Financing Energy Projects in Developing Countries

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Preface

This book provides firsthand information and analysis regarding how multilateral, bilateral, and commercial financiers make decisions about oil, gas, and power projects. The financing of energy projects in developing countries is challenging in relation to each country's business environment, government behavior, and political risk. Hence, putting together an attractive financing package requires an intimate understanding of all of the following:

- The availability of many sources of soft loans, credits, grants, tied loans, and untied loans
- The objectives, tendencies, and requirements of various financiers
- The possibilities for combining borrowing and guarantee instruments
- The effective ways of approaching financiers

This book describes the intricacies of public and private financing of energy projects and provides guidance in preparing upstream and downstream oil and gas projects, as well as power generation, transmission, and distribution projects. It is divided into three parts: Part I comprises two brief chapters that provide a background of project and corporate financing and the challenges of funding projects located in developing countries. Part II consists of five chapters that introduce the major sources of funding for oil, gas, and power projects. The sources discussed include global multilateral institutions; regional development banks; bilateral aid, credit, and insurance agencies; and commercial capital markets. Part III consists of four chapters that provide guidelines for the preparation of

successful project packages. These guidelines include methods for the analysis of business environments, economic and financial viability, financial structures, and environmental concerns for oil, gas, and power projects.

It has been more than 10 years since the first edition of this book was published. The intervening decade has seen a bust and a boom in energy investment and energy finance. As a result, many new players have entered the business of financing energy projects in emerging economies, and many new methods have emerged. These changes necessitated the creation of a new edition of this book. This edition addresses the new business environment by discussion and case studies throughout—particularly in the sections devoted to the description of financiers and the presentation of bankable projects.

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1 Fundamentals Of Project Financing

Before the 1970s, most petroleum projects in developing countries were financed by the internal cash generation of international oil companies (IOCs). During the 1970s, governments became heavily involved in the petroleum sector to ensure better control of their reserves and, in the case of petroleum-importing countries, to quell concerns regarding the security of oil supply. Consequently, oil and gas projects received increased financing from governments' budgets and official borrowings, as well as from IOCs.

Since the early 1990s, most governments have limited their interventions in the petroleum sector and their budgetary contributions thereto in order to encourage the private sector to undertake the required investments. IOCs have again become the main source of investment but often undertake projects with a wide range of partners. As a result, funding of oil and gas projects has become quite complex, involving public and private investors and financiers.

Electricity supply in most developing countries has traditionally been undertaken by a vertically integrated public monopoly that generates, transmits, and distributes power to customer groups in various locations. Electricity supply is often viewed as a socioeconomic service and frequently involves

After a plant has been constructed, the main concern is that it may not operate on a continuing basis within acceptable economic and technical parameters. Such operational risks are numerous but are usually modest in magnitude. They are related to technical failures, unavailability of fuels, market demand and prices, fiscal issues (taxes or subsidies), foreign exchange rates and convertibility, environmental problems, and so on. These operating risks are borne by the project company. However, a project company can hedge against risks through contractual and guarantee arrangements that in effect transfer some of the risks to other parties. The following are examples of such hedging:

- The project company receives guarantees from equipment suppliers for equipment performance.
- The project company obtains a supply guarantee from a fuel source, at defined prices that might be passed through or, in case of margin shortfall, with netback pricing down to a certain floor.
- The project company receives a take-or-pay contract from a company that buys project output at defined prices, sometimes including a pass-through of certain operating costs (e.g., fuel costs).
- The project company receives guarantees against political risk from multilateral or bilateral agencies, channels foreign revenues through an offshore disbursement account, or both.
- The project company receives limited support from shareholders for defined margin shortfalls, through methods such as cash injection, subordinated loans, or dividend clawbacks.

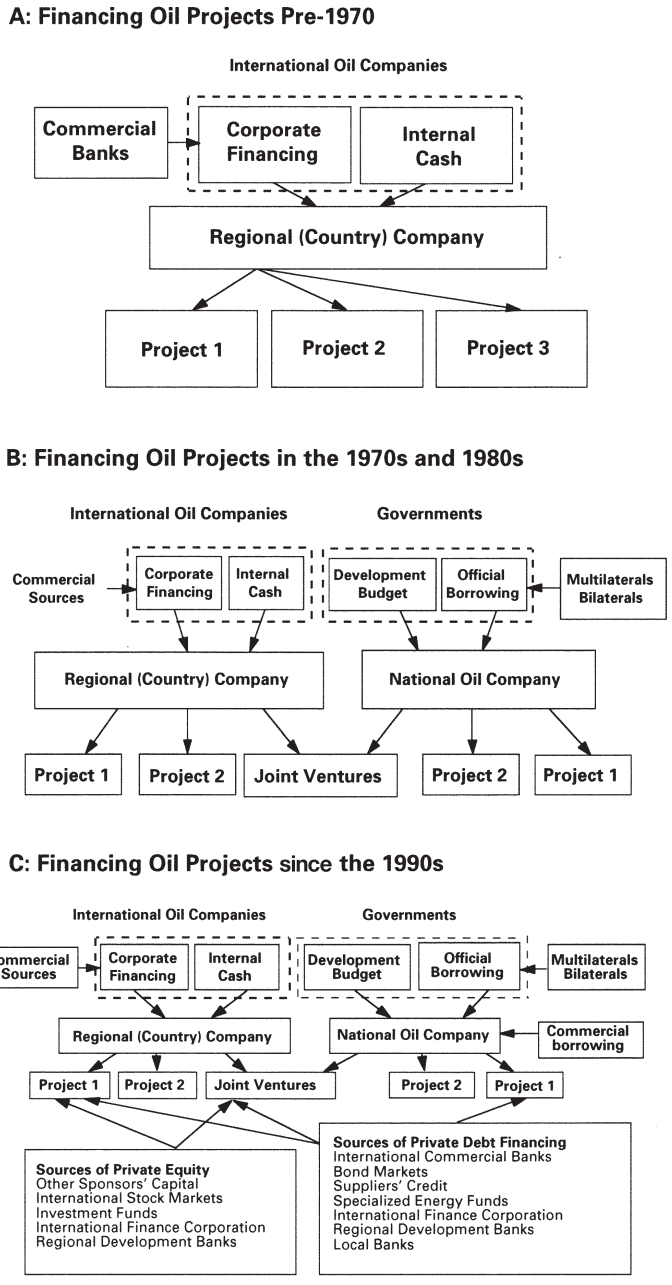

Fig. 3–1. Changes in methods of financing oil projects

The IFC's direct contribution to the financing of projects in developing countries is significantly enhanced through its syndication of commercial bank loans. As a multilateral institution, IFC has certain privileges; for example, it is exempt from payments of local taxes, its loans have never been rescheduled for political risk, and it has access to high-level policy makers. When the IFC syndicates a loan, it is the lender of record and brings commercial banks under its own umbrella. The commercial banks' loans thus are treated the same as IFC loans. Indeed, the IFC takes responsibility for administering the loans and collecting payments from the borrower. The IFC distributes all payments (whether received directly from the borrower or from realization of security) pro rata among the participants and itself. Thus, a default on any portion of the loan is a default to the IFC. The IFC also takes responsibility for appraising the project and coordinating the preparation of legal and contractual packages. Because the IFC takes all the lead responsibilities, commercial banks find it more convenient and comforting to participate in financing projects in developing countries.

In the area of infrastructure, the IFC's participation in project finance has been very effective in mobilizing other resources. It is estimated that for every dollar invested by the IFC, six dollars were provided by others. This is particularly important in the power sector, where the IFC has become an important player since the 1990s.

The IFC's involvement in the oil and gas sector started in the late 1970s, grew at a moderate pace during the 1980s, and surged markedly during the 1990s, as an increasing number of countries facilitated private investments in the sector. The IFC invests in all parts of the oil and gas sector, upstream and downstream, except pure exploration. Where appropriate, it is prepared to participate in and lend to unincorporated joint ventures.

are the United States and Japan, with 12.8% each, followed by China and India, with 5.4% each; Australia, with 4.9%; Indonesia, with 4.6%; Canada, with 4.5%; and South Korea, with 4.3%. The ADB's ordinary capital is $54 billion. This subscribed capital consists of $3.8 billion paid-in capital and the rest as callable capital (guarantees by member countries to provide funds in the event that the ADB cannot repay funds it has borrowed on the capital markets).

The ADB has a program—the Asian Development Fund (ADF)—that provides concessionary funding to very poor countries of the region. The ADF was established in 1973 with initial contributions from the richer member countries. It has been continuously replenished and has now reached $7 billion.

The ADB's total annual lending is about $6 billion, of which 15%–20% goes to the energy sector. Lending has primarily been to traditional public projects, particularly power generation, transmission, and distribution projects. In its traditional lending, the ADB requires a government guarantee. However, since the 1980s, it has emphasized private sector participation. Support for the private sector increased in 1983 with the introduction of an equity investment facility, which allowed the ADB to make direct equity investments in private enterprises and financial institutions and to extend lines of equity to selected financial intermediaries. In 1985, the ADB further reinforced its support for the private sector by establishing a facility for direct lending to private enterprises without government guarantee.

The private sector loans are based on a fixed spread over LIBOR. The spread is determined on a case-by-case basis on assessment of credit and project risks and is set prior to loan signing.

In addition to providing grants to finance projects, USAID has numerous programs that support investment studies and preparatory work. Many of these programs provide assistance to the energy sector and have no direct link to promoting the interest of American companies; others support projects that do present potential business opportunities for U.S. companies. In the first category, studies supported by USAID have helped many developing countries to formulate energy development strategies, energy conservation and pricing policies, and so on. In the second category, several country-specific programs provide funds for work that promotes joint ventures of each specific country with U.S. companies. The Global Development Alliance program has led to USAID partnership with the private sector to introduce clean and efficient energy technologies. Similarly, a number of global institutes are working on the Methane to Markets Partnership. Other partnerships include the Global Village Energy Partnership, Efficient Energy for Sustainable Development, and Partnership for Clean Fuels and Vehicles.

The MCC was established in 2004 with a goal of reducing poverty by supporting sustainable, transformative economic growth in low-income countries. MCC field operations are at the earliest stages; nevertheless, the OECD considers the MCC to be a good example of how the U.S. aid system could be more broadly adapted in line with the aid-effectiveness principles of the Paris Declaration. This includes approaches to local ownership and funding that are results based (rather than tied only to U.S. procurement). Congress provided nearly $1 billion in initial funding and $1.4 billion and $1.7 billion in the following years for the MCC and its assistance programs.

The TDA was founded in 1981 and provides grants for feasibility studies and technical assistance, to promote U.S. exports to developing countries. The grant must be requested