
Mobilization of Capital for Infrastructure Development

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Projects are usually financed with a mixture of equity capital, long-term debt, and short-term debt. I would like to talk briefly about issues relating to the mobilization of equity capital and long-term finance for infrastructure projects, rather than the sourcing of bank loans and short-to-medium-term credit.

The emphasis of my comments will be on infrastructure projects in emerging markets. Anyone wishing to research this subject should look at developments in industrial economies over the last ten years to understand how the forces of deregulation, denationalization, and globalization are already affecting and will continue to affect developed and emerging markets in Asia.

In the United States and the United Kingdom, it would appear that if anything can be sold to the private sector, it will be sold. The private sector in both countries is even active in (1) the operation of prisons, (2) service and maintenance of state school buildings and hospitals, (3) the design, building, finance, and operation of roads, and (4) the maintenance and operation of railways, as well as the operation of electric, gas, water, and telecommunications utilities.

A whole industry has emerged to advise bidders and government departments, to produce appropriate regulatory frameworks, to draft contract documentation, and to finance growing private-sector involvement in domestic infrastructure projects. In the United Kingdom, this development is termed the "private finance initiative" and is a system whereby public sector functions and services are transferred to investors and operators in the private sector on the basis of a future stream of payments to be made by the public sector to the operators. Many of the advisers to the government institutions and contractors are commercial and investment banks operating in London, whose head offices are in the United States, Canada, Europe, and even in Japan.

Increasing numbers of governments in emerging countries have also sought to change their role in their respective economies to that of regulator and offtaker, particularly in industries such as power generation and distribution, telecommunications, and water supply and treatment. The attraction is that infrastructure projects can often be financed without full government guarantees and with less than full recourse to the host country. Another important consideration is the extent to which utilities can raise efficiencies at the same time as massively increasing the numbers of beneficiaries of the services provided.

An important question is how much equity will be needed for an infrastructure project. The IFC produced data in the mid-1990s, which indicated that for 115 projects relating to power generation, telecommunications, transport, and pipelines undertaken in emerging markets, the ratio of debt to equity was 58:42. In 1996 the IFC noted that for projects involving investment of US\$26.6 billion, 39% of the total investment came from equity and that private foreign and local sponsors (i.e., commercial firms) accounted for the majority of the equity invested. This compares with debt to equity ratios of 80:20 for independent power projects in developed countries, which are backed by power-purchase agreements and long-term fuel-supply contracts.

SOURCES OF EQUITY CAPITAL FOR INFRASTRUCTURE PROJECTS

Multilateral or International Financial Institutions

Possible sources of equity capital for infrastructure projects include the multilateral or international financial institutions, such as the World Bank and its affiliate, the International Financial Corporation (IFC), as well as regional institutions such as the ADB and EBRD. The IFC made its first investment in a private infrastructure project in 1967, with a US\$8 million loan and a US\$4 million equity investment in a power project in the Philippines. By the middle of 1996, the World Bank Group's provision of loans, equity, and guarantees to private infrastructure projects surpassed the US\$5 billion mark.

Host-Country Equity Providers

The countries in which the projects are located (i.e., the host countries) will often be required to participate as project sponsors and possibly as minor equity capital providers. If beneficiaries of projects are not willing to assume part of the risks inherent in a project, commercial providers of equity and debt will be more reluctant to provide long-term financial resources. In many emerging countries where the IFC has undertaken infrastructure projects, the local equity providers have often been private companies.

Export Credit Agencies

Export credit agencies—for example, the export-import banks of Japan and the United States and export credit insurers in Europe—are often willing to provide long-term debt to support an export of capital goods from their respective countries to the country in which the project is located.

If the project is of strategic importance to another country, for example where a new source of a vital mineral is being developed, an export credit agency or other bilateral government entity in the importer's country may be willing to participate in a project as an equity provider. This will often be done via the

provision of soft loans and political risk insurance to the equipment exporter or a trading company, if the latter assumes a major role as a project sponsor and project operator.

In many such situations the sheer scale of the project may make it impossible for a developing country to raise finance by itself or create the infrastructure necessary to support and realize an export-oriented commercial project. For this reason foreign export credit agencies will be called on to assist in financing peripheral but nonetheless vital power plant projects, road construction, and port improvements.

This type of situation is already making itself felt in the Russian Far East and particularly in the case of oil and gas extraction projects in Sakhalin, which necessitate the development of basic infrastructure to support the growing foreign and domestic investment. In this area, ING Barings is already active through the provision of finance for the modernization of airport facilities in Sakhalin, a transaction facilitated by ING Barings's Vladivostok representative office.

Bilateral Development Institutions

Bilateral development institutions exist in almost all industrial countries and take an active role with respect to small and medium-sized projects in emerging countries, as well as providing equity capital and long-term loans. As the projects they invest in are generally much smaller than the mega-projects that major development banks tend to look at, such institutions have a greater involvement in the monitoring and management of the projects and often provide specialist advisers and managers whose role it is to transfer skills to the host country.

Corporations Involved in Projects

Corporations that are involved in the supply of plant and equipment, along with construction companies and project operators, will often consider providing equity capital, subject to their independent risk analysis and the returns they can expect on being involved in a project. Such companies will often be one of the prime sources of equity in private infrastructure projects.

A number of multinational companies that are involved in such projects have established specialist funds or funding subsidiaries that involve institutional investors and other corporations willing to assume equity risks in private infrastructure projects. One of the first major power plant suppliers to take this route was ABB, which created ABB Funding Partners in the early 1990s when it realized that it needed to take equity stakes if it was to win contracts to supply power plants to private infrastructure projects.

To date, the largest investments of private capital have been realized in the area of power and telecommunications projects, but in recent years there has been considerable cross-border investment in water supplies and sewerage-treatment

companies, as a result of the deregulation of such industries and the creation of a number of multinational corporations that specialize in the operation of water management companies.

A major European power plant supplier, and client of ING Barings, actively participates in the equity of independent power projects in China, the Philippines, and Pakistan. It usually seeks to limit its equity participation to 15% of the total equity of the project company. Over the first five years of the project's life, the foreign investor will seek to achieve a 20% internal rate of return on its investment. The foreign investor's profit will be generated on the supply of plant and equipment, subsequent supply contracts for spares and parts, the provision of technical managers, and carrying out overhauls of the plant.

In the case of independent power producers (IPPs) in China, the maximum internal rate of return permitted by the authorities is, of course, 15%, but this has had little effect in reducing the interest of foreign plant suppliers in investing in IPPs in China. They have weathered the Asian crisis well and have traditionally been financed in a more conservative manner than in other parts of Asia.

Commercial Infrastructure Funds

Commercial investors in the form of commercial infrastructure funds actively seek projects in which to invest equity. Again, their objective is to identify projects that will generate commercially attractive returns with acceptable risk structures.

In the case of the two AIG Asian Infrastructure Funds, their objective is to provide equity or equity-linked investments (such as convertible bonds or preference shares) to commercial projects in Asia. Each Fund seeks significant minority stakes (10–40%) and looks to obtain seats on the boards of the companies in which it invests, commensurate with the amount of the Fund's investment. However, the role the Fund would play would be more that of a passive financial investor rather than that of an active manager of the investee company. The single largest investor in the AIG Asian Infrastructure Funds is the Government of Singapore Investment Corporation.

The first AIG Asian Infrastructure Fund was established in 1994 with commitments of US\$1 billion, which is now fully invested in 30 projects. A second fund established in 1997 has invested US\$600 million of its committed funds totaling US\$1.7 billion. The second fund has broadened its scope of investment activities to include investments in basic industries such as metals and mining, chemicals and petrochemicals, oil and gas, pulp and paper, and cement. The Fund will generally look at individual investments of the order of US\$20–100 million per project. (Source: Emerging Markets Partnership, principal adviser to the AIG Asian Infrastructure Funds.)

Another Asian infrastructure fund—established by the now-defunct Peregrine Securities and called “The Asian Infrastructure Fund—had as its initial investors the ADB, IFC, and George Soros’ Quantum Group. This fund had already attracted US\$500 million in funding for equity investments in Asia before the end of 1994.

With respect to sources of long-term-debt capital for projects in the form of loans and bonds, we can identify the following that are increasing in importance:

Public Bond Markets

Public bond markets in the United States and Europe are a further, relatively new, source of long-term funding that can be expected to contribute significant amounts to infrastructure projects in emerging markets. A precondition for accessing bond markets at a reasonable cost is to ensure that the projects are given credit ratings by credit rating agencies such as Moody’s and S&P.

In the United States, in particular, special-purpose funding vehicles have been used since the beginning of the decade to raise billions of dollars from the bond markets for independent power producer holding companies operating in the United States and increasingly overseas.

For independent power projects, there are three types of debt issued in the bond markets: (1) the IPP holding company, in which the power plant operator issues a bond in its own name on the strength of its own balance sheet and earnings (i.e., the same as corporate debt); (2) for a pool of projects whose assets are securitized, the power operator is able to source off-balance-sheet debt based on the cash flows and credit ratings of a pool of individual projects; and (3) individual power projects, which also represent off-balance-sheet debt for the power operator, but the collateral is a function of an individual project’s creditworthiness and cash flows. As there are only one plant, one fuel source, and one utility customer, such a project lacks a diversified cash flow stream.

Bonds have also been used to raise debt funds for use by sponsors as equity in a number of IPPs. In early 1987, for example, AES, a major power generator, project arranger, and sponsor, issued a bond for US\$80 million in Asia in the name of China Generating Co. Ltd. The purpose of the bond was to provide the subsidiary company with funds to invest in a number of equity stakes relating to AES’s power projects in China. A successful placing of the bond issue with institutional investors implied an evaluation of the credit risk in each individual power project and of AES itself by a rating agency, in order to achieve a favorable rating for the bond.

In addition, the U.S. market for private placements—the so-called 144A market—has long been used by U.S. domestic companies as a source of finance for domestic infrastructure projects and is increasingly being tapped by U.S.-based operators for projects in Asia.

In the United States alone, it is estimated that American workers have US\$6 trillion in retirement funds, pension schemes, and 401 (k) savings plans. Major capital markets can therefore be expected to be a growing source of equity and debt funds for infrastructure projects in emerging countries.

Insurance Companies, Pension Funds, and Other New Sources

Commercial banks have long been providers of long-term loans of up to 10–12 years, but new sources of finance to private infrastructure projects in emerging markets, such as insurance companies, are entering the market to provide even longer-term financing. Their growing interest is based on the success of commercial bank cofinancing made under the multilateral umbrella of international financial institutions, such as the IFC.

A second reason for insurers' and pension funds' interest in investing in infrastructure funds and long-term project debt is that such companies need to find new types of long-term investments. This is of growing importance to institutional investors at a time when sovereign borrowers in west European countries and the United States are reducing their public sector debt burdens and hence cannot be relied upon to provide sufficient quantities of long-term government debt to meet institutional investor demand. The long-term downward trend in interest rates in the United States, Europe, and Japan, has also created opportunities for project sponsors to raise longer-term finance from a broader range of investors.

Emerging-Country Financial Institutions

A relatively small but growing source of capital and long-term loans is domestic financial institutions in the emerging countries themselves. With the development of private pension plans and growth of local insurance entities, increasing amounts of domestically raised capital are flowing into infrastructure projects, either as loans or as equity capital participations. Such investments enable institutional investors to achieve a better fit, in terms of the management of their assets and liabilities as well as raising yields. There is, however, a tendency for domestic institutions to prefer existing assets rather than provide finance for greenfield projects.

China is an exception to this rule, as Chinese banks provided renminbi currency funding to a private power project in Anhui Province in 1997 in an amount equivalent to US\$230 million.

POLITICAL/SOVEREIGN RISK INSURANCE

Whilst the obtention of finance itself is of major importance, in many cases finance becomes available only as a result of the provision of insurance and

guarantees by international financial institutions, export credit agencies, and political risk insurers to commercial lenders and project sponsors. Political risk insurers can be multilateral—as in the case of the Multilateral Investment Guarantee Agency (MIGA), which is part of the World Bank Group—or bilateral, as in the case of Overseas Private Investment Corporation (OPIC) in the United States and the Ministry of International Trade and Industry (MITI) in Japan.

In some cases the existence of specific types of insurance will make a project that cannot be financed by commercial lenders into one that can. For example, development banks and export credit agencies often provide country risk guarantees for projects in emerging markets where the underlying country has or has had in the past a problem in servicing its foreign debt. Such guarantees enable commercial banks to participate as lenders of long-term funds to projects in countries that would otherwise require the lending bank to make country risk provisions and prevent it from participating as a lender and as an acceptor of some of the project and sponsor credit risks.

By way of example, ING Barings participated in project financing for a cement plant in Colombia, which called for commercial banks to provide seven-year financing to the project. Under normal circumstances ING Barings would not have been able to provide loans for more than one year to Colombia, unless the bank raised a country risk provision in accordance with Dutch Central Bank regulations. By virtue of the issue of a country risk guarantee by Japan's Ministry of International Trade and Industry, ING Barings was able to make a medium-term loan to the project and assume risks on the sponsors and on the project cash flows.

In view of the success MIGA has had in its activities, an increasing number of private insurance and reinsurance companies and brokers are willing to provide coinsurance with MIGA, thereby expanding the amount of cover available. The beneficiaries of political risk insurance are foreign commercial investors, either as direct investors in emerging markets, as foreign banks seeking political risk cover for the operations of their local branches and affiliates, or as project companies established to operate infrastructure projects.

ING BARINGS'S INVOLVEMENT IN FINANCING INFRASTRUCTURE PROJECTS IN EMERGING MARKETS

ING Barings has participated as a lender with over US\$1 billion lent or committed to projects in emerging markets in cooperation with the World Bank affiliate, IFC. Of the projects ING Barings has lent to, 15 are infrastructure related. ING Barings also provides cofinance with all the other international financial institutions and with many export credit agencies and bilateral

development entities in the United Kingdom, the Netherlands, Germany, the United States, Japan, and Scandinavia, in the framework of project cofinancings that are exempt from country risk provisioning. In addition, ING Barings makes active use of the political risk cover made available by MIGA, the Multilateral Investment Guarantee Agency, another World Bank affiliate.

In the Netherlands, ING Real Estate is the single largest real estate development company. In Europe (including some of the former CIS countries), the United States, and China, ING Barings is actively involved in commercial real estate developments.

In South Korea, ING Barings has been involved in the attraction of over US\$800 million of foreign capital into the country over the twelve months up to October 1999, as a result of the floating of stock in the U.S. American Depository Receipt market and through the privatization of some Korea Electric Power Corporation (KEPCO) power generation facilities.

THE IMPACT OF THE ASIAN CRISIS

The Asian crisis led to rapid currency devaluations, a painful downgrading of Asian countries' sovereign risk ratings, and a general increase in the cost of obtaining funds either in the form of debt or as equity for private infrastructure projects. It also led to a period of negative growth and the postponement and even cancellation of a large number of projects, and gave all parties an opportunity to take stock and to raise healthy questions about the following:

- the level of future demand for infrastructure services

It had been generally assumed that GDP growth rates in major Asian economies would continue to be high well into the future. In 1997 the countries of Southeast Asia had plans to double their power generation capacity by 2005. This would have meant adding 100,000 MW of additional capacity and would have necessitated US\$100 billion of fresh investments. According to press reports, finance was arranged for 353 projects worth US\$76 billion in the Asia-Pacific region alone in 1996.

- the effective risks and how they were being allocated between lenders, sponsors, and host countries; the quality of the documentation and its enforceability, as well as its usefulness in protecting sponsors from currency risks in an era in which currencies are not tied to the US dollar

Some countries that did allow indexation of power tariffs to currency risks sought to renegotiate tariffs for some of the private power projects that were undertaken, particularly where the host country lacked the foreign currency reserves to meet its obligations to foreign sponsors and lenders.

- sponsors' and lenders' need for sovereign political risk cover and insurance to cover the risk of payment defaults by the state-owned buyers of power

Whereas in the mid-1990s a number of Asian countries were able to secure financing for power projects without lenders seeking to buy political risk cover, the Asian crisis prompted lenders to rush to export credit agencies and providers of insurance such as MITI and OPIC. The lenders and sponsors not only obtained country risk cover but also partial insurance cover for the payment default by local power buyers under power purchase agreements that independent power companies were signing with the local power offtaker.

- the need for ongoing deregulation of power prices and other prices in host countries, and their willingness to reduce subsidies and pass power and other costs onto end consumers
- the need for improved access to sources of local currency funding and equity, in order to reduce a country's or project's exposure to currency risks.

The Asian crisis has provided a valuable opportunity for countries and their advisers to focus on changes and developments that will be conducive to private infrastructure projects, namely:

- the creation of market pricing structures
- the implementation of transparent bidding procedures
- the creation of regulatory frameworks and institutions
- the standardization of project documentation
- building up distribution networks, e.g., power grids and grid maintenance for electric power in order to reduce costs and grid loss, improve system reliability, and enhance utilities' profitability.

The Asian crisis has also given a major impulse both to emerging countries and to Japan, to privatize their existing infrastructure and commercial assets and to find ways, such as the Private Finance Initiative, to finance new infrastructure projects. This is necessary in order to reduce the burden on taxpayers and public sector debt levels at a time when all Asian countries are heavily involved in recapitalizing their financial sectors.

CONCLUSION

In conclusion, I would like to put forward the view that infrastructure development projects and the management of infrastructure assets in Northeast Asia should be just as much a partnership between the stakeholders as they are in the rest of Asia. By stakeholders I mean:

- the host country

- the citizens and other domestic beneficiaries of the project
- domestic and foreign contractors, suppliers, and purchasers of the project's output
- domestic and foreign project operators, managers, and shareholders
- domestic and foreign lenders, international financial institutions, bilateral development agencies, and export credit agencies.

A project that excludes any one of these stakeholders will result in a less than optimal structure in terms of higher risks, higher costs, lower efficiencies, and reduced skill and technology transfer possibilities.

This does not mean that any and every project in every Northeast Asian country can be financed with a mixture of development bank and commercial funding. There will be many situations in which international financial institutions will continue to take the lead, particularly in cases where projects are not capable of generating commercial returns and where hard currency debt service cannot be achieved without donations and/or soft loans from international financial institutions and bilateral development institutions.

It is important, however, that the private sector is involved in the operation, management, and ownership of infrastructure projects in order to ensure ongoing world best standards in terms of operating efficiencies and environmental safeguards. In Northeast Asia in particular, potential demand for finance for infrastructure and commercial projects is great, and there is generally a lack of technical and management skills needed to operate capital intensive, sophisticated, and integrated power and gas supply and transmission systems, telecommunications networks, and water distribution and treatment facilities.

This would seem to imply a need for syndication or sharing of risks, both in the precompletion and construction phase as well as in the operating phase, between host governments, international agencies, and the private sector.

I feel that the major reason for the involvement of foreign companies in the joint financing and operation of infrastructure projects in partnership with host countries is to provide a major stimulus to direct foreign investment in Northeast Asia.

The next step for Northeast Asia is to actively demand the creation of a new vehicle to identify and finance projects—a vehicle that will act as a catalyst between all the stakeholders, in realizing viable infrastructure and commercial projects, and as a means of ensuring that the region is able to fulfill its development potential.