



Project Finance in Developing Countries

Chapter 1

THE IMPORTANCE OF PROJECT FINANCE

In the past twenty years there has been a new wave of global interest in project finance as a tool for economic investment. Project finance helps finance new investment by structuring the financing around the project's own operating cash flow and assets, without additional sponsor guarantees. Thus the technique is

able to alleviate investment risk and raise finance at a relatively low cost, to the benefit of sponsor and investor alike. Though project finance has been in use for hundreds of years, primarily in mining and natural resource projects, its other possible applications—especially for financing large greenfield projects (new projects without any prior track record or operating history)—have only recently received serious attention. This is particularly so in developing markets, but here its application is also broadening, as illustrated by the following examples of IFC-supported projects:

- In Argentina, in 1993, project finance structuring helped raise US\$329 million to finance investment in the rehabilitation and expansion of Buenos Aires' water and sewerage services based on a new 30-year concession awarded to Aguas Argentinas. The investment, financed with IFC support, has helped improve water quality and service to a city of more than 6 million people. At that time, private sector participation in a water concession in a developing country was an untested idea, and there was virtually no precedent for a private company operating in such an environment raising substantial resources in international capital markets.
- In Hungary, in 1994, project finance structuring helped finance a 15-year concession to develop, install, and operate a nationwide digital cellular network. The \$185 million joint venture project was an important part of the government's privatization and liberalization program. Because of difficulty attracting commercial financing at that time, the project relied heavily on \$109 million in

debt and equity financing from IFC and the U.S. Overseas Private Investment Corporation (OPIC).

- In China, in 1997, Plantation Timber Products (Hubei) Ltd. launched a \$57 million greenfield project to install modern medium-density fiberboard plants in interior China, using timber plantations developed over the past decade, to support China's fast-growing construction industry. As part of the limited-recourse financing for the project, IFC helped arrange \$26 million in syndicated loans, at a time when foreign commercial banks remained cautious about project financing in China's interior provinces.
- In Mozambique, in 1998, project finance structuring helped establish a \$1.3 billion greenfield aluminum smelter. Mozal, the largest private sector project in the country to date, is expected to generate significant benefits in employment, export earnings, and infrastructure development. IFC fostered the project by serving as legal coordinator and preparing an independent detailed analysis of economic results and environmental and developmental impacts. IFC also supported the project with \$120 million in senior and subordinated loans for its own account.

The change in attitude toward project finance can be attributed to a number of factors, a prime one being that most countries today rely on market mechanisms to guide their economic activity and on the private sector to supply investment. Greater focus on the private sector has necessitated major regulatory reforms, which in turn have created new markets in areas previously the preserve of government activity. When the

United States passed the Public Utility Regulatory Act (PURPA) in 1978 and established a private market for electric power, for example, it provided a strong model for the growth of project financing in many other industrial countries. Similarly, recent large-scale privatizations in developing countries aimed at strengthening economic growth and stimulating private sector investment have given further impetus to project finance structuring.

Governments were also willing to provide incentives to encourage private investors into new sectors. That surge was particularly strong in 1996 and 1997, stimulated by large flows of international capital. In 1997 the number of project finance deals worldwide (greenfield and expansion projects) exceeded 600, many of them in developing countries, and their value topped \$230 billion (table 1.1), although this dropped back to about \$115 billion in 1998.

Table 1.1. Project Finance Transactions, by Region 1997–98

Regions	Number of projects		Amount (millions of U.S. dollars)	
	1997	1998	1997	1998
Europe	207	104	81,703	26,173
Asia	191	63	58,405	27,477
Latin America	105	49	41,610	33,554
North America	75	33	28,400	15,033
Middle East and North Africa	35	14	22,876	7,169
Sub-Saharan Africa	11	8	3,429	2,114
Total	624	271	236,423	111,520
Share of developing countries	380	140	123,169	60,069

Source: Capital DATA ProjectFinanceWare. Signed transactions. Although the scope of transactions included as project finance is broader than that used in this report, these data provide a good overview of market trends and developments.

Some market observers are questioning the prudence of this expanded use of project finance, especially in the wake of the East Asia financial crisis that began in mid-1997 and the dramatic deterioration that ensued in a number of the major developing markets. In short order, many large projects undertaken in the previous few years were no longer economically or financially feasible. Contractual arrangements proved to be shaky—in some cases, unenforceable—and many projects, with hindsight, had failed adequately to address potential risks (including, but not only, foreign exchange risks). Private lenders and investors were much less willing to support projects facing a deteriorating policy or

market environment than would have been public sector promoters. In a few countries these problems were exacerbated by public criticism of government support given to projects, and by allegations of corruption in the awarding of initial contracts.

In IFC's experience, however, project finance remains a valuable tool. Although many projects are under serious strain in the aftermath of the East Asia crisis, project finance offers a means for investors, creditors, and other unrelated parties to come together to share the costs, risks, and benefits of new investment in an economically efficient and fair manner. As the emphasis on corporate governance increases, the

contractually based approach of project finance can also help ensure greater transparency.

Despite the 1997–98 financial crisis, the investment needs in many developing markets clearly remain enormous. Meeting these needs is essential to development, not only in the more traditional sectors such as energy but also in nontraditional areas such as school and hospital construction. For most countries, this will mean a continuing need to rely on private sector expertise and finance to meet demand. Once growth and investment resume, project finance techniques are likely to be an even more important means of sharing risks and of helping these projects get off the ground—particularly in some markets and sectors that may be considered more risky for some time to come. As the experience of the crisis has demonstrated, individual projects are not a substitute for economy-wide regulatory reform designed to improve competitiveness and efficiency, or for the development of local financial markets in support of local investment. But, in the appropriate framework, project finance can provide a strong and transparent structure for projects, and through careful attention to potential risks it can help increase new investment and improve economic growth.

BASICS OF PROJECT FINANCING

As already noted, project finance is tailored to meet the needs of a specific project. Repayment of the financing relies on the cash flow and the assets of the project itself. The risks (and returns) are borne not by the sponsor alone, but by different classes of investors (equity holders, debt providers, quasi-equity investors). Because risks are shared, one criterion of a project's suitability for financing is whether it is able to stand alone as a distinct legal and economic entity. Project assets, project-related contracts, and project cash flows need to be separated from those of the sponsor. There are two basic types of project finance: nonrecourse project finance and limited-recourse project finance.

Nonrecourse project finance is an arrangement under which investors and creditors financing the project do not have any direct recourse to the

sponsors, as might traditionally be expected (for example, through loan guarantees). Although creditors' security will include the assets being financed, lenders rely on the operating cash flow generated from those assets for repayment. Before it can attract financing, then, the project must be carefully structured and provide comfort to its financiers that it is economically, technically, and environmentally feasible, and that it is capable of servicing debt and generating financial returns commensurate with its risk profile.

Limited-recourse project finance permits creditors and investors some recourse to the sponsors. This frequently takes the form of a precompletion guarantee during a project's construction period, or other assurances of some form of support for the project. Creditors and investors, however, still look to the success of the project as their primary source of repayment. In most developing market projects and in other projects with significant construction risk, project finance is generally of the limited-recourse type.

Difference from corporate lending

Traditional finance is corporate finance, where the primary source of repayment for investors and creditors is the sponsoring company, backed by its entire balance sheet, not the project alone. Although creditors will usually still seek to assure themselves of the economic viability of the project being financed, so that it is not a drain on the corporate sponsor's existing pool of assets, an important influence on their credit decision is the overall strength of the sponsor's balance sheet, as well as their business reputation. Depending on this strength, creditors will still retain a significant level of comfort in being repaid even if the individual project fails. In corporate finance, if a project fails its lenders do not necessarily suffer, as long as the company owning the project remains financially viable. In project finance, if the project fails investors and creditors can expect significant losses.

Project finance benefits primarily sectors or industries in which projects can be structured as a separate entity, apart from their sponsors. A case in point would be a stand-alone production plant,

which can be assessed in accounting and financial terms separately from the sponsor's other activities. Generally, such projects tend to be relatively large because of the time and other transaction costs involved in structuring and to include considerable capital equipment that needs long-term financing. In the financial sector, by contrast, the large volume of finance that flows directly to developing countries' financial institutions has continued to be of the corporate lending kind.

Traditionally, in developing countries at least, project finance techniques have shown up mainly in the mining and oil and gas sectors. Projects there depend on large-scale foreign currency financing and are particularly suited to project finance because their output has a global market and is priced in hard currency. Since market risk greatly affects the potential outcome of most projects, project finance tends to be more applicable in industries where the revenue streams can be defined and fairly easily secured. In recent years, private sector infrastructure projects under long-term government concession agreements with power purchase agreements (PPAs) that assure a purchaser for the project's output have been able to attract major project finance flows. Regulatory reform and a growing body of project finance experience continue to expand the situations in which project finance structuring makes sense, for example, as in the case of merchant power plants, which have no PPA but sell into a national power grid at prevailing market prices. In IFC's experience, project finance is applicable over a fairly broad range of nonfinancial sectors, including manufacturing and service projects such as privately financed hospitals (wherever projects can stand on their own and where the risks can be clearly identified up front). Although the risk-sharing attributes of a project finance arrangement make it particularly suitable for large projects requiring hundreds of millions of dollars in financing, IFC's experience—including textile, shrimp farming, and hotel projects—also shows that the approach can be employed successfully in smaller projects in a variety of industries. Indeed, that experience suggests project finance could help attract private funding to a wider range of activities in many developing markets.

BRINGING PRIVATE FLOWS TO DEVELOPING MARKETS

As already mentioned, most project finance deals of the past two decades have been concluded in industrial countries, but the technique has also played a significant role in some developing markets. In 1997 and 1998 flows of this kind to developing country projects totaled an estimated \$184 billion, or slightly more than half the total project finance flows recorded worldwide.

For developing markets, project finance holds out the hope that a well-structured, economically viable project will attract long-term financing even if the project dwarfs its sponsors' own resources or entails risks they are unable to bear alone. With such a mechanism for sharing the costs, risks, and rewards of a project among a number of unrelated parties, a privatization or infrastructure improvement program will have a greater chance of raising the volume of funds it requires.

As a result, it is now standard practice for large and complex projects in the major developing markets to employ project finance techniques. The total volume of project finance transactions concluded in 1996 and 1997 before the financial crisis (an estimated 954 projects costing \$215 billion) would have been hard to imagine a decade ago. The number of active participants in these markets also increased as many international institutions (investment banks, commercial banks, institutional investors, and others) moved quickly to build up their project finance expertise.

The financial and economic crisis of late 1997 in East Asia, the site of much recent growth, and in other countries since then has dramatically slowed market evolution. The estimated number of projects in developing markets fell in 1998 to 140 for an amount of \$60 billion. The financial capacity and willingness of many banks in these countries and of other potential investors to support large projects has also been eroded. As a result, sponsors in East Asia, both private and public, have canceled or deferred numerous major projects. The ones still under implementation, particularly those financed during the past few years, have come under increased stress in the face of reduced market demand for their output or related sponsor problems.

With the prospects for economic growth slowing worldwide, other countries and regions are also structuring projects more conservatively. It is not yet clear how prolonged these difficulties will be. When the growth of new productive investment picks up again, however, project financing is likely to increase, particularly in countries where perceptions of risk remain high and investors could be expected to turn to structuring techniques to help alleviate these risks.

ADVANTAGES OF PROJECT FINANCE

In the appropriate circumstances, project finance has two important advantages over traditional corporate finance: it can (1) increase the availability of finance, and (2) reduce the overall risk for major project participants, bringing it down to an acceptable level.

For a sponsor, a compelling reason to consider using project finance is that the risks of the new project will remain separate from its existing business. Then if the project, large or small, were to fail, this would not jeopardize the financial integrity of the corporate sponsor's core businesses. Proper structuring will also protect the sponsor's capital base and debt capacity and usually allow the new project to be financed without requiring as much sponsor equity as in traditional corporate finance. Thus the technique enables a sponsor to increase leverage and expand its overall business.¹

By allocating the risks and the financing needs of the project among a group of interested parties or sponsors, project finance makes it possible to undertake projects that would be too large or would pose too great a risk for one party on its own. This was the case in 1995 when IFC helped structure financing for a \$1.4 billion power project in the Philippines during a time of considerable economic uncertainty there. Sharing the risks among many investors was an important factor in getting the project launched.

To raise adequate funding, project sponsors must settle on a financial package that both meets the needs of the project—in the context of its

particular risks and the available security at various phases of development—and is attractive to potential creditors and investors. By tapping various sources (for example, equity investors, banks, and the capital markets), each of which demand a different risk/return profile for their investments, a large project can raise these funds at a relatively low cost. Also working to its advantage is the globalization of financial markets, which has helped create a broad spectrum of financial instruments and new classes of investors. By contrast, traditionally project sponsors would have relied on their own resources for equity and on commercial banks for debt financing. Particularly significant is the increasing importance of private equity investors, who tend to take a long-term view of their investments. These investors are often willing to take more risk (for example, by extending subordinated debt) in anticipation of higher returns (through equity or income sharing) than lenders. A project that can be structured to attract these investors—to supplement or even to substitute for bank lending—may be able to raise longer-term finance more easily. Further details on the main financial instruments and sources of financing for project finance appear in box 1.1.

NO FREE LUNCH

For all its advantages, project finance cannot be said to offer a «free lunch.» On the contrary, it has rigorous requirements. To attract such finance, a project needs to be carefully structured to ensure that all the parties' obligations are negotiated and are contractually binding. Financial and legal advisers and other experts may have to spend considerable time and effort on this structuring, and on a detailed appraisal of the project. These steps will add to the cost of setting up the project and may delay its implementation. Moreover, the sharing of risks and benefits brings unrelated parties into a close and long relationship. A sponsor must consider the implications of its actions on the other parties associated with the project (and must treat them fairly) if the relationship is to remain harmonious over the long term.

Since project finance structuring hinges on the strength of the project itself, the technical, financial, environmental, and economic viability of the project is a paramount concern. Anything that could weaken the project is also likely to weaken the financial returns of investors and creditors. Therefore an essential step of the procedure is to identify and analyze the project's risks, then to allocate and mitigate them. Such risks are many and varied. Some may relate to a specific subsector, others to the country and policy environment, and still others to more general factors. As the East Asia crisis has demonstrated, currency mismatches and government-related risks can have devastating consequences if overlooked. Though it may be costly and time-consuming, detailed risk appraisal is absolutely necessary to assure other parties, including passive lenders and investors, that the project makes sound economic and commercial sense. Similarly, lenders and investors must be kept abreast of the project's operational performance as it progresses.

Box 1.1. Project Financing Instruments, Sources, and Risk Return Profiles

Commercial Loans. Funds lent primarily by commercial banks and other financial institutions, generally securitized by the project's underlying assets. Lenders seek (1) projected cash flows that can finance debt repayment with a safety margin; (2) enough of an equity stake from sponsors to demonstrate commitment; (3) limited recourse to sponsors in the event of specified problems, such as cost overruns; and (4) covenants to ensure approved usage of funds and management of the projects.

Equity. Long-term capital provided in exchange for shares, representing part ownership of the company. Provided primarily by sponsors and minority investors. Equity holders receive dividends and capital gains (or losses), which are based on net profits. Equity holders take risks (dividends are not paid if the company makes losses), but in return share in profits.

Subordinated Loans. Finance with repayment

priority over equity capital, but not over commercial bank loans or other senior debt in the event of default or bankruptcy. Usually provided by sponsors. Subordinated debt contains a schedule for payment of interest and principal but may also allow participation in the up-side potential similar to equity.

Suppliers Credit. Long-term loans provided by project equipment suppliers to cover purchase of their equipment by the project company. Particularly important in projects where capital equipment is intensive.

Bonds. Long-term debt securities generally purchased by institutional investors through public markets, although the private placement of bonds is becoming more common. Institutional investors are usually risk-averse, preferring projects with an independent credit rating. Purchasers require a high level of confidence in the project (for example strong sponsors, contractual arrangements, and country environment); this is still a relatively new market in developing countries.

Internally Generated Cash. Funds available to a company from cash flow from operations (that is, profit after tax plus noncash charges minus noncash receipts) that are retained and available for reinvestment in a project. In a financial plan, reinvested profits are treated as equity, although they will only be generated if operations are successful.

Export Credit Agency (ECA) Facility. Loan, guarantee, or insurance facility provided by an ECA. Traditionally, ECAs asked host governments to counterguarantee some project risks, such as expropriation. In the past five years, however, many have begun to provide project debt on a limited-recourse basis.

Multilateral/Bilateral Agency Credit Facility. Loan, guarantee, or insurance (political or commercial) facility provided through a multilateral development bank (MDB) or bilateral agency. Tenor usually long term. Loans may include a syndicated loan facility from other institutions, paralleling the MDB's own direct lending.

The largest share of project finance normally consists of debt, which is usually provided by creditors with no direct control over managing the project. They try to protect their investment through collateral and contracts, broadly known as a security package, to help ensure that their loans will be repaid. The quality of the security package is closely linked to the effectiveness of the project's risk mitigation. Because project financing relies on the project's cash flows and the contractual arrangements that support and ensure those flows, it is essential to identify the security available in a project and to structure the security package to alleviate the risks perceived by participants (see box 1.2). Some projects may need additional support—in the form of sponsor assurances or government guarantees—to bring credit risk to a level that can attract private financing.

Box 1.2. A Typical Security Package

The security package will include all the contracts and documentation provided by various parties involved in the project to assure lenders that their funds will be used to support the project in the way intended. The package also provides that, if things go wrong, lenders will still have some likelihood of being repaid.

A typical security package would include a mortgage on available land and fixed assets; sponsor commitments of project support, including a share retention agreement and a project funds agreement; assignment of major project agreements, including construction and supply contracts and offtake agreements; financial covenants ensuring prudent and professional project management; and assignment of insurance proceeds in the event of project calamity. The quality of the package is particularly important to passive investors, since they normally provide the bulk of the financing yet have no say in the operations of a project and therefore do not want to bear significant operating risks. The strength of the package, as judged by the type and quality of security available, governs the creditworthiness of the project, effectively increasing the share of project

costs that can be funded through borrowings. Significant additional expense may accrue in identifying and providing the security arrangements, which will also require detailed legal documentation to ensure their effectiveness.

The overall financial costs of a project finance transaction may not be as high as under corporate finance if the project is carefully structured, if it identifies and mitigates each risk to the extent possible, and if it sources financing appropriately from different categories of investor. The senior debt component may be more expensive, however, because debt repayment relies on the cash flow of the project rather than on the strength of the sponsors' entire balance sheet. The project sponsors will need to carefully weigh the advantages of raising large-scale financing against the relative financial and administrative costs (both up-front and ongoing) of different sources of finance.

IFC'S PERSPECTIVE

This report explores the changing face of project finance in developing markets.² IFC and, more recently, other multilateral, bilateral, and export credit institutions have played a strong supportive role in bringing project finance to its current volumes. IFC, in particular, was a pioneer of project finance in developing countries and has a unique depth of experience in this field, which spans more than 40 years in the practical implementation of some 2,000 projects, many of them on a limited-recourse basis.³ Particularly in today's marketplace, IFC's ability to mobilize finance (both loan and equity for its own account and syndicated loans under its B-loan program), the strength of its project appraisal capabilities, and its experience in structuring complex transactions in difficult environments have been reassuring to other participants and important to the successful financing of many projects. The report draws on IFC's experience in more than 230 greenfield projects costing upward of \$30 billion that relied on project finance on a limited-recourse basis (appendix A). It opens with a brief description of the major international trends in project finance over the past two decades and then turns to the essential ingredients of successful project financing.

In view of IFC's considerable experience and the attention now being given to project financing, especially among developing market participants themselves, the time seems ripe to let others benefit from that experience. The discussion in the pages that follow should be of particular interest to private sector commercial banks and investment banks in developing markets that are giving thought to financing projects, private sector corporations considering a new project in a developing country, other financial institutions, and governments in developing markets seeking a better understanding of how project finance can help promote new investment.

Notes

1. Note that for some projects the date may differ from the project's fiscal year commitment date, because of the time lag between project preparation and commitment date of financing.
2. John D. Finnerty, *Project Financing: Asset-Based Financial Engineering* (New York: John Wiley and Sons Inc., 1996).
3. In some cases, project finance structured with minority participation may also confer tax or financial disclosure benefits on the sponsor.
4. The report concentrates on project finance for private sector projects. Although some national and local governments seek to attract private financing to public sector projects through project finance structuring and the techniques are similar, the project is under the explicit or implicit umbrella of government support.
5. Since its founding in 1956, IFC has committed more than \$23.9 billion of its own funds and has arranged \$17 billion in syndications and underwriting for 2,067 companies in 134 developing countries. IFC's total committed portfolio outstanding at June 30, 1998, included financing to 1,138 companies in 111 countries.