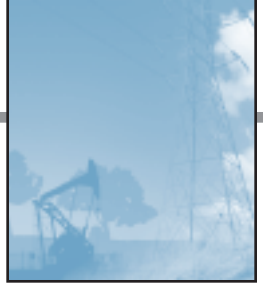


Financing Oil and Gas Projects in Developing Countries

HOSSEIN RAZAVI

In the future, investment opportunities in the oil and gas sector are likely to be concentrated in developing countries. Project financing is scarce, however, because of the commercial and political risks. What can be done to mitigate the risks and attract funding?

THE BIGGEST increases in demand for oil and gas are occurring in the developing world, which is also where most of the world's proven oil and gas reserves are located. International energy companies—investors, equipment suppliers, contractors, and consulting firms—are therefore shifting their attention from Europe and North America to developing countries, which are likely to offer more business opportunities in the oil and gas sector in the future.

Although many new projects are being formulated, most do not take off because of the difficulties of securing sufficient financing. Project sponsors are being forced to design more flexible and innovative financing packages involving a range of partners from both the public and private sectors. Still, the commercial and political risks often discourage potential partners. In an effort to facilitate the flow of funds, the World Bank recently revised its strategy in the oil and gas sector, giving greater emphasis to helping governments and private companies manage and mitigate project risks.

A changing sector

During the past five years, the political and economic environments in the developing countries have changed drastically, as has the international oil and gas industry. These changes have had a profound effect on the hydrocarbon sector.

The role of the state has been redefined. Recognizing that the state does not make a good entrepreneur, many governments have redefined their role as policymaker and regulator. They are giving a freer rein to the private sector and letting market forces determine the most efficient ways of supplying commodities and services. This trend, although global, has had the most dramatic results in the former centrally planned economies.

The international petroleum market has changed markedly. In the 1970s and 1980s, there was substantial concern about the security of petroleum supplies and the danger of rising prices. Some of these risks still exist, but crude oil and petroleum products are now viewed as commodities that should be supplied through the most cost-effective channels. The emphasis is on procuring petroleum products in the international market, and development of domestic resources is seen as justified only when oil and gas can be produced and marketed at internationally competitive prices.

Environmental concerns are now prominent. Deterioration of the environment has become one of the primary concerns of the international community. Environmental issues are of particular concern with respect to the hydrocarbon sector in developing countries.

First, oil and gas projects often have potential environmental and safety risks, which have to be investigated and managed. In industrial countries, projects are designed and implemented in accordance with clear and transparent standards, but, in most developing countries, there are no environmental standards for the oil and gas sector. In the past, major oil companies applied in-house standards and acted as custodians for environmental concerns, but this is changing as many small private companies begin to operate in the hydrocarbon sector.

Second, existing oil and gas facilities in many developing countries are operating at sub-optimum standards, causing damage to the local and global environment. Oil spills and gas leakages, which need to be cleaned up as rapidly as possible, are of particular concern.

Natural gas has become the fuel of choice. Partly because of environmental concerns and partly because of economic and efficiency considerations, natural gas has become a popular fuel in developing countries. Outside of the countries of the former Soviet Union, the use of natural gas in developing countries was quite limited until recently. In the past five years, gas consumption has increased by 6 percent annually. A large share of the gas consumed is used for power generation, as efficiency of gas-based combined cycle plants has increased significantly.

Business opportunities

Total world oil consumption is projected to grow by about 36 percent between 1995

Hossein Razavi,
an Iranian national, is Chief of the Oil and Gas Division in the World Bank's Industry and Energy Department.

and 2010. Most of this growth will be in developing countries, where demand is expected to increase in almost all sectors (Chart 1). In contrast, the growth of oil consumption in the industrial countries is likely to be limited to the transportation sector. Over the same period, total world gas consumption is also projected to grow by about 36 percent. The growth of gas consumption in developing and industrial countries alike will be due largely to the expansion of gas-based power generation; the largest additions to gas demand will therefore be in developing countries, where most of the expansion of power-generating capacity is taking place.

Hydrocarbon reserves are also concentrated in developing countries (Chart 1). Only 5 percent of total proven oil reserves and 9 percent of proven gas reserves are in the industrial countries; the remainder are in developing countries.

This concentration of market prospects and oil and gas reserves, combined with recent economic reforms, has stimulated substantial interest in the developing countries' hydrocarbon sector. As business opportunities in the oil and gas sectors of industrial countries diminish, energy companies are shifting their attention to the energy investment requirements of developing countries. But the traditional system of financing oil and gas projects in developing countries has been dismantled, and a new system is not yet in place, resulting in a shortage of financing.

Until the 1970s, most petroleum projects in developing countries were financed by the international oil companies, through internal cash generation. This situation changed during the 1970s, when 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, funds for oil and gas projects came from government budgets and official borrowing, as well as from international oil companies. In the early 1990s, emphasis shifted again toward private sector financing, as most governments began limiting their involvement in, and budgetary contributions to, the oil and gas sector. However, the international oil companies have become less willing to finance these projects on their own and have begun to include a wide range of partners in projects for a variety of reasons, including a political need for local participation and a desire to share project risks. As a result, funding of oil and gas projects has become quite complex, involving public as well as private investors and financiers.

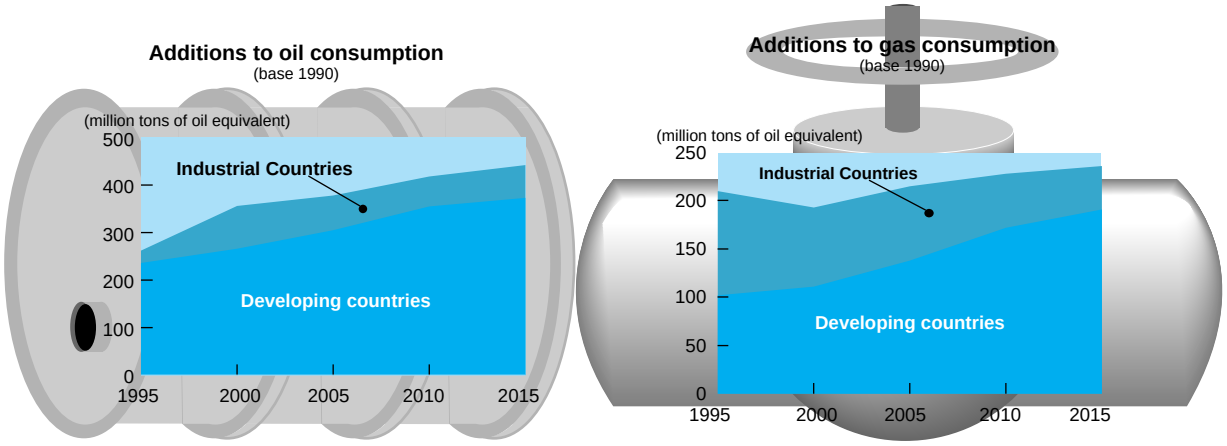
Project risks are bottlenecks

Project risks are normally classified under two general categories—commercial and political. Commercial risks (e.g., cost overruns, delays, and shortfalls in project revenues caused by uncertain sales and prices) are all considered to be under the

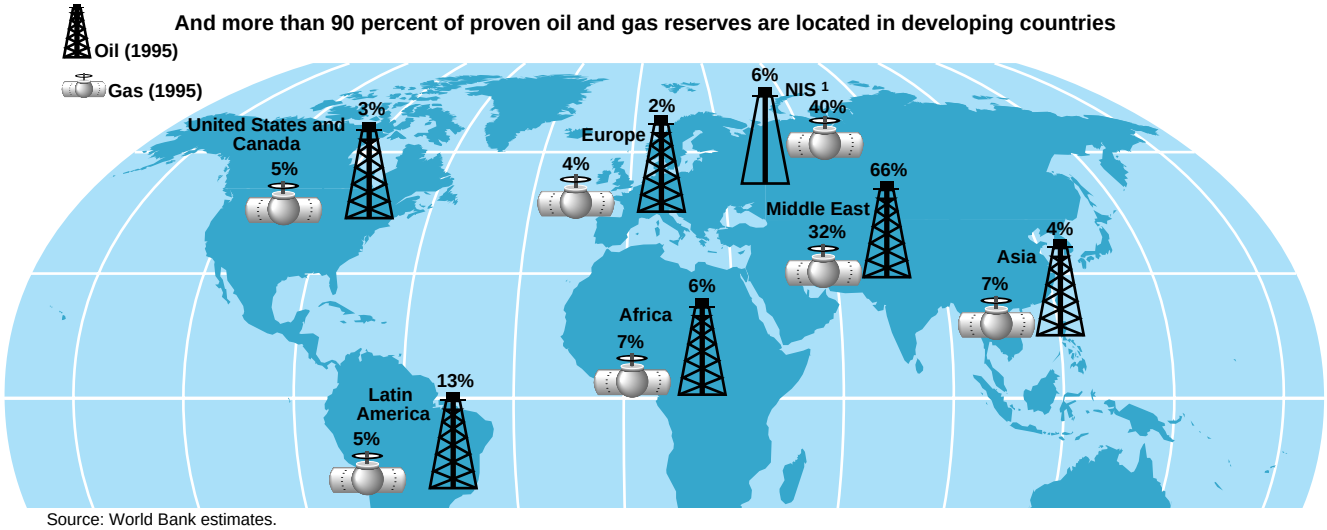
Chart 1

Oil and gas: demand and resources

Most of the increase in demand is occurring in developing countries



And more than 90 percent of proven oil and gas reserves are located in developing countries



Source: World Bank estimates.

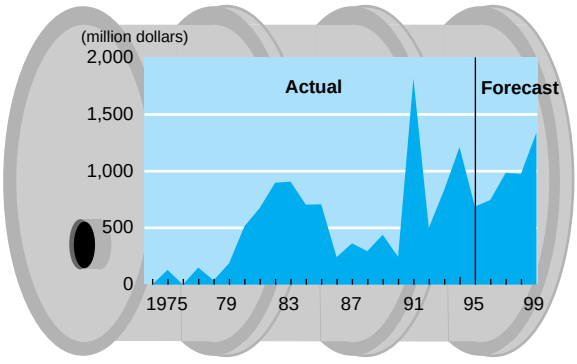
[1] Newly independent states of the former Soviet Union.

Chart 2

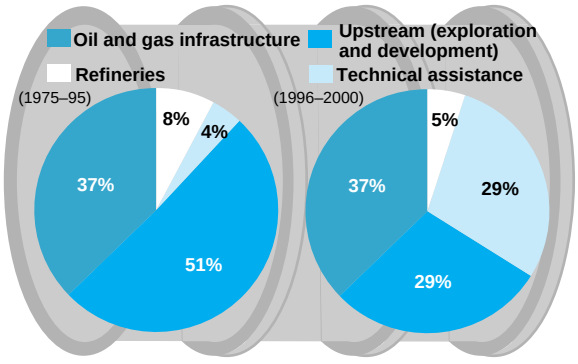
World Bank lending for oil and gas projects

(1975–99)

Lending is expected to average $1 billion annually in 1995-99



The emphasis is shifting from upstream industries to infrastructure and technical assistance



Source: World Bank data.
Note: Technical assistance refers to loans aimed at improving institutional efficiency, restructuring, etc.

control of project sponsors, while political risks (e.g., expropriation of assets, civil unrest, and foreign exchange inconvertibility) are not. With conventional project financing methods, project sponsors assume and manage the commercial risks and buy insurance against political risks.

In many developing countries, there is another dimension to political risk that is more difficult to handle. The lack of well-established legal, institutional, and regulatory systems and policies makes it possible for governments to take unpredictable actions that could substantially affect costs and revenue streams—particularly if, for example, governments control the domestic prices of oil and gas, or decide to change the terms of oil and gas taxes and royalties. This risk is the biggest deterrent to private investment in the oil and gas sector of developing countries. Even in countries where governments have taken steps to establish a stable framework and clarify policies, project sponsors (and financiers) may not have full confidence that the new business environment will remain unchanged and that the government will fulfill its obligations fairly and consistently.

Project risks are allocated to the different parties involved through numerous agreements and contracts included in the security package. These documents are aimed at protecting the interests of the sponsors and, more often, at providing comfort to lenders that risks will be managed to a reasonable extent. From a lender's point of view, three questions need to be answered. First, can the project be constructed and commissioned within the planned schedule and budget? Second, can the project generate the projected net revenue? Third, can the net revenue be allocated and paid back to the lenders and investors according to the project agreement? In connection with these questions, lenders want to know who would be responsible for damages in the event the project fails in any of these areas.

The issue of political risk should be addressed at the outset of project preparation. Most investors and financiers are convinced that commercial risks can be effectively addressed when the time comes, but they feel that political risks cannot be controlled by anyone. Thus, they do not take a proposal seriously until they receive some assurance that political risks are manageable. Political risks can be mitigated through a variety of measures, including different forms of guarantees and the involvement of certain types of partners—for example, a key state entity or powerful local individuals and companies. Formal guarantees can be provided by host governments and by multilateral and bilateral agencies. Often, rather than choosing one form of comfort over another, sponsors will try to combine them to get the most comprehensive coverage at the lowest possible cost.

Commercial risks can be mitigated through two distinct avenues. First, sponsors need to reach an agreement with the government of the host country or with government entities about some aspects of marketing the project's output. The government's role varies depending on the country and the type of project. For gas projects, the government's role is substantial because most of the output is bought by a state entity or is sold at prices regulated by the state. Therefore, project sponsors need to secure take-or-pay or throughput agreements with the state entities. The government needs to guarantee the credibility of the state entities or to provide assurance that it will permit any necessary increase in energy prices. Securing government guarantees and agreements takes a relatively long time, particularly in countries that lack clear precedents. The second avenue involves negotiating with contractors, equipment suppliers, fuel suppliers, operating companies, and so on, to determine their willingness to compensate for damages if they fail to fulfill their obligations. Although technically complex, this process is normally accomplished efficiently because it is driven by commercial incentives.

The role of the World Bank

In 1995, the World Bank re-examined its oil and gas lending strategy in consultation with member countries, representatives of the international petroleum industry, and other sources of finance. The strategy was revised to take account of the changes that had taken place over the previous 5 to 10 years and to enable the Bank to provide member countries with the most effective assistance. In accordance with the new strategy, which puts substantial emphasis on helping developing countries to mitigate project risks and enabling governments to serve as effective regulators, the Bank will support the creation of open and competitive markets; encourage protection of health, safety, and the environment; and serve both as a magnet for private capital and as a lender of last resort. The Bank's new agenda, designed in cooperation with other World Bank Group members—the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA)—includes technical assistance, lending, and guarantees as follows:

- Helping countries to establish legal

and regulatory frameworks that facilitate private investment and enhance efficiency.

• Assisting in the restructuring of public hydrocarbon companies through corporatization, commercialization, and privatization.

• Identifying more efficient and benign fuels and promoting the substitution of gas for coal and oil when this would be both more efficient and environmentally beneficial. As a recent study in India has shown, liberalized access to modern fuels can—directly or indirectly—help poor households move up the "energy ladder" to cleaner, more efficient fuels for cooking than wood fuels and agricultural residues for cooking.

• Assisting governments in the environmental cleanup of existing oil and gas facilities and in establishing standards and institutions required for monitoring the environmental impacts of oil and gas projects.

• Facilitating international trade projects (mainly gas pipelines but also liquefied natural gas projects and oil pipelines). Gas pipeline projects may particularly benefit from Bank support because, as investments with long payback periods, no alternative uses, and often uncertain local markets, they are seen by private investors as relatively risky. World Bank participation as a facilitator is warranted in projects that are very complex and that require direct participation by the state or a state company.

• Financing urgent, economically sound projects in oil development, processing, transmission, and distribution—but only in the absence of sufficient private sector resources.

• Providing guarantees to cover risks for important and environmentally vital projects. Since September 1994, the Bank has been offering two different types of guarantees as a way of "leveraging" private investments in key projects: (1) a *partial risk guarantee* covering governmental nonperformance of contractual obligations in a project (such as selling inputs to the project, buying end-products, or making certain related investment); and (2) a *partial credit guarantee* that typically extends maturities beyond what creditors would otherwise provide, for example, by guaranteeing late-dated repayments.

The level of World Bank lending to the oil and gas sector has fluctuated substantially over the past two decades in response to changes in market conditions as well as to shifts in the Bank's own policy. After the oil crisis of the 1970s, the Bank began to play a prominent role in the oil and gas sector, assisting member countries in developing their indigenous energy resources. Bank lending, initially concentrated in exploration and development of hydrocarbon resources, climbed to $1 billion in 1983. This rapid expansion caused concern that the Bank might pre-empt the private sector. The Bank therefore imposed limitations on its lending for oil exploration and production. These limitations, combined with a perception that future oil demand would be weak, caused lending to drop sharply (it fell to $300 million in 1986). By 1990, the Bank was again active in the hydrocarbon sector, but this time the emphasis was on promoting private sector involvement and supporting the development of natural gas as a substitute for coal and oil.

Bank lending in the oil and gas sector is expected to reach about $1 billion yearly during the second half of the 1990s (Chart 2). However, the sectoral composition is expected to shift away from upstream industries to infrastructure, reflecting the Bank's view that the private sector will invest in upstream projects if the infrastructure for delivering the output is in place. The Bank is also increasing its emphasis on technical assistance, which will be aimed at facilitating sector restructuring, privatization, private sector development, and the establishment of environmental standards and monitoring institutions.

Recommendations

Sponsors of oil and gas projects in developing countries often find themselves in a seemingly never-ending process while designing the ownership structure, security package, and financing plan. They must try to achieve conflicting objectives—minimizing the risk and financing costs while maximizing the likelihood of successful and timely project implementation. To manage project risks, sponsors try to get more players involved. There is a strong tendency to involve local partners—in the hydrocarbon sector, these are normally state oil and gas companies. Despite the great differences between state-owned and privately owned companies, recently there has been a surprising convergence in the way these entities seek to finance projects in developing countries. State-owned companies, which have traditionally financed their projects through government budgets or official government-sponsored borrowing, have recently turned to commercial sources of finance, such as commercial bank loans, private bond placements, and sales of equity in stock markets. And private investors now seek to incorporate official sources of finance with government sponsorship into their projects—even going so far as to form joint ventures with state entities.

The trend is clearly toward using the full range of financial tools available for oil and gas projects in developing countries. Thus, with a larger number of project partners and a wider range of financial instruments, project preparation has become much more complex. A critical question while designing the ownership structure is the role of government or state entities in the project. Often, some ownership by state entities provides access to a variety of sources of official funding, but, in practice, most official financiers hesitate to support full state ownership. The appropriate degree of state participation varies, depending on the type of project and the country's business environment. For upstream oil and gas projects and refineries, the role of the state should be minimized. For infrastructure projects, a larger role for the state is normally justified. With an appropriate ownership structure, sponsors could receive support from multilateral institutions such as the World Bank, which now offer a menu of instruments that are more flexible than in the past. The different types of assistance offered by the World Bank can be combined to facilitate the mobilization of funds from a variety of sources.

Governments can further facilitate investment in the oil and gas sector by establishing clear regulatory and fiscal regimes. Often the risk-reward profile of a project can be substantially improved by clarifying the rules of the game and assuring project sponsors and lenders of the stability of relevant policies. Governments may also benefit by studying the practices of other countries with regard to fiscal systems and the parameters of regulatory regimes. This is another area in which the World Bank and other multilateral institutions can offer valuable assistance based on their cross-country experience. F&D

For information on obtaining funds from multilateral, bilateral, and commercial financiers, see Hossein Razavi, 1996, Financing Energy Projects in Emerging Economies *(Tulsa, Oklahoma: PennWell Books).*