countries, maturities rarely exceed 12 years and are often shorter. This clearly pushes up the cost of a project's output, making it less affordable to consumers. Thus, the facility should provide loans with maturities exceeding 12 years. In the case of PSEDF in Pakistan, for example, the maturities are as long as 23 years.

Several of the facilities reviewed in Chapter 4 provided subordinated loans rather than senior debt. The advantage of subordination is security for the senior commercial lenders is improved and, therefore, the portion of equity, which is expensive, can be reduced. Thus, the resulting tariffs charged by the project can be lowered to benefit consumers.

Governance Structure

The facility should be professionally managed by people who understand limited recourse finance and have incentives to carry out a careful due diligence of project proposals. In practice, the design of the facility will depend on:

- Donor policies, enabling it to lend or make a grant to a private sector entity;
- The strength of existing financial institutions in the recipient country. Do they have experience in providing long-term financing for large projects? Do their balance sheets have enough strength to allow the banks to lend to large infrastructure projects without violating their single borrowing and capital adequacy requirements; and
- Government policies to create an enabling environment.

The review in Chapter 4 illustrates the range of options and some of the considerations that have gone into the design of the institutional arrangements. The most innovative and in many ways the most attractive approach is the one adopted for the Africa Private Infrastructure Financing Facility (APIFF).¹ Its structure ensures motivated professional management and leverages public funds with private resources. If it functions as anticipated, it could also have a sustained life after the donor funding is no longer available.

An important issue is the facility's and its manager's independence in making investment decisions. State-owned banks in both the developed and developing world have sometimes made their lending decisions partly on political grounds. Thus, the facility can be pressured to finance projects that are unsound. Three approaches can be used to minimize this problem:

- A privately owned organization could function as a financial intermediary or as a fund manager with full authority to take investment decisions.
- The lead donor could review and approve all projects proposed for financing by the facility.
- The share of the total financing the facility provides could be limited to ensure that other commercial lenders are participating in the transaction and, thus, providing implicit assurances that the project is sound.

A related issue to be addressed explicitly in the design of the governance structure is potential conflict of interest that the fund manager might encounter.

¹ In simple terms, APIFF is structured as follows: donors provide a returnable grant to a special trust fund that makes an equity investment in APIFF. The management of APIFF is awarded to a bank consortium after a competitive bidding process. The bank consortium is required to provide long-term debt to APIFF. The fund manager is selected, in part, based on the amount of debt it undertakes to provide. After appropriate provisioning for bad debts, both the long-term debt and the equity are used for lending to private infrastructure projects.

Internal Management

In order to become effective quickly, the facility needs to have a comprehensive operational manual. This manual should cover all aspects of the facility's business, but the sponsoring donor must ensure that the manual places emphasis on two topics: environmental impact and corruption. All sub-projects should include an environmental impact assessment (EIA) and meet both the donor's and the government's environmental standards. The EIA and the environmental mitigation plan should be submitted to the donor for approval. Similarly, special consideration has to be given to how land acquisition, resettlement and social impacts should be handled. Similarly, reasonable safeguards should be put in place to ensure that project sponsors who benefit from a facility loan have not engaged in corrupt practices. These safeguards should not only relate to corrupt dealing between the sponsors and the fund manager but also to the whole process of obtaining and negotiating the concession and other agreements with concerned agencies.

Options for USAID

USAID can take three different approaches:

- *Provide a returnable grant to a trust fund that works along the lines of the Africa Private Infrastructure Financing Facility.* The main advantages of this approach are two-fold: the grant helps leverage private debt into the facility and management is professional. The drawbacks are that USAID can incorrectly be accused of subsidizing the lenders to the facility and the government's commitment might be limited.
- *Provide a grant to the government who on-lends the money to private infrastructure projects through a special facility like PSEDF in Pakistan or IDCOL in Bangladesh.* The main drawback with this approach is that it is more difficult to ensure professional management of the facility. However, it is possible to bring in a professional fund manager, as was the case in Bangladesh, or to have a local bank manage the facility.
- *Use a DCA guarantee to mobilize loans from US commercial lenders to local banks for on-lending to private infrastructure projects.* Variations of the guarantee mechanism are also possible. For example, the guarantee mechanism could also be used for providing funds to a special purpose infrastructure finance facility.

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ACRONYMS

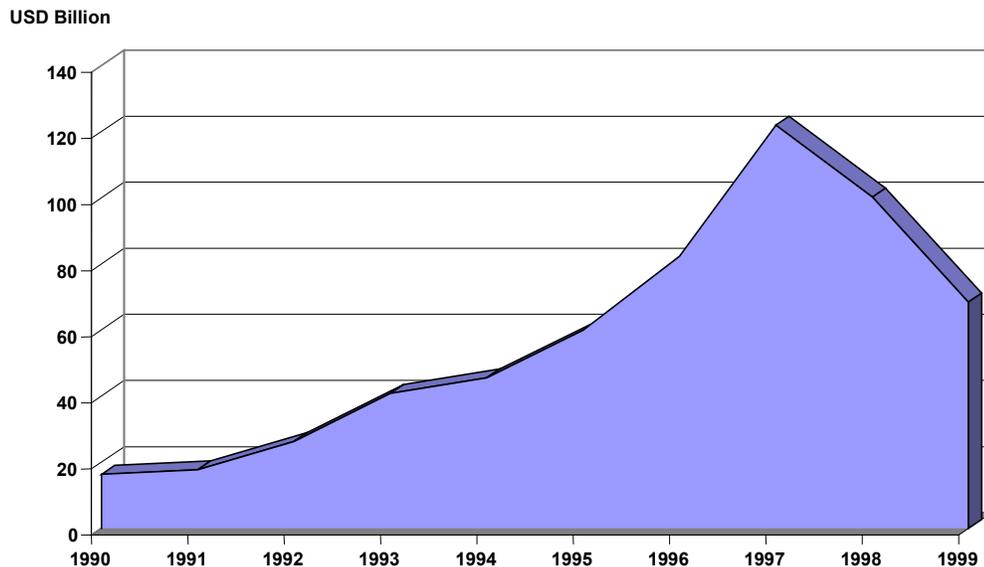
ADB	Asian Development Bank
APIFF	Africa Private Infrastructure Financing Facility
BID	Bureau for Infrastructure Development (Sri Lanka)
BIDM	Development and Infrastructure Bank of Malaysia
BOO	Build-Operate-Own
BOT	Build-Operate-Transfer
CIDA	Canadian International Development Agency
CPI	Consumer Price Index
DFID	Department for International Development (UK)
ECA	Export Credit Agency
EIA	Environmental Impact Assessment
GDP	Gross Domestic Product
GNI	Gross National Income
IDA	International Development Association
IDCOL	Infrastructure Development Company Ltd (Bangladesh)
IDC	Infrastructure Development Corporation (Malaysia)
IDFC	Infrastructure Development Finance Corporation (India)
IFC	International Finance Corporation
IIFC	Infrastructure Investment Facilitation Center (Bangladesh)
IL&FS	Infrastructure Leasing and Financial Services Ltd (India)
JEXIM	Export-Import Bank of Japan
LIBOR	London Interbank Offer Rate
MIGA	Multilateral Investment Guarantee Agency
NDFC	National Development Finance Corporation (Pakistan)
PSEDF	Private Sector Energy Development Fund (Pakistan)
PSIDC	Private Sector Infrastructure Development Company (Sri Lanka)
O&M	Operation and Maintenance
PM Global	PM Global Infrastructure Inc.
SIDA	Swedish International Development Cooperation Agency
SIDI	Secretariat for Infrastructure Development and Investment (Sri Lanka)
USAID	US Agency for International Development
USD	U.S. Dollars

CHAPTER 1 INTRODUCTION

1.1 Background

Faced with severe budget constraints and mounting social expenditures during the 1990s, most governments in developing countries have curtailed their investments in infrastructure. At the same time, overall aid flows have declined and multilateral and bilateral development agencies have shifted the focus of their lending away from infrastructure toward the social sectors and quick disbursing non-project lending. However, a major paradigm shift, however, is currently changing the way infrastructure facilities are owned, operated and financed. Governments are increasingly building up their ability to regulate the infrastructure sectors while divesting assets and/or encouraging the private sector to construct and operate new facilities.

Figure 1
Investments in Private Infrastructure Projects



Changing perceptions among international investors and commercial banks toward emerging market risks, combined with the introduction of regulatory reforms and privatization programs, have led to a virtual explosion of private infrastructure investments. Between 1990 and 1997, investments in privately owned and managed infrastructure facilities increased almost eight-fold from USD 16 billion to

USD 122 billion.² There was a marked decline in private investments following the Asian financial crisis: Investments fell 20 percent in 1998 and a further 30 percent to USD 68 billion in 1999 (Figure 1). Still, for the 1990s as a whole, the investments amounted to some USD 580 billion.

Not only has the amount of private investment grown dramatically but the geographical coverage has also widened. At the start of the 1990s, only about a dozen developing countries had any significant private investments in infrastructure. During the decade, however, at least 121 countries had some private activity in one or more infrastructure sector. Unfortunately, in most of these countries, private infrastructure projects remained the exception rather than the rule. To date, the top ten countries, mostly middle income, have accounted for more than three-quarters of all investments. Of the low income countries³ only India, Indonesia and Pakistan have managed to attract significant private infrastructure investments. These three have reasonably well-developed domestic capital markets and, at least for part of the 1990s, had an investment grade, or near investment grade, credit rating.⁴ All other low-income countries accounted for only two percent of the total.

Some types of infrastructure facilities have proven to be much easier to finance than others: Telecommunications sectors have attracted some 43 percent of the investments in private infrastructure facilities, followed by energy, mostly power generation, with a 34 percent share (Figure 2). Investments in transport facilities, including ports, railways, airports and toll roads, accounted for a 17 percent share and water and sanitation trailed with a 6 percent share of the total.

1.2 Objectives of the Report

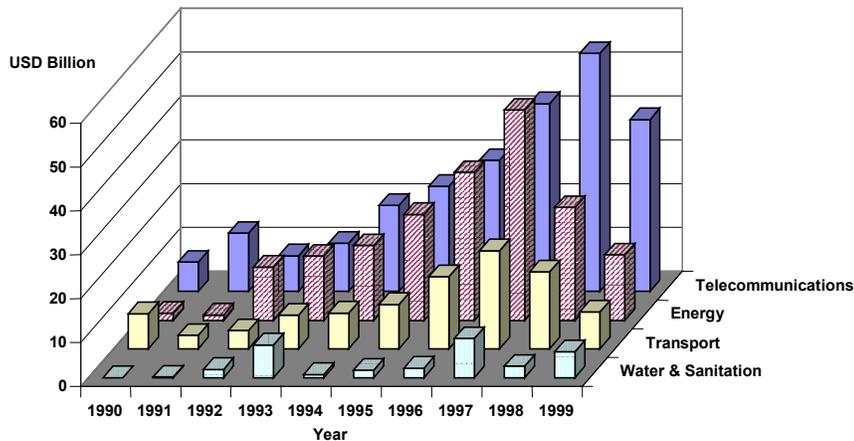
In short, what emerges is a highly skewed picture: the private infrastructure investment boom during the 1990s largely bypassed the majority of developing countries, especially the low income ones, and some sectors, such as water supply, have attracted only small amounts of money. In response, the donor community has

² The figures quoted are from the World Bank's database on private participation in infrastructure (Izquierre and Rao 2000). It is noteworthy that the figures on investments reflect the estimated cost at the time of financial closure and the investments in any given project are recorded as having taken place in the year when financial closure was reached although the funds might have been disbursed during a couple of subsequent years.

³ The division of developing according to income groups follows the World Bank's (1991) most recent classification based on gross national income (GNI) per capita in 1999: low-income countries have a GNI of US\$755 or less; lower middle-income countries, between US\$756 and US\$2,995; upper middle income countries, between US\$2,996 and US\$9,265; high-income or "developed" countries, US\$9,266 or more. A couple of classification changes in recent years are noteworthy: following the Asian crisis, Indonesia was "downgraded" to low-income. This year, China was "upgraded" to lower middle-income status.

⁴ With S&P ratings of B-, both Indonesia and Pakistan have now fallen far down into the "junk bond" category.

Figure 2
Annual Investments in Private Infrastructure Projects by Sector



created a number of new instruments, like the World Bank’s partial risk guarantees, and has adapted others to help catalyze private infrastructure investments. One of the promising approaches has been to create special financing facilities for channeling donor funds to infrastructure projects owned and managed by the private sector. Thus, the purpose of this report is to review the experience of these facilities and to examine to what extent they would constitute suitable vehicles for channeling USAID development assistance.

1.3 Structure and Approach of the Report

Over the years, the donor community has helped create and support various types of financing facilities to promote worthy development causes. These facilities have ranged from housing finance institutions, agricultural development banks, and development finance corporations—that channeled donor funds to large industrial enterprises—to small scale lending schemes aimed at alternative energy sources, women, and the poorest segments of the population or other disadvantaged groups. While many of these schemes were successful, others failed because they were based on the fallacy that money was the problem. Thus, Chapter 2 examines the constraints to private infrastructure investments in developing countries in order to assess when infrastructure facilities are suitable instruments.

Most private infrastructure projects in developing countries are financed on a non or a limited recourse basis that is fundamentally different from the corporate finance approach used for most industrial projects. Since the finance approach has a significant impact on how the infrastructure facilities function, Chapter 3 provides a brief overview of the contractual arrangements and the financing sources for private infrastructure projects.

An in-depth review of seven existing debt facilities for private infrastructure projects and three proposed facilities is provided in Chapter 4. Most of these facilities are or were to be supported by donors. The emphasis is on lending terms, governance structure and operating history, i.e. results on the ground.

The conclusions of this review are presented in Chapter 5. Included in the chapter are lessons learned regarding the design of the facility and the policy and institutional frameworks.

Chapter 6 outlines options for USAID. This chapter will be further elaborated following a planned presentation to USAID staff.

CHAPTER 2

CONSTRAINTS TO PRIVATE INFRASTRUCTURE INVESTMENTS

2.1 Existing Limitations in Developing Countries

Potential project sponsors, investors and lenders generally cite a number of factors that limit their ability to develop and finance private infrastructure projects in developing countries:

- Lack of buyer creditworthiness, in cases where government agencies are the buyers of the project's output, or the limited ability and/or willingness of consumers to pay for the service;
- Limited availability and convertibility of foreign exchange, characterized by the host country's weak balance of payment and its associated lack of creditworthiness, which makes servicing of loans and repatriating profits uncertain;
- Shallow domestic financial markets forcing developers to raise equity and debt internationally even if project revenues primarily are in local currencies;
- Lack of government commitment which often provides vested interests with frequent opportunities to effectively block private participation, and to delay or derail project implementation;
- High level of regulatory uncertainty which increases project risks and makes mobilization of debt difficult, if not impossible; and
- Lack of clarity in the decision making process and the resulting implementation delays and sometimes demand for bribes and other facilitating payments.

Each of these factors will be reviewed in the subsequent sections of this chapter.

2.2 Ability to Pay and Buyer Creditworthiness

Throughout the developing world, around 1.2 billion people live on incomes of less than USD 1 per day.⁵ Another 1.6 billion have incomes between USD 1 and USD 2 per day. Around 70 percent of the poor live in South Asia or Sub-Saharan Africa. Clearly, with incomes at this level, the poor's ability to pay for infrastructure services is limited. However, numerous studies from all parts of the developing world have demonstrated that the poor are not only willing to pay but often actually do pay more for inferior service than what the middle class and the rich pay for their utilities.

⁵ The estimates are from the World Bank (2000). The USD 1 a day is in 1993 purchasing power parity terms.

Subsidies to higher income groups who are connected to the utility networks often are very costly. The World Development Report 1994⁶, entitled “Infrastructure and Development,” documented the fiscal burden of not recovering the full cost from the users: typically, tariffs in the power sector covered only about 60 percent of the cost and in the water supply sector the revenues were less than one-third of the cost of supply. The total fiscal cost for power and water supply was estimated at around USD 110 billion. When the deficits of railways were added, the total added up to USD 123 billion per year, an amount roughly equivalent to the annual investments in these sectors.

This situation has two important implications for willingness of equity investors and lenders to put their capital at risk:

- The strong political resistance against setting tariffs to cover the full cost of the service has made it difficult to mobilize financing for projects that directly serve low-income households. Thus, private participation in water and sewerage has lagged far behind that of other sectors (Figure 2). Similarly, outside Latin America, private investments in power distribution represent only a small fraction of the investments in power generation.⁷ Financing has been easiest in infrastructure sectors that primarily serve businesses or high-income groups, such as telecommunications and ports, or where bulk supplies are sold to a state owned utility rather than to the public at large, such as power and water treatment plants.
- Unfortunately, the low tariffs have commonly undermined the financial viability of the public utilities that were expected to buy the output from greenfield projects like power plants and treatment plants under long-term contracts. Thus, the slow progress on the so-called fast track power generation projects in India can largely be explained by the poor financial health of the state electricity boards and the states that own them. Similarly, the limited number of build-own-transfer (BOT) projects in the water sector is due primarily to the shaky finances of local governments and water utilities.

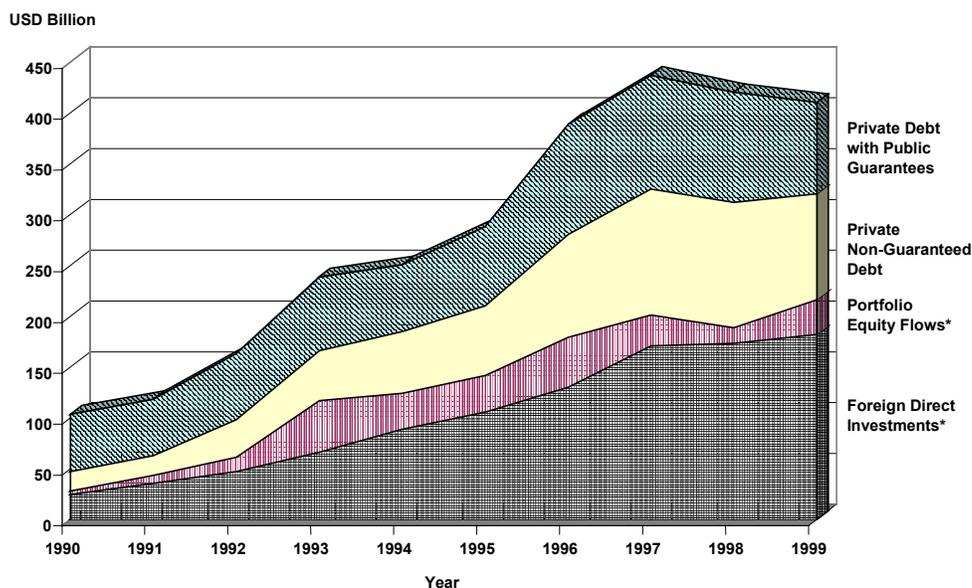
2.3 Availability and Convertibility of Foreign Exchange

Over the last decade, private financial flows to developing countries have increased dramatically. Debt flows have expanded more slowly than direct foreign investments and portfolio investments (Figure 3). This has implications for private infrastructure projects that tend to be highly leveraged and rely on debt for 60-80 percent of the investment costs.

⁶ World Bank, 1994

⁷ Another reason for the limited private involvement in the operation of power and water networks is the reluctance of many—if not most—governments to take on the vested interests of labor unions and to deal with the politically-charged issues related to retail tariff setting.

Figure 3
Private Debt and Equity Flows to Developing Countries (1990-99)



Source: World Bank (2001)

* These flows are on a net basis

One basic fact in the project finance business is that a project's credit rating cannot exceed the creditworthiness of the host country unless some form of credit enhancement is provided. This means that projects in countries with a Standard & Poor's credit rating lower than BBB-, or the equivalent from other credit rating agencies, will find it extremely difficult to mobilize the required debt financing.⁸ The exceptions to this rule, as can be seen from the table below, are the three major countries in Latin America: Brazil, Mexico and Argentina (Table 1).

About three-fifths of the lending to the below investment grade countries in Africa and Asia went to South Africa and the Philippines, respectively. Both countries are middle-income and have ratings just one notch below investment grade. Thus, all of low-income Africa and Asia, with a total population of around two billion people attracted only about four percent of all private lending to developing countries.

In short, it is extremely difficult to mobilize private sector debt financing for projects in countries with below investment grade ratings. To overcome this difficulty, financing packages in most countries with limited creditworthiness will include political risk insurance from some major insurance companies, export credit agencies (ECAs) or from multilateral agencies like the Multilateral Investment Guarantee Agency (MIGA) or partial risk guarantees from the World Bank and the regional development banks.

⁸ Credit ratings quoted in the report are taken from Standard & Poor's website (<http://www.standardandpoor.com/RatingsActions/RatingsLists/Sovereigns/>)

Table 1
Private Lending to Developing Countries in 1999

Country Groupings	Private Lending USD Million	Percentage of Total Lending	Lending as Percent of GNP
16 Investment Grade Countries	55,400	28.6	2.58
Non-Investment Grade			
Brazil (B+)	34,194	17.6	4.68
Mexico (BB)	33,095	17.1	7.03
Argentina (BB)	20,509	10.6	7.45
Other Latin America	<u>6,315</u>	<u>3.3</u>	<u>2.11</u>
Latin America	94,113	48.6	5.30
E. Europe & C. Asia	21,066	10.9	2.75
Asia	11,165	5.8	1.29
N. Africa & Middle East	7,747	4.0	1.59
Sub-Saharan Africa	4,298	2.2	1.40
Total	193,789	100.0	3.06
Low income Africa & Asia	8,019	4.1	0.65

Source: World Bank (2001a)

Although such guarantees can cover a broad range of risks,⁹ the one that the commercial lenders are almost universally concerned about is the availability of foreign exchange for debt service.

2.4 Depth of Domestic Financial Markets

Most infrastructure projects—with the exception of ports, airports and international telecommunications—derive their revenues in local currencies. Thus, it is desirable for most projects to rely on local currency financing to the extent possible. Furthermore, many infrastructure projects have a large local cost component. Consequently, from a macro-economic point of view it is also desirable to mobilize at least part of the financing locally.

⁹ Political risk insurance typically covers: transfer restrictions, expropriation, war and civil disturbances as well as breach of contract by a public sector entity.

Unfortunately, most developing countries have shallow financial markets and commercial bank lending tends to be short term with high real interest rates. One common measure of financial depth is the ratio of domestic credit provided by the banking system to GDP. This is illustrated in Table 2.

Country Groupings	Bank Credit as Percentage of GDP
High Income Countries	147.8
Middle Income Countries	70.5
Low Income Countries	37.2
Sub-Saharan Africa excl. South Africa	21.4

Source: World Development Indicators (World Bank 2001)

The constraints imposed by shallow financial markets in most countries can be illustrated with data on the pattern of financing for private power generation projects in East Asia during the 1990s. A recent study sponsored by the World Bank (Baietti 2001) provides data for projects in four different countries. Combining the financing data with measures on financial debt, the following picture emerges:

Country	Bank Credit as Percentage of GDP (average for 1990 & 1999)	Local Financing as Percent of Total
Malaysia	113.7	90
Thailand	116.5	75
Indonesia	53.0	14
Philippines	47.9	3

Sources: World Bank (2001) and Baietti (2001)

Consequently, in virtually all low-income countries, except India, and in most lower middle-income countries, it is extremely difficult, if not impossible, to mobilize any significant amounts of long-term debt from local financial institutions.

2.5 Government Commitment

If governments are serious about private participation in infrastructure, they will establish a transparent regulatory framework and set up clear rules and processes for solicitation, award and negotiation of project proposals (Sections 2.6 and 2.7). However, more is generally needed. The government needs to be prepared to deal fairly but resolutely with various vested interests. Furthermore, in the early stages of private participation, a large number of unanticipated problems and issues are likely to arise. Often these issues involve ministries and agencies other than the one directly concerned with the project.

The problems and issues typically arise because laws and regulations are old and adopted at a time when private ownership of infrastructure facilities was not envisaged. The Hub Power Project in Pakistan provides a typical example. Numerous interventions at the Cabinet level were required to get the pioneering Hub Power Project through the Pakistani bureaucracy. According to the Pakistani law, all projects located in the country had to be insured by one of the two state-owned insurance companies. However, none of these companies had strong enough balance sheets to take a USD 1.5 billion risk. A decision by the Cabinet was required to allow 95 percent of the insurance to be placed abroad. Given instances like this one, it is clear that in most countries, a strong government commitment is required when pioneering projects are launched.

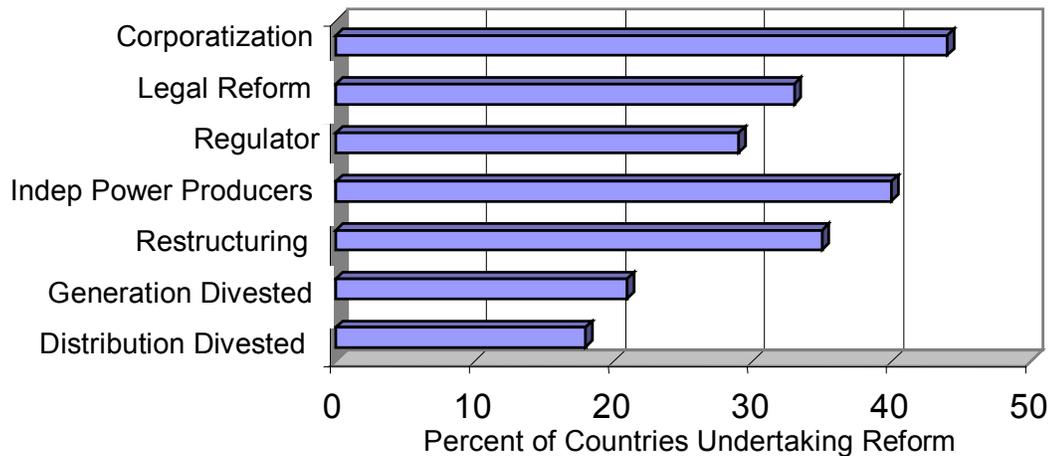
2.6 Regulatory Uncertainty

Lenders to infrastructure projects rely on the cash flow of the project as security for their loans. Thus, the dependability of a project's revenue is critical for its success. In most cases this requires a stable and tested regulatory framework.

Technical innovations and falling costs have made it easy to introduce competition in the telecom sector. This has meant that the regulatory task is much less complicated and controversial in this sector than in other infrastructure sectors that are closer to the textbook case of natural monopolies. Consequently, regulatory reforms have proceeded faster in the telecommunications. The lagging sectors are transport and water supply and sanitation, where regulation is still primarily done through the concession contract.

The power sector falls somewhere in between with a potentially competitive generation sector and close to a natural monopoly in transmission and distribution. Power sector reform comprises a number of different elements aimed at increasing competition and accountability and mobilization of financial resources for system expansion and service quality enhancement. A recent survey of 115 developing countries by the World Bank (Bacon, 1999) reviews how far different aspects of power sector reform have progressed. As can be seen from Figure 4 below, more than two-thirds of developing countries have not taken the basic steps of reforming the legal framework and creating regulatory authorities.

Figure 4
Progress on Power Sector Reform in 115 Developing Countries



Source: Data from Bacon (1999)

2.7 The Solicitation and Approval Process

Gordon Wu, the pioneer developer of greenfield infrastructure projects, often said, “You spend more time negotiating a deal than building the project.” Most project sponsors have had the same experience. Obscure rules of the game, unclear approval authority, interference by vested interests and, occasionally, outright corruption has tended to slow down private infrastructure development in many countries. In this respect, the Philippines stand out as a prominent exception. In 1990, the Philippines became the first Asian country to adopt a build-own-transfer (BOT) law -- the first such law in Asia. The government also created a BOT-Center that was instrumental in implementing Asia’s most successful private power program. Similarly, the 1994 private power policy in Pakistan established clear rules and a transparent approval process for private generation projects. With standardized legal documents, the Private Power and Infrastructure Board could move quickly and in three years, 15 projects were brought to financial closure.

In sharp contrast to the Philippines, China and, to some extent, India are typified by unclear divisions of responsibilities between central and provincial governments and frequently changing rules that have slowed down most investments and forced many investors to abandon their projects at an early stage.

2.8 Resulting Patterns of Private Infrastructure Investments

At the start of the 1990s, most countries in Latin America suffered from overstaffed and poorly-managed utilities that imposed heavy burdens on the state treasuries. During the decade, they followed the lead of Chile and Argentina and emphasized privatization of existing assets as a way of improving efficiency and generating resources for the state in the form of privatization receipts. Given the emphasis on

divestiture, they had to establish reasonable regulatory frameworks and use transparent processes for the divestiture of existing utilities usually assisted by foreign investment banks. Furthermore, most of the countries were classified as upper middle income and had comparatively good access to international capital markets. Thus, during the 1990s, Latin America and the Caribbean attracted half of all investments in private infrastructure facilities.

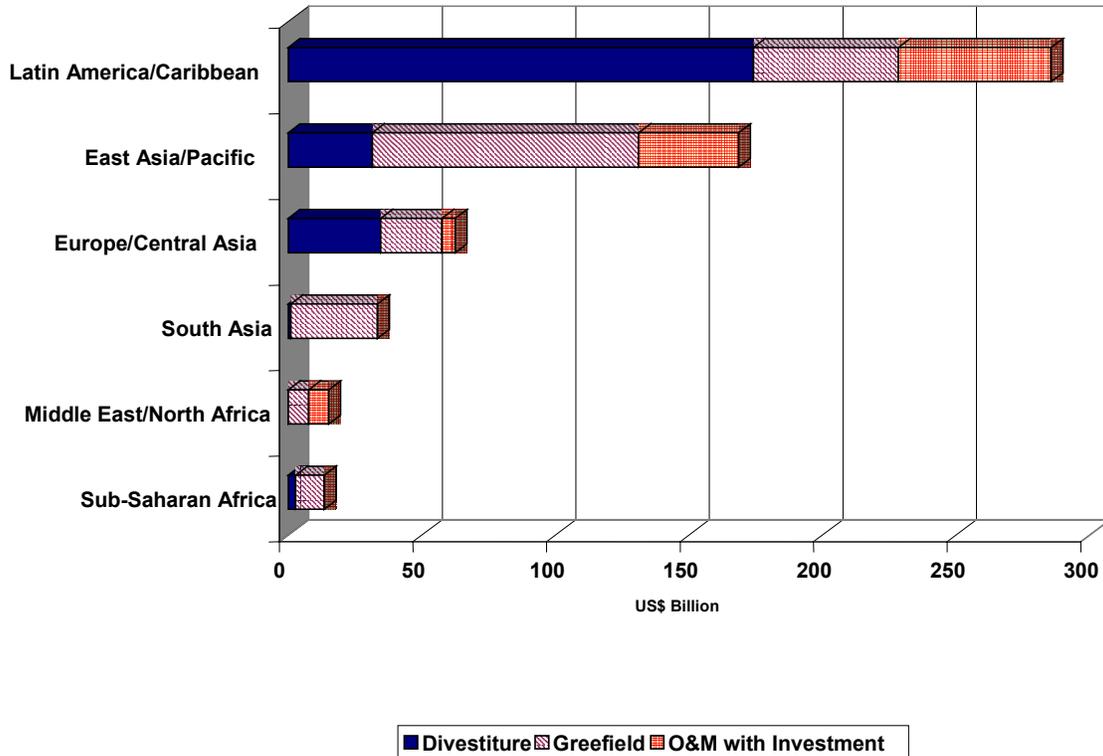
During most of the past decade, the countries in East Asia, on the other hand, were struggling with the problem of mobilizing financing to meet rapidly growing infrastructure needs. They sought to attract private investments in greenfield projects that helped to augment existing capacities. By adopting this approach, they could avoid the political difficulties associated with sector reform and divestiture of state assets. Still, the major countries were rated as investment grade¹⁰ and lenders put faith in long-term off-take agreements, often guaranteed by the government, in lieu of a proper regulatory framework. Thus, during the last decade, East Asia accounted for about 30 percent of private infrastructure investments.

Most of the rest of the developing world followed the lead of East Asia and emphasized greenfield projects rather than privatization of existing assets, largely because this was more expedient from a political point of view. However, they were low-income or lower middle-income countries that in most cases didn't come close to an investment grade rating. Thus, they were generally unable to mobilize private financing for infrastructure projects and most projects had to rely heavily on financing or guarantees from the multilateral development banks and bilateral donors. An example of this is a recent private port concession in Mozambique, a country in the forefront of economic reforms in Sub-Saharan Africa. Financing for rehabilitation works was obtained primarily from various bilateral development institutions. The sponsors also sought to mobilize USD 12 million in commercial bank loans. It turned out that the banks were not willing to take any of the political risks associated with the project and were prepared to assume only part of the commercial risks during the first four years and none thereafter.

What emerges from the available data is a highly skewed picture: Three regions--South Asia, Middle East and North Africa, and Sub-Saharan Africa--are lagging far behind the others. Indeed, Sub-Saharan Africa attracted only about 2.3 percent of all investments in private infrastructure facilities, and South Asia approximately 5.8 percent.

¹⁰ In early 1997, prior to the Asian crisis, S&P rated the major economies as follows: China—BBB+; Indonesia—BBB; Korea—AA; Malaysia—A+; Philippines—BB+; Thailand—A.

Figure 5
Regional Patterns of Private Infrastructure Investments (1990-1999)



2.9 Conclusions

The international donor community can provide important advice and technical assistance to help developing countries adopt sound macro-economic policies, strengthen their financial sectors, and implement proper legal and regulatory frameworks for private infrastructure investments. However, experience has shown that it usually takes a decade or two for a country to become creditworthy and establish a vibrant domestic credit market. Thus, in the case of virtually all low-income countries and most lower-middle income countries, export credit agencies and bilateral and multilateral donor agencies will have to provide guarantees or loans to support private infrastructure investments.

CHAPTER 3

FINANCING APPROACHES FOR PRIVATE INFRASTRUCTURE

3.1 Basic Principles of Project Finance

The preferred way of financing private infrastructure schemes in the developing world is project finance. This means that the repayment of the financing relies on the cash flow and the assets of the project itself rather than on the strength of the sponsor's balance sheet. The risks and returns are borne not by the sponsor alone but by the different participants in the projects. There are two basic types of project finance: non-recourse and limited recourse project finance.

Non-recourse financing implies that the lenders to and investors in the project do not have any direct recourse to the sponsors, for example, through loan guarantees. Although creditors' security includes the assets being financed, they tend to be illiquid and of limited value. Thus, the lenders rely solely on the operating cash flow generated by the project.

Limited recourse financing allows the lenders and equity investors some recourse to the sponsors. Such recourse often involves some form of pre-completion guarantee by the sponsors.

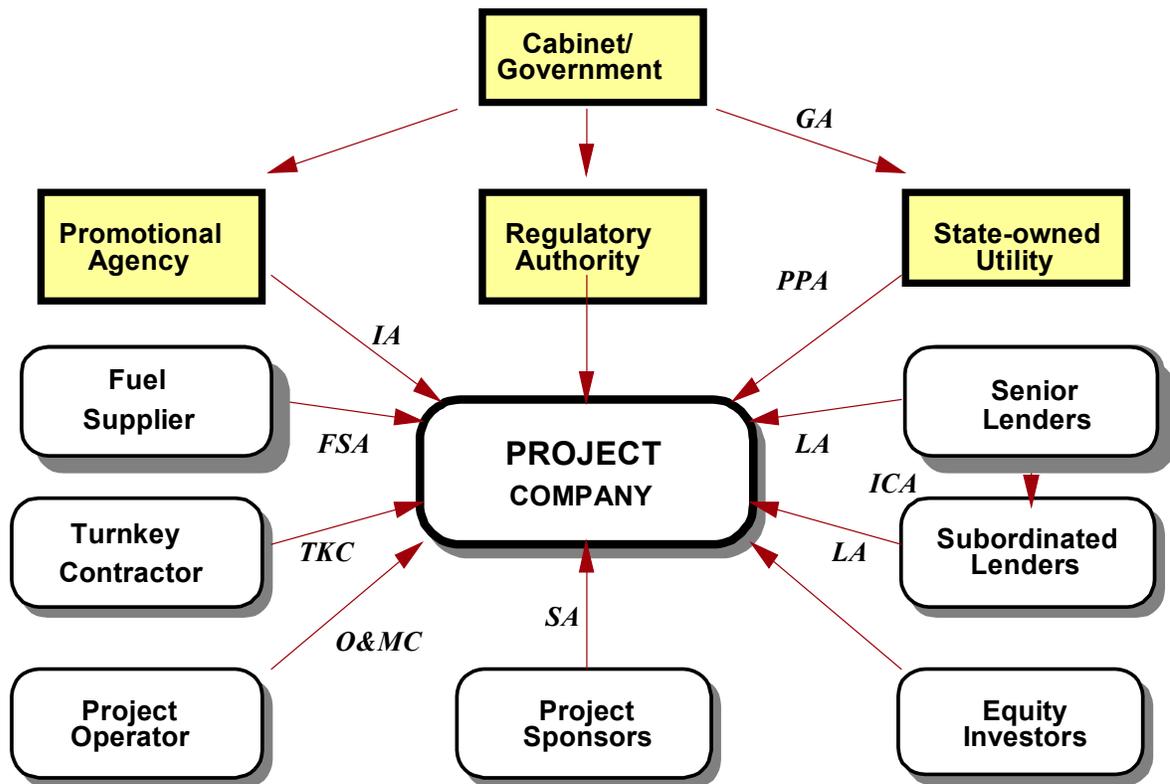
In either case, the project needs to be carefully structured to ensure lenders that it is economically, technically, and environmentally feasible and that it is capable of servicing the debt under most reasonable scenarios. Crucial to the successful structuring of a project's financing is the identification and mitigation of risks. These risks are allocated among the project participants through a comprehensive set of legal documents, usually referred to as the security package.

The security package achieves the following:

- It allocates risks to the parties that can best manage those risks.
- It ensures the long-term commitment of the parties to the project.

Figure 6 illustrates the basic structure of the security package for a power project. Most private infrastructure schemes follow the same basic model, although projects that sell their output directly to consumers would not have an off-take agreement with a state-owned utility. Similarly, projects that do not rely on one key input for their operation would not have a long-term agreement with a supplier. With these caveats, the key agreements in the security package are:

Figure 6
Security Package for a Power Project



- The Implementation Agreement (IA) or Concession Agreement — It sets out the conditions under which the project company operates. It also establishes the government’s obligations to the project company. Typically, it protects the company against changes in law and taxation and against certain political force majeure events. Depending on country conditions, it might also have provisions related to the availability of foreign exchange for debt service and profit remittances and convertibility of the local currency.
- The Guarantee Agreement (GA) — It commonly covers the government’s undertaking to ensure that various state-owned entities, especially the power purchaser, fulfill their obligations.
- The Power Purchase Agreement (PPA) — Between the state-owned utility and the project company, it covers, inter alia, the long-term commitment by the utility to buy power at a pre-defined price. It also defines a number of technical and financial undertakings by both parties. The tariff typically is divided into two parts: a capacity charge that guarantees the project company sufficient revenues to service the debt even if the plant is not dispatched, and an energy charge. Generally, the tariff formula includes indexation for general inflation, devaluation and changes in fuel costs.

- The Fuel Supply Agreement (FSA) — Between a coal, gas or oil supplier and the project company, defines the terms and conditions for long-term sales of the fuel in question.
- The Turn Key Construction Contract (TKC) — Typically provides for a fixed price and includes severe penalties in case completion is delayed. In most cases, the contractor is also responsible for designs and procurement of all equipment.
- The Operation and Maintenance Agreement (O&MA) — It is entered into with a company that has acknowledged expertise in operating power plants. Although such contracts tend to have shorter duration than the FSA and PPA, they typically cover the period while the bulk of the loans are being repaid. Like the TKC, the O&MA includes significant penalties for the O&M contractor in case he fails to meet the agreed performance targets.
- The Loan Agreements (LA) — These are entered into with the lenders. For larger projects, say over USD 100 million, the loans tend to be syndicated to a group of banks. The loans typically have maturities of 10-12 years, with repayment starting shortly after the planned start of commercial operation. Most commercial bank loans have a floating interest rate, which provides for a spread over the 6-months LIBOR. Depending on the creditworthiness of the country where the project is located and the risk profile of the project, the spread can vary between one percent and five percent.
- The Inter-Creditor Agreement (ICA) — It defines the relationships between the different lenders. It covers, inter alia, the procedures for handling an eventual default by the project company.

3.2 The Structure of a Limited Recourse Transaction

The basic principle in limited recourse finance is that the project's cash flow provides the assurance to lenders that they will be repaid. This means that the debt-service ratio is of critical importance. The minimum acceptable level for this ratio depends on the risk profile of the project. The main variable that can be used to ensure an adequate debt-service ratio is the amount of equity and quasi-equity or subordinated debt. For thermal power projects, for example, this has typically resulted in a demand by the lenders that the equity provided by the sponsors and other investors cover at least 25 percent of the cost of the project, including interest during construction. Since equity is more expensive than debt, the desire to have competitive tariffs will result in the equity being as close as possible to what the lenders regard as the minimum acceptable.

Project Finance Risks

Identification and mitigation of risks are at the core of limited recourse financing for infrastructure projects. Of course, every project is different and it is not possible to compile an exhaustive list of risks or to rank them according to importance. What is a major risk in one project might be negligible in another. The risks also vary for different participants in a project. What might look like a major risk to the project sponsor/developer might not concern the government or the lenders. The nature of the risks also changes over time as the project moves from its early planning stage through construction and commercial operation to eventual decommissioning.

Lenders and developers typically make a distinction between commercial and political risks. The former covers risks that are a natural part of doing business such as construction of the plant and its efficient operation, market prospects, and interest rate fluctuations. Political risks have traditionally included such events as insurrections, major strikes and expropriation. However, in the project finance context, political risks are seen much more broadly, and typically cover all factors directly controlled by the government or strongly influenced by government actions or in-actions. Thus, political risks include the availability and convertibility of foreign exchange, changes in law, timely approvals and issuance of permits and licenses and the contractual performance of government owned entities. The line between commercial and political risks is often fuzzy and varies from case to case.

Typically, the risks are classified depending on the stage of the project. The financiers of a project would be concerned about the following risks:

Development Risks — The process from project concept to financial closure can be long and cumbersome. The detailed feasibility study might demonstrate that the project isn't viable or lenders might consider macro-economic conditions too risky for long-term loans. However, bureaucratic recalcitrance, slow approval processes, and drawn-out negotiations of the key contracts are the most common obstacles that seriously impact the viability of the project—assuming that the basic policy and regulatory framework doesn't change during the development phase. In India, for example, after more than five years of negotiations, only two of eight fast track projects have reached financial closure. The project sponsors take the risks at this stage.

Construction Risks — These are almost universally mitigated through a fixed-price, date-certain design and construction contract. Thus, the turnkey contractor assumes most of the risks. However, there are residual risks that affect the sponsors and lenders such as those due to foreign exchange, interest rate movements, and a variety of political force majeure risks.

Operating Risks — The proper operation of the plant is ensured through warranties by the equipment supplier/turnkey contractor and through an O&M contract with an experienced operator. The availability of fuel is ensured through a long-term contract with a reliable supplier. Most critical, however, is the off-take risk that, in the case of BOT power plants, is typically mitigated through a long-term contract with a state-owned utility. The risks associated with economic factors outside the project company's control are typically passed on to the state-owned utility and the final consumers by linking the tariff to an index that includes general inflation, devaluation, and changes in fuel costs.

The next major issue that needs to be tackled is the risk of cost overruns. Although the principle is to have a fixed-price construction contract, there are always factors, such as exchange rate movements, interest rate changes, and unforeseen foundation problems, that can legitimately increase the construction cost or delay completion. To deal with this problem, it is common to require the sponsors to give a commitment to increase their equity contribution in the case of legitimate cost overruns. Similarly, the lenders often make a commitment to provide a limited increase in the loan amount. These contingent funding amounts are usually referred to as stand-bys. The stand-bys typically range between five percent and ten percent of the base financing.

The real challenge, however, is that a project can never have a credit rating that is higher than the country where it is located. Thus, in most countries with a credit rating below investment grade,¹¹ commercial banks will be reluctant to take the risk of the host country running out of foreign exchange.

3.3 Financing Sources for Infrastructure Projects

Between 20 and 40 percent of project costs, including contingencies and interest during construction, are typically contributed in the form of equity. The bulk of the equity comes from the project's sponsors. There are also a number of investment funds that specialize in emerging market infrastructure projects. Most prominent among them are the AIG sponsored funds managed by the Emerging Markets Partnership. Occasionally, equity is also mobilized on the local stock exchange or through exchange-traded Global Depository Receipts. In general, raising the equity for well-structured private infrastructure projects is not difficult.

Project finance deals tend to be highly leveraged with debt typically accounting for 60-80 percent of total financing. Thus, the driving forces in the risk minimization process are not the project sponsors but the commercial lenders. There are many cases where the sponsors have negotiated one set of contracts with the government and the lenders have insisted on changes implying that the government had to assume greater risks. The reason for this situation is that project sponsors get rewarded through returns on their investment of 15-25 percent after adjustment for inflation, while lenders have to work with a small margin of two to three percent over the cost of capital with no upside potential. Thus, while they will respond to small increases in project and/or country risks through upward adjustments in the spread over LIBOR and/or shortening of the maturities, there very soon comes a point where they would rather not lend than take the risk.

One basic fact in the project finance business is that a project's credit rating cannot exceed the creditworthiness of the host country unless some form of credit enhancement is provided. This means that projects in countries with a Standard & Poor's credit rating lower than BBB- or the equivalent from other credit rating agencies will find it extremely difficult to mobilize the required financing. To overcome this difficulty, financing packages in most countries with limited

¹¹ "BBB-" by Standard & Poor's or equivalent by any of the other rating agencies.

creditworthiness will include political risk guarantees from export credit agencies¹² or from multilateral agencies like MIGA or partial risk guarantees from the World Bank and the regional development banks.¹³ Although such guarantees can cover a broad range of risks, the one that the commercial lenders are almost universally concerned about is the availability of foreign exchange for debt service. Although the B-loan¹⁴ program of IFC and corresponding programs at other development banks do not formally provide protection against a government's failure to make foreign exchange available for debt service, most bank regulators in industrialized countries regard B-loans as having a de facto preferred creditor status.

Since ECA coverage is linked to the export of equipment, the sourcing of equipment is often determined by which ECA is willing to provide coverage to projects in the host country. This means that in most developing countries, the participation of official agencies in one form or another is imperative. This participation can take the form of:

- Equity investments and A and B-loans from IFC and the private sector arms of the regional development banks;
- Guarantees from MIGA;
- Partial risk guarantees from the World Bank and the regional development banks;
- Loans from the World Bank and the regional development banks, either directly to the project company with a repayment guarantee from the government or channeled through the government; and
- Loans and/or guarantees from export credit agencies.

In short, the financing package for a major infrastructure project in a low income country tends to be highly complex, typically involving a number of commercial banks, a couple of ECAs and one of the international development banks.

Last, but not least, the donor community is also supporting private infrastructure investments through the kind of special financing facilities discussed in the next chapter.

¹² In recent years, some of the major international insurance companies, such as AIG, have also been offering political risk insurance.

¹³ The recent decision by the World Bank to also offer guarantees for projects in the poorest and least developed countries makes this instrument much more important as a facilitating instrument for private infrastructure investments. (Previously guarantees could only be offered for projects in middle-income countries and a couple of the more creditworthy low-income countries.) It deserves to be noted that partial risk guarantees provided by the World Bank and the regional development banks are covered by the same social and environmental guidelines as loans.

¹⁴ B-loans are syndicated loans for which IFC is the lender on record. A-loans are direct loans from IFC.

CHAPTER 4

FINANCING FACILITIES FOR PRIVATE INFRASTRUCTURE

4.1 Approaches

To overcome the constraints to private infrastructure investments that are imposed by limited creditworthiness and shallow domestic capital markets, many governments—usually with the support of multilateral development agencies—have established special infrastructure financing facilities. The approaches taken depend on a number of different factors, such as:

- The ability of the country to attract international bank loans;
- The depth of domestic financial markets;
- The financial and managerial strength of existing financial institutions;
- The lending policies of the supporting donor organizations;
- The desire to leverage public funds with private financing; and
- The need for professional and transparent management.
- This has meant that no two facilities are the same. However, they can broadly be divided into two types:
 - Entities that provide senior or subordinated debt and, rarely, equity; and
 - Facilities that provide contingent support, i.e. guarantees or refinancing commitments.

In general, debt facilities have been used in countries with below investment grade credit ratings and poorly developed credit markets. Contingent financing facilities, on the other hand, have been proposed primarily for countries with deeper financial markets but where lenders are reluctant to go beyond 5-year maturities and/or where the yield curve is very steep due to uncertainties regarding inflation and interest rates.

The following sections provide a review of the experience with infrastructure financing facilities.

4.2 Pakistan—Private Sector Energy Development Fund

The Private Sector Energy Development Fund (PSEDF) is the earliest example of an earmarked financing facility for privately-owned and operated infrastructure projects. It was created in 1988 with the support of the World Bank. Subsequently, a number

of bilateral donors, including USAID and JEXIM, contributed funding. PSEDF is a government owned fund managed by National Development Finance Corporation (NDFC), a state owned development bank. PSEDF provides long-term, subordinated loans with maturities of up to 23 years and a maximum grace period of eight years. The loan amount cannot exceed 30 percent of project costs in order to maximize the amount of private debt mobilized for the project. Equity should make up at least 20 percent of the financing plan. Under the World Bank loan, a Private Power Cell, attached to the Ministry of Water and Power, was created as the focal point for negotiations with project sponsors. Both the Private Power Cell and NDFC's Private Energy Department benefited from extensive technical assistance from USAID.

The first subproject financed through PSEDF, the 1,200 MW Hub Power Project, took over five years from inception to the start of construction, largely because of factors beyond the control of the government and the project sponsors. The negotiations for the Hub Power Project provided a valuable experience that led it to fine-tune the institutional arrangements and to announce a Private Power Policy in early 1994. This policy proved to be highly successful in attracting private investments. Over the following three years, 15 projects with a total capacity of around 3,000 MW reached financial closure; PSEDF was involved in the two largest, after Hub, and a couple of the smaller ones, as well as a fuel oil pipeline. International development institutions, including ADB, IFC, CDC and JEXIM were involved in all the projects, except three of the smallest ones.

As equal partners, PSEDF staff and the commercial banks participated in the structuring of the various transactions. This on-the-job training proved to be successful and PSEDF earned the reputation of a highly competent entity.

The sponsors of the Hub Power Project have repeatedly stated that if PSEDF did not exist, they would never have persisted with the frustrating, time-consuming and costly development process. Thus, PSEDF played an important catalytic role in encouraging private infrastructure investments in Pakistan. Its subsequent success was in large part due to four factors that are important to consider in the creation and design of similar facilities:

- There was a strong government commitment to private participation;
- A transparent and well-designed policy framework was in place;
- An institutional framework for promoting and negotiating private sector projects was established together with the creation of PSEDF; and
- Extensive technical assistance was provided to all the entities involved in the power sector.

Another design lesson that emerged from PSEDF was that the interest rate structure should be consistent with those prevalent on international financial markets. Initially, the on-lending rate was based on the World Bank's lending rate with a spread. However, in the mid-1990s, the World Bank rate was determined by a formula based

on its own borrowing rate for a mixture of currencies. When the sponsors for the Uch Power Project sought to hedge the interest rate risk, no institution was willing to do so because of the complex and unique nature of the World Bank's lending rate. Thus, the lending rate formula was changed and a fixed-rate option was introduced. The variable rate was based on a one-year US Treasury bill rate plus a spread of 300 basis points. The fixed rate was locked in based on the 20-year US Treasury bond rate plus 350 basis points.

4.3 Sri Lanka—Private Sector Infrastructure Development Company

The Private Sector Infrastructure Development Company (PSIDC) is largely modeled after PSEDF in Pakistan. It is primarily designed to provide subordinated debt but it can also provide senior loans. Lending terms are essentially the same although the variable-lending rate is set at USD LIBOR plus 300 basis points. PSIDC can provide fixed-rate loans at a rate determined through a survey of interest-rate swaps.

The main difference with PSEDF lies in its governance structure. Several alternatives were considered at the design stage. First, the option of channeling IDA funds through an existing financial institution in Sri Lanka was examined. It turned out, though, that no bank in the country was big enough to handle loans for major infrastructure projects: the repository financial institution would violate its single borrowing and capital adequacy requirements. The second option was to have one of the two development banks play a management role similar to the one played by NDFC in Pakistan. However, an important objective of the facility was to involve these banks in the provision of senior local debt for the subprojects. Thus, there would be a clear conflict of interest between the bank's role of senior lender and its role as manager of subordinated debt on behalf of the government.¹⁵ Consequently, PSIDC was set up as a separate legal entity. IDA helped finance technical assistance for PSIDC.

The government passes on the IDA credit to PSIDC on the same terms as it receives it, i.e. with 40-year maturities and a nominal interest rate of 0.75 percent. The significant spread income that PSIDC derives remains with PSIDC as retained earnings, i.e. as a de facto equity contribution from the government and can be used in the future to increase PSIDC's lending. The World Bank criticized this arrangement. The main argument was that it would be better if the government passed on the IDA credit at a more market-based interest rate so that PSIDC would have stronger incentives to avoid default and to keep its operating costs low.

The Sri Lanka PSIDC became operational in 1996 but it was not until four years later that it approved its first loan for a major container port in Colombo. The slow start-up was due to several factors. The most important appears to have been a fairly weak government commitment to private ownership of infrastructure facilities, which allowed vested interests in the line ministries to delay potential projects.¹⁶ The

¹⁵ IDA can only lend to governments.

¹⁶ The most striking example was when the Ceylon Electricity Board (CEB) "lost" the bid documents for the first major power plant to be solicited on a BOT/BOO basis. CEB had been

government had established a Secretariat for Infrastructure Development and Investment (SIDI) in 1992. SIDI benefited from extensive technical assistance provided by USAID. SIDI was expected to function as a one-stop-shop for liaison with private sector investors. In 1995, SIDI was reorganized and become the Bureau for Infrastructure Development (BID) under the Board of Investments. BID continued to be a facilitating organization. However, the main responsibility for developing potential schemes and inviting bids remained with the line ministries that neither fully understood the modalities for private sector participation nor had funding to prepare potential schemes and, thus, BID's efficacy was severely compromised.

4.4 Bangladesh—Infrastructure Development Company Ltd.

The Infrastructure Development Company Ltd. (IDCOL) is virtually identical to PSIDC in Sri Lanka. However, the issues related to political interference and transparency were given additional considerations in the design of IDCOL. Thus, IDCOL was required to hire after competitive bidding an international firm responsible for appraising and negotiating sub-loans on behalf of IDCOL. This arrangement has worked well so far.

IDCOL demonstrates how a donor-supported infrastructure financing facility can be used as a vehicle for promoting policy reforms. Bangladesh experienced severe power shortages during the 1990s. Largely because the two existing state-owned power utilities performed poorly and the government was reluctant to reform them, the donor community refused any new loans for the sector. Thus, to initiate reform, the World Bank agreed to provide funding for IDCOL if the government adopted a policy for private power generation. This policy was prepared with technical assistance from the World Bank. Financing from ADB and the World Bank also helped prepare the bid documents for the solicitation of two 300 MW power plants to be built on a BOO basis. Bids for the two plants were solicited in 1997 when the World Bank agreed on funding for IDCOL. The bidders were informed that they would have access to IDCOL financing. This generated serious bids from major international power developers. Both projects have recently reached financial closure.¹⁷ It is highly unlikely that these projects would have proceeded in the aftermath of the Asian crisis without the availability of IDCOL financing.¹⁸

With the support of the World Bank, DFID and CIDA, the government has established an Infrastructure Investment Facilitation Center (IIFC). IIFC is a central advisory unit, working with line agencies to develop project proposals and with project sponsors to implement the approved projects. It is not supposed to encroach

instructed by the cabinet to invite the bids for the plant although there was strong opposition—at all levels—in CEB against private participation in the sector.

¹⁷ However, only one of the projects relied on IDCOL financing. The other benefited from a partial risk guarantee from the World Bank.

¹⁸ See footnote above. For the project without IDCOL financing, the “switch” from IDCOL financing to support through the partial risk guarantee took place at a relatively late stage after the World Bank had introduced this new instrument for low-income countries. Thus, IDCOL enabled the sponsors to continue to pursue the project even when commercial bank and ECA financing dried up in the late 1990s.

on the technical or contracting functions of the line agencies, but is expected to assist them with expertise, as and when needed. It is also expected to play a coordinating role in addressing cross-sectoral policy and process issues. Furthermore, it is supposed to facilitate the implementation of approved projects by helping project sponsors interface with relevant agencies and secure timely clearances. However, a major share of IIFC's efforts during its first few years of operation has been devoted to awareness building and training the staff of line agencies.

4.5 India—Infrastructure Leasing and Financial Services Ltd

Infrastructure Leasing and Financial Services Limited (IL&FS) was created in 1987 as a joint public-private sector venture. Originally, public sector institutions held a majority of the shares but since 1993 private investors have controlled the company. IFC has a five percent equity stake.

IL&FS is a non-banking financial company regulated by the Reserve Bank of India. It was initially engaged in leasing activities and loan financing of various non-infrastructure activities as well as merchant banking. It has an AAA credit rating from a domestic rating agency. As government policy changed in the mid-1990s, IL&FS started to focus on private infrastructure projects. To support this change, the World Bank approved a USD 200 million loan to IL&FS in 1996. Unlike the facilities in Bangladesh, Pakistan and Sri Lanka, IL&FS functions as a true financial intermediary. It can provide senior loans with maturities of up to 20 years either in Indian rupees or in US dollars. In addition, IL&FS can utilize its own funds for equity investments or for providing other financial instruments. Given the fact that IL&FS is a true financial intermediary, the World Bank left IL&FS free to establish its interest rate structure but imposed certain conditions to ensure the continued solvency of IL&FS. The company is required to maintain a debt-service coverage ratio of not less than 1:25 and a debt-to-equity ratio of not more than 6:1.

The Indian government is putting in place a framework for private infrastructure investments, albeit slowly and in a rather piecemeal fashion. However, many of the infrastructure sectors, like power, fall under the purview of the state governments and most lack capacity to prepare and structure private projects. Thus, the first couple of projects pursued by IL&FS have taken a long time to materialize and IL&FS has had to wear many hats: in the same project it can act as an advisor to the state government, a sponsor, and a lender. IL&FS has managed to play these conflicting roles due to its good reputation and professionalism.

4.6 India—Infrastructure Development Finance Corporation

The Infrastructure Development Finance Corporation (IDFC) was created in 1997 on the initiative of the Indian government. Like IL&FS, it is a non-banking financial company. Its mission is to stimulate private and long-term local financing for infrastructure projects. IDFC's instruments initially focused on the provision of direct

funding through long-term debt, preferred and common equity for greenfield projects, and the refinancing of existing local currency debt. It can also offer instruments aimed at improving the lending terms and conditions offered by a third party. The focus has been on power generation and telecommunications with some activities in transport and urban infrastructure.

In round terms, IDFC has USD 250 million in equity. The Government of India, the Reserve Bank and the state-owned Industrial Development Bank hold 40 percent of the shares. Domestic financial institutions have another 20 percent, and foreign financial institutions hold the remaining 40 percent. The foreign institutions include AIG, ADB and IFC. IDFC also has a subordinated loan of approximately USD 150 million from the government and the Reserve Bank. The third source of funding for IDFC is local debt, mostly in the form of bonds. However, IDFC is not relying on market forces in its resource mobilization, rather on benefits from India's long tradition of directed lending. Its fund raising is supported by the following regulatory changes:

- Infrastructure is listed as a priority sector for banks, and IDFC's bonds qualify as infrastructure lending;
- A new investment categorization for provident, superannuation and gratuity funds whereby they are required to invest in AAA rated infrastructure bonds with maturities over ten years; and
- Modification of insurance regulations to enable and earmark utilization of insurance deposits for investments in infrastructure-related equity/debt instruments of IDFC.

IDFC appears to have made a spectacular start. In just over three years of operations, it approved more than USD 1,000 million in financing for 50 projects. This stands in stark contrast to the modest progress made by IL&FS and the facilities in Bangladesh, Pakistan and Sri Lanka. Outside observers, however, still view the legal and regulatory framework for private infrastructure as inadequate. During the 1990s, only a trickle of foreign commercial debt flowed to Indian projects. For example, because of inadequate security arrangements, including politicized tariff setting leading to the insolvency of most state electricity boards, only two of eight fast track power projects have reached financial closure after more than six years of negotiations.

This situation points to one of the major risks associated with government sponsored infrastructure financing facilities: a strong political pressure to lend might lead to a less careful due diligence process and the implicit or explicit acceptance of high commercial and regulatory risks. This might be justified if the financing facility hands out government money and the government is the regulator and/or the contractual partner. If this is the case, however, a default by the government on any of its obligations to the private infrastructure projects is likely to hurt itself as a lender. In addition, in the case of India, there appear to be some serious problems with moral hazards. The individual states, not the central government, are the regulators and/or contractual partners. Retail depositors, insurance holders and pension savers are

the ones who have no choice but to provide the funds for IDFC's lending, guarantees, and equity investments.

IDFC also faces potential conflicts of interests in its policy advice to state governments. While this is a more incidental part of IL&FS's activities, it is a core mandate for IDFC.

Another challenge for IDFC is the exceptionally broad range of instruments it envisages to use. Indeed, it appears that it will offer more instruments than any financial institution in the world, at least in the infrastructure field. Even a pedestrian activity such as limited recourse lending is complex and requires a lot of experience in order to be done well.¹⁹ This problem is further complicated by the wide variety of sectors that IDFC intends to cover.²⁰ A recent review of IDFC sponsored by the World Bank (Klingebiel and Ruster 2000) concluded that the large number of sectors and diverse instruments "will impose a high burden on its management and necessitate staff with a diverse set of skills that is relatively scarce in India."

4.7 Africa Private Infrastructure Financing Facility

Perhaps the most interesting initiative presently under way is the creation of the Africa Private Infrastructure Financing Facility (APIFF). It is intended to be a joint private-public sector venture aimed at increasing the availability of financing for private infrastructure projects in Sub-Saharan Africa. The Department for International Development (DFID) of the United Kingdom initiated the idea but has recently been joined by the Swedish International Development Cooperation Agency (SIDA) as a sponsor of the facility. DFID and SIDA are expected to contribute the equivalent of USD 100 million in returnable grant money that would function as APIFF's equity.

The basic design objectives for APIFF are to leverage the public funds with as much private money as possible and to ensure cost-effective professional management of the facility. This is to be achieved by "auctioning" off the management of the facility to an investment bank or a consortium. The fund manager is required to bring in at least USD 100 million in long-term senior loans to the facility. However, the fund manager is encouraged to bring in more money since the selection criteria include the amount of senior debt committed, the level of the management fee, and the experience and competence of the fund manager. It is anticipated that having a fund manager with a real stake in the facility will encourage a more careful due diligence of the projects.

¹⁹ The Eurotunnel, the largest project financing in recent times, resulted in losses amounting to many billions of dollars for both equity investors and lenders largely because the basic principles of limited recourse financing were replaced by political pressure and general hype.

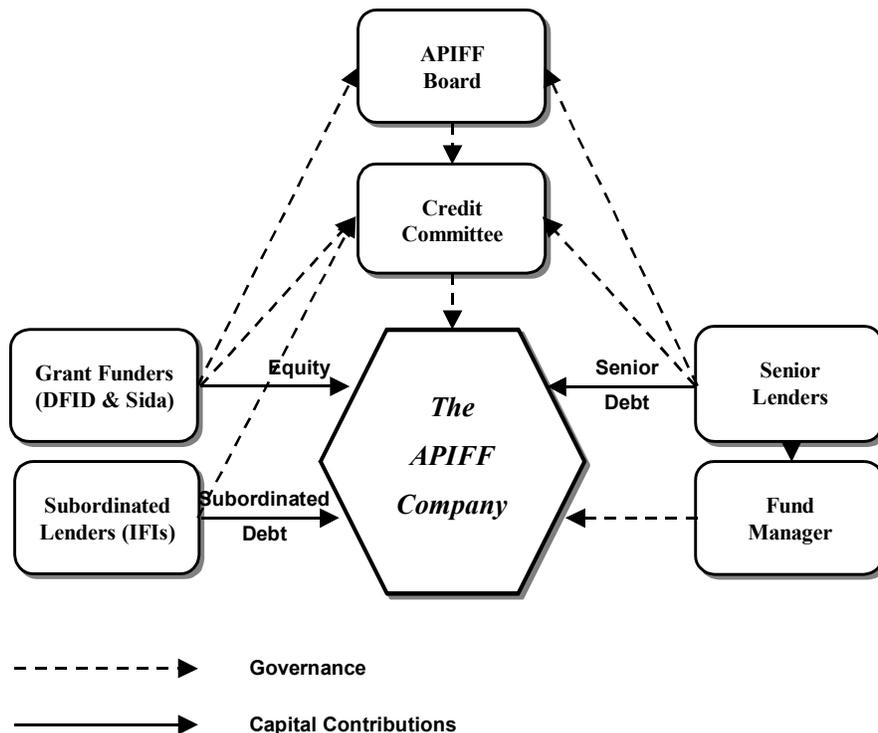
²⁰ In its own words, IDFC will "broaden its initial focus on power, roads, ports and telecommunications to a framework of energy, telecommunications & information technology, integrated transportation, urban infrastructure and food & agri-business infrastructure." (See its web site at <http://www.idfc.com>.)

APIFF's main product will be dollar-denominated senior debt, although it will be able to offer subordinated debt and quasi equity. The average maturity of loans is estimated to be 14 years, including a two-year grace period. The interest rate charged is anticipated to average LIBOR plus five percent. The rate will be market based and will vary according to tenor and any subordination.

APIFF will direct lending to electricity, gas pipeline, telecommunications, transport, water, and sanitation sectors. Oil and mineral extraction will, however, be excluded on the basis that the natural foreign exchange hedge within these activities makes them considerably more easy to finance than other infrastructure sectors. All modes of private sector participation will be eligible.

The facility has recently been bid out to private sector lenders who will be both senior lenders to the facility and fund managers. International financial institutions, such as IFC, will be invited to provide subordinated debt to the APIFF. The governance and capital structure of APIFF are captured in Figure 7 and each element is discussed below.

Figure 7
Structure of the Africa Private Infrastructure Financing Facility



The APIFF Company will be a limited liability company capitalised through three annual cash injections from the donor agencies. The donors would not get any dividends but would hopefully get their money back with a modest return through appropriate exit arrangements. Although the precise arrangements will be subject to negotiation, it might be expected that donors will seek to exit APIFF at some point after it has fully disbursed its funds, assuming that the donors do not see a need to increase the size of the facility. In order to reduce the risk that APIFF would crowd out other debt providers, it is anticipated that the facility would be privatised. This could be done through a private placement or public offering of 49 percent of the APIFF equity. APIFF's lenders and fund manager would have the right to purchase 51 percent of the stake for the same price. It is expected that the returns to the donors would be in the low single digits.

The APIFF Board is proposed to have 10 members plus a Chair. In order to balance the developmental and commercial objectives of APIFF, the donors who are equity contributors will have five seats plus the chair appointed by the largest equity contributor. The senior lenders also will have five seats. The board will appoint the members of the Credit Committee and will rule on any disputes within the committee. It will be able to amend APIFF's investment policy, but only with a two-thirds majority. A simple majority will be required to overrule any lending decision. However, the board will not be able to approve any loans if a majority of the senior lenders' representatives are against their loans in order to ensure that all lending decisions are commercially sound.

The Credit Committee will have three members: one representing the senior lenders, (but not from the Fund Manager), the donors, and the subordinated lenders. The committee will make decisions by consensus. In case one member of the committee objects, the case will be elevated to the board for a decision.

The winning Consortium of Senior Lenders would provide a minimum of USD 100 million in senior long-term debt to the facility. As noted above, the senior lenders would be represented on APIFF's board and on the Credit Committee. They would also have a controlling interest in the fund management company.

The Fund Manager would be a separate corporate entity, as is common in this type of venture. The winning consortium will hold 75 percent of the equity of the Fund Manager, the APIFF Company will hold 10 percent and the remaining 15 percent will be available to any "blind" or subordinated lenders. The Fund Manager will be responsible for the day-to-day management of the facility. It will be enumerated through a fee structure with both fixed and variable elements; the former element being a percentage fee based on the size of funds under management, and the latter element comprising a performance related element related to the fund manager's success, and transaction fees. All fees but the arrangement fees will be paid by APIFF. The arrangement fees and the APIFF's out-of-pocket expenses for due diligence will be paid by APIFF's borrowers.

International financial institutions, such as the IFC and CDC, will be invited to become subordinated lenders to APIFF. They will be "blind" lenders with no representation on the Board. However, to benefit from their expertise in financing

infrastructure projects in developing countries, they will have one seat on the Credit Committee and be offered part of the equity in the Fund Management Company, although their participation will be with the agreement of the Leading Consortium.

4.8 Other Examples of Infrastructure Financing Facilities

In 1994, the Government of Thailand established a facility that offered loan guarantees and bond insurance for private infrastructure projects. It was capitalized with USD 150 million from the government, domestic and foreign financial institutions, and reportedly with some support from USAID. Unfortunately, it has not been possible to find out more information on the facility and on its performance. Given the large amount of private infrastructure investments in Thailand during the 1990s and that most of the funding was raised from local commercial banks, it is likely that the facility had only a marginal impact on the overall flow of investments. Indeed, it appears that the main constraint to private participation was related to the rather vague regulatory framework.

In the late 1990s, the Government of Malaysia established an Infrastructure Development Corporation (IDC). It was merged in 1999 with Bank Pembangunan, the public sector development bank, to form the Development and Infrastructure Bank of Malaysia (DIBM). The Bank provides long-term funding for road, rail, power, and water supply projects, and supports the government's Information Communication Technology initiatives. DIBM raises most of its financing through the placement of long-term bonds, with maturities of up to 25 years, on the local market. It placed bonds worth USD 1.3 billion in 2000 and plans to issue bonds for another USD 6.5 billion in the period up to 2005. In the aftermath of the Asian crisis, IDC and DIBM have been involved in the restructuring of some of the major private infrastructure enterprises in Malaysia.

Malaysia has a long tradition of directed lending to high profile infrastructure facilities. For example, the government's compulsory pension fund, the Employee Provident Fund, was a major source of financing for infrastructure projects during the 1990s. While the concept of pooling risks of individual projects and mobilizing long-term funding through DIBM bond issues is attractive, there are reasons to be concerned about the quality of DIBM's due diligence of individual infrastructure projects.

4.9 Proposed Facilities that Did Not Materialize

A proposal for a USD 5 billion facility for equity and subordinated debt was developed for the Philippines in the mid-1990s. A private investment bank would manage the facility. It was expected that 75 percent of the funds would be raised from private sources with the balance contributed by the government. It was realized during the design stage that the main constraint to furthering private investments in infrastructure in the Philippines was not the availability of equity or subordinated debt; the key constraints were the legal and regulatory framework and

weak financial viability of many projects outside the power sector. After the successes in the power sector, public sector agencies tended to see private participation as the panacea for all their problems and many non-viable projects were proposed for private development.

Similarly, an equity facility was proposed for Mexico in the mid-1990s. This facility would be capitalized with USD 225 million in proceeds from the government's privatization program. This facility was, thus, proposed to deal with the least important issue in the country's efforts to have the private sector play a greater role in the infrastructure field. A poorly designed program for private toll roads in the early 1990s led to a well-publicized and costly failure. Once proper frameworks for power generation and railway privatization were put in place, ample financing has been forthcoming. Thus, it turned out that the facility was not really needed.

Over the last couple of years, an elaborate proposal for a financing facility in Colombia was developed with World Bank support. The facility would offer three instruments:

- Local and international market refinancing of medium term debt;
- A put option for local investors through which they could sell their equity—at discounted prices—to the facility; and
- A liquidity-support facility to provide support to private projects if the public sector buyers failed to meet their payment obligations.

The refinancing and put option facilities were supposed to be housed in Bancoldex, a government-owned export bank. The liquidity support facility would be housed in Invias, the public sector transport agency.

While the facilities were based on a demand survey, there were extensive delays and many of the conclusions of the survey became obsolete. The preparation was a drawn out process due to the lack of coordination between the various government entities and weak commitment by the agencies concerned. There were also inconsistencies between the government's development objectives and the commercial objectives pursued by Bancoldex. Inter alia, Bancoldex did not want to take the risks associated with the liquidity support facility in case government entities did not fulfill their payment obligations. This was the reason why it was later proposed that Invias should handle this component.

In the end, the facility turned out to be intellectually elegant but rather divorced from reality. Thus, the World Bank dropped the proposal and settled for a more modest—and practical—approach. In 1998, the World Bank approved a loan to FINDETER, the local development bank. Historically, FINDETER has refinanced commercial bank loans to municipalities. Under the World Bank operation, FINDETER would also refinance loans to private infrastructure enterprises. While the funds for infrastructure enterprises are likely to increase, there is still a strong need for the professional appraisal of private subprojects.

CHAPTER 5 SUMMARY OF LESSONS

5.1 Rationale for Private Infrastructure Financing Facilities

Donor financed infrastructure facilities can help overcome the financing constraints prevalent in many developing countries. They can potentially have an impact that goes well beyond the sum of the individual subprojects in that they can provide strong incentives for governments, like those in Pakistan and Bangladesh, to undertake policy and institutional reforms.

These facilities can also provide strong incentives to private sponsors to go through the time consuming and costly process of developing and/or bidding for projects in countries with limited access to international capital markets.²¹ There is little doubt, for example, that the availability of IDCOL financing was a key reason for highly competitive bids in 1997 for the Haripur and Meghnaghat power plants in Bangladesh.

However, donor institutions that set disbursement of funds as a major criterion for measuring lending success have not always been seen as successes.²² This chapter summarizes the lessons learned by these institutions to be applied in the design of future private infrastructure financing facilities.

5.2 The Legal and Regulatory Framework

The legal and regulatory framework has to be transparent and sound. Reforms at the sector level must have established financially sound key government agencies. There are examples where facilities have been designed in essence to circumvent weaknesses in the regulatory framework and in the sector institutions. While soft money facilities can help overcome such weaknesses, the resulting private infrastructure enterprises are unlikely to be viable and the facility will not be catalytic in creating a sustained flow of private lending to infrastructure projects.

5.3 Political Commitment

Political commitment is needed not only to establish policies, institutions, laws and regulations supporting private participation in the infrastructure field, but also to steamroll the vested interests and to overcome the many hurdles that tend to crop up during the development of pioneering projects. It is often essential to have a political heavyweight, either a civil servant or a politician, spearheading the

²¹ See, for example, Michael Gerrard's review of the Hub Power Project in Pakistan (Gerrard, 1997).

²² See "Why Infrastructure Facilities Often Fall Short of Their Objectives" by Klingebiel & Ruster (2000).

government's efforts. Without this support, even the most well-designed schemes are likely to fail—or at least take an exorbitant amount of time.

5.4 Supporting Institutions

There is a strong need for a local institution that can actively promote private participation, serve as liaison with potential investors, identify generic legal and regulatory bottlenecks, and advise line ministries. The Private Power Board not only fulfilled these roles in Pakistan but also negotiated the key agreements with the project sponsors. In Sri Lanka, SIDI and subsequently the Bureau for Infrastructure Development played a much more limited role, largely isolated from the line agencies. It appears that this was one of the reasons why progress on private participation was slow in the country. Thus, while the exact form, function and location of the promoting agency will change from case to case, it should be high profile and proactive, preferably reporting to the political heavyweight referred to above.

There is also the need for an institution to advise government agencies on the structuring of private infrastructure projects and on policy issues related to private participation. It is undesirable to have the financing facility play this role, as is the case of IL&FS and IDFC in India. This role could, as in Bangladesh, be assumed by the promoting agency referred to above. The outreach function is especially important in the case of decentralized services, as usually is the case in the water and sanitation sector.

International donors, not necessarily the one helping establish the financing facility, must assist the central promoting agency and the line agencies. The line agencies need to be fully involved and have ownership over their programs for private participation. The assistance should also cover the cost of preparing project proposals for private participation.

5.5 Basic Facility Design

A consistent problem found in many of the facilities is the long lead-time until the first project is approved. In part this is due to the lags between concept, feasibility study, solicitation, award, completion of negotiations with the concerned government agencies and mobilization of all financing. Also, the experience is that many potential projects fall to the wayside during the development phase. Thus, the establishment of a financing facility needs to be combined with the development of a robust pipeline of potential projects.

Similarly, the nature of the financing constraint needs to be assessed. Is it primarily a problem of access to foreign exchange loans for import of equipment or is it a lack of long-term domestic finance? How large is the financing gap? In Pakistan, for example, it was determined that international commercial banks would not provide financing without protection against currency convertibility and transfer risks, and

export credit agencies would not be ready to finance 75-80 percent of a power plant. The resulting gap between the investment cost, including interest during construction and contingencies, and the available financing in the form of equity and export credits/guarantees would be in the order of 25-30 percent of the cost of a typical power plant. Thus, the PSEDF was designed to provide up to 30 percent of the total cost of a project. In Bangladesh, where IDCOL was expected to also finance transport projects with a higher local cost component and thus lower ceiling on available support from export credit agencies, the facility can finance up to 40 percent of project cost. In India, with a relatively well-developed financial market, it was determined that a lack of experience in infrastructure project financing was a major constraint. Thus, the World Bank's loan to IL&FS was designed to allow the company to take the lead in the due diligence process and provide comfort to other lenders. For it to play this catalytic role, it was assumed that IL&FS would not need to provide more than 25 percent of the total financing.

Facilities that have been designed to overcome the constraints associated with a lack of long loan maturities on the local market by providing various forms of guarantees have been less successful than loan facilities. Indeed, most proposed guarantee facilities have typically died at the planning stage. The reason is often quite simple: even short-term interest rates tend to be too high in nominal terms. As was the case when the US mortgage market came to a standstill when lending rates were around 13 percent a couple of decades ago—infrastructure projects in developing countries cannot really absorb interest rates higher than 10-12 percent.²³ It appears that guarantee facilities are likely to succeed only when domestic financial markets are fairly well developed, inflation and interest rates are reasonably stable, and the volume of medium-term lending is fairly strong. However, if that is the case, the need for a guarantee facility might be only temporary. Indeed, in Colombia, and Argentina where a similar guarantee facility for non-infrastructure projects had been proposed, the need for such facilities seemed to have disappeared by the time the preparation of the facility had been completed. A priori, guarantee facilities for infrastructure bonds sold to institutional investors, including insurance companies and pension funds, might be more attractive than guarantees for commercial bank loans. It generally makes more sense, however, to have the financing facility mobilize funding by placing bonds, which would reduce risks to the bearers of the bonds and, probably, also overall transaction costs.

In short, the basic and most successful approach is for the facility to focus on providing long-term debt. Besides the issues related to guarantees presented above, another argument in favor of keeping it simple is the general complexity of project finance operations. Introducing new instruments and additional actors adds to this complexity, making it even more time consuming and difficult to bring a transaction to financial closure.

²³ Even if local interest rates might not be high in real (inflation adjusted) terms, high nominal interest rates and high inflation effectively frontload the repayment schedule, and thus, reduce the average loan maturity in real terms. The revenues of most infrastructure projects, however, increase over time. This creates a severe (and typically unmanageable) mismatch between a project's revenues and its debt service.

A fundamental problem with facilities borrowing in international currencies is the potential foreign exchange risk. These facilities work on a relatively narrow spread between their cost of capital and their on-lending interest rates. Thus, in most circumstances, the facilities have to pass on the foreign exchange risk to the borrower. Unfortunately, infrastructure projects tend to derive their revenues in local currencies and do not have the pricing flexibility to adjust to devaluations to the same extent as most manufacturing projects. Traditional structures for internationally financed BOT projects in power and water sectors have required that the projects' output be priced in US dollars or set in local currencies but indexed to the dollar exchange rate. This has proved to be of limited value if a drastic devaluation takes place, as was the case in Indonesia in 1997. This dilemma can be solved if the facility can benefit from donor grants converted into local currencies when the facility is capitalized.

Some of the facilities, such as PSIDC in Sri Lanka, have been established with the explicit objective being transitory mechanisms until such time that the host country has established its creditworthiness or domestic banks have established a financial and administrative capacity to handle long-term limited recourse transactions. In practice, however, the transformation can take many years and it is desirable to prevent these facilities from becoming completely reliant on one or a couple of donors, as happened with some housing banks financed by donors. Consequently, one of the long-term development objectives for the facilities should be to enable them to mobilize additional funding from domestic or international sources.

5.6 Lending Terms

Implicit in the preceding sections is that the financing facilities—as far as they depend on donor money—should be lenders of last resort. Generally, they should not represent a cheaper alternative to commercial financing²⁴ that might be available. This, of course, is somewhat contradictory. On one hand, the rationale for the facilities is that they should be a response to market failures, for example, when private financing of appropriate maturities is not available. On the other hand, we argue that the lending terms should be market based. In practice, this should be resolved by looking at the financing terms offered by quasi-commercial institutions such as the IFC, and the private sector windows of the regional development banks. Similarly, the infrastructure financing facilities should not offer significantly lower interest rates than the effective rates of commercial bank loans with ECA coverage. For most countries where donor supported infrastructure financing facilities would be considered, this is likely to imply a rate in the range of LIBOR plus three to five percent. Most international project financings are made with the six-month LIBOR as a base. In order to simplify loan administration and make interest rate swaps practical, it is preferable to have donor-sponsored facilities follow the same practice.

²⁴ Commercial financing also means quasi-commercial-like funding from IFC and the private sector windows of the regional development banks and commercial bank loans with ECA coverage.

The financial viability of private projects and the affordability of tariffs to consumers are generally more sensitive to loan maturities and grace periods than to interest rates. In developed countries, infrastructure projects typically obtain 15-30 year financing. In developing countries, maturities rarely exceed 12 years and are often shorter. This clearly pushes up the cost of a project's output, making it less affordable to consumers. Thus, the facility should provide loans with maturities exceeding 12 years. In the case of PSEDF in Pakistan, for example, the maturities are as long as 23 years.

The need to maintain market-related lending terms depends in part on the procedures for awarding concessions for private infrastructure projects. If, like for power projects in Bangladesh, the government awards concessions after a price competition, any implicit subsidy in the lending terms will accrue to consumers and/or the government. Clearly, what needs to be avoided is that soft lending terms accrue, in the form of excessive profits, to the investors in sweetheart negotiated deals.

Several of the facilities reviewed in Chapter 4 provided subordinated loans rather than senior debt. The advantage of subordination is security for the senior commercial lenders is improved and, therefore, the portion of equity, which is expensive, can be reduced. Thus, the resulting tariffs charged by the project can be lowered to benefit consumers.

5.7 Governance Structure

The facility should be professionally managed, by people who understand limited recourse finance and have incentives to carry out a careful due diligence of project proposals. In practice, the design of the facility will depend on:

- Donor policies, enabling it to lend or make a grant to a private sector entity;
- The strength of existing financial institutions in the recipient country. Do they have experience in providing long-term financing for large projects? Do their balance sheets have enough strength to allow the banks to lend to large infrastructure projects without violating their single borrowing and capital adequacy requirements; and
- Government policies to create an enabling environment.

The review in Chapter 4 illustrates the range of options and some of the considerations that have gone into the design of the institutional arrangements. The most innovative and in many ways the most attractive approach is the one adopted for the Africa Private Infrastructure Financing Facility. Its structure ensures motivated professional management and leverages public funds with private resources. If it functions as anticipated, it could also have a sustained life after the donor funding is no longer available.

One issue that needs to be dealt with explicitly in the design of the governance structure is the potential conflict of interest that the fund manager might encounter. For example, should the fund manager provide both policy advice to the government and financing of projects that are affected by that advice? Can an affiliate of the fund manager participate in a different role, for example, as an investor, in a project that is obtaining financing from the facility? It seems like the two Indian facilities reviewed in Chapter 4 suffered from potential conflict of interest in some of their varied roles.

This leads to the important question of the independence of the facility and its manager in making investment decisions. State-owned banks in both the developed and developing world have been known to make their lending decisions partly on political grounds. Besides the classical cases of political interference for personal gains, private infrastructure facilities face another kind of pressure: major infrastructure projects tend to be highly visible politically and often are seen by the donor community as the litmus test of the government's commitment to reform. Thus, there can be strong pressure on the facility to provide financing to projects that are unsound. Two approaches have been used to minimize this problem. First, the lead donor has insisted on reviewing all projects proposed for approval by the facility. Second, the share of the total financing provided by the facility has been limited to ensure that other commercial lenders are participating in the transaction. In Pakistan, for example, international commercial banks provided most of the debt and took the lead in the due diligence process. This approach might not work well in cases where the other lenders are domestic banks with little or no experience in limited recourse financing. It appears, for example, that most financial institutions in India primarily rely on the due diligence undertaken by IL&FS or IDFC.

The due diligence process for private infrastructure projects is time consuming and costly. Most donors have a policy of absorbing the cost of appraising projects rather than passing it on to the borrower. Thus, if the donor agency finances individual private infrastructure, it might face serious budgetary constraints. The practice of most infrastructure facilities, however, is to charge the sub-borrowers for the due diligence process.

5.8 Internal Management

In order to become effective quickly, the facility needs to have a comprehensive operational manual that deals with areas including:

- Terms and conditions related to main lending products
- Application guidelines
- Fee structure
- Application and approval procedures
- Use of legal and technical advisors for due diligence
- Social and environmental requirements
- Public disclosure
- Loan disbursements, including withdrawals from the sponsoring donor

- Loan monitoring procedures
- Resource mobilization and financial management
- Internal administrative procedures
- Auditing

Loan Fees Charges by PSIDC in Sri Lanka

PSIDC charges its borrowers a variety of fees that largely mirror the practices of commercial banks engaged in limited recourse financing. However, since PSIDC is not a profit-maximizing entity and its costs are relatively low, the fees are also lower than what international commercial banks charge. The fees are as follows:

- A one time *application fee* of USD 5,000;
- A *documentation fee* of 0.5 percent of the loan amount, subject to a maximum of US\$300,000 plus PSIDC's out-of-pocket costs for international travel as well as fees for technical and legal consultants employed for the due diligence process;
- A *commitment fee* of 0.75 percent of the committed funds; and
- A *project monitoring fee* of 0.25 percent of the yearly outstanding balances, subject to a ceiling of USD 50,000 plus out-of-pocket costs.

From a donor's point of view, certain areas need emphasis. All sub-projects must have an environmental impact assessment (EIA) and meet both the donor's and the government's environmental standards. This seldom presents a problem for international project developers, although local project sponsors sometimes do not take this requirement as seriously as they should. The EIA and the environmental mitigation plan should be submitted to the donor for approval. Similarly, special thought should be given to how land acquisition, resettlement and social impacts should be handled.

Special consideration should also be given to the problem of corruption. Reasonable safeguards must be put in place to ensure that project sponsors who benefit from a facility loan have not engaged in corrupt practices. These safeguards do not only relate to corrupt dealings between the sponsors and the fund manager but also to the whole process of obtaining and negotiating the concession and other agreements with concerned agencies.

CHAPTER 6 OPTIONS FOR USAID

The facilities represent an efficient way of leveraging donor resources. Well-structured facilities encourage commercial lenders to provide project financing that otherwise would not be forthcoming. By wholesaling and delegating most of the due diligence/appraisal work to local institutions and requiring the ultimate borrowers to pay for the due diligence, the budgetary burden on the donor is reduced.

They can play an important catalytic role in helping to overcome the financing constraints prevalent in many developing countries. They can potentially have an impact that goes well beyond the sum of the individual subprojects, providing strong incentives for host governments to undertake policy and institutional reforms.

Such facilities can also provide strong incentives to private sponsors to go through the time consuming and costly process of developing and/or bidding for projects in countries with limited access to international capital markets.

Thus, donor-sponsored facilities are most appropriate

- In low and lower middle-income countries with limited creditworthiness and underdeveloped capital markets;
- When there is an emerging political commitment to private infrastructure investments; and
- When the needed legal and regulatory framework is in place or is being put in place.

USAID can take three different approaches:

- *Provide a returnable grant to a trust fund that works along the lines of APIFF (see Section 4.7).* The main advantages of this approach are two-fold: the grant helps leverage private debt into the facility and management is professional. Furthermore, the risk of corrupt and/or politically motivated lending decisions is minimized. The drawbacks are that USAID can incorrectly be accused of subsidizing the lenders to the facility and the host government's commitment might be limited;
- *Provide a grant to the government who on-lends the money to private infrastructure projects through a special facility like PSEDF in Pakistan or IDCOL in Bangladesh.* The main drawback with this approach is that it is more difficult to ensure professional management of the facility. However, it is possible to bring in a professional fund manager on a contractual basis, as was the case in Bangladesh, or to have a local bank manage the facility. In many developing countries it might, however, be difficult to find a local financial institution with the

vision, skills, and experience. Targeted technical assistance will likely be a need under this option; and

- *Use a DCA guarantee to mobilize loans from US commercial lenders to local banks for on-lending to private infrastructure projects.*²⁵ Variations of the guarantee mechanism are also possible. For example, the guarantee mechanism could also be used for providing funds to a special purpose infrastructure finance facility.

²⁵ We believe that it would not be feasible to channel grant funds through a financial intermediary in the target country.

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