

Key Elements of Private Infrastructure Financing in the Asia-Pacific Region

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Abstract. In each country of the Asia-Pacific Region infrastructure investment has failed to keep pace with requirements of expanding economies. The expansion of infrastructure is now a pre-condition to further growth. The question of how best to finance infrastructure requirements is being addressed by such governments in a broader policy framework of liberalization, which contemplates a more limited public sector role and the encouragement of private sector led development. But international commercial banks still have a rather cautious appetite for financing such infrastructure projects and are particularly concerned about sovereign risks.

KEY WORDS: Asia-Pacific Region: Infrastructure: Sovereign Risk: Asian Development Bank.

I. Outline

Driven by fiscal constraints and growing disenchantment with the performance of state-provided infrastructure services, an increasing number of governments have turned to private solutions for financing and providing energy, transport, telecommunications and water services.

While economic fundamentals of the region are moving favorably after the unprecedented financial and economic crisis that took place in July 1997, close to 900 million of the world's poor live in the Asia-Pacific Region. It is the region which has attracted dramatic levels of foreign investment, and yet that investment is focused on a small number of countries in the region while other countries remain critically short of foreign equity capital.

On most subjects it is difficult to generalize with any confidence across such diversity, and the subject of infrastructure finance is no exception. This paper starts with the description of the Region's infrastructure requirements and the scope of the response to date in terms of projects completed and the projects in process and then will turn to how the framework for project financing of infrastructure projects in the Asia-Pacific Region differs; i.e. the "distinguishing characteristics" of infrastructure project finance in the Asia-Pacific Region. In explaining them, one troubled infrastructure financing in the Region, "the Bangkok Expressway Project in Thailand", in which the author was involved in its early stage of development as an investment officer of the Asian Development Bank (ADB), will be cited and the case will be used to explore its relationship to such distinguishing characteristics and to lessons

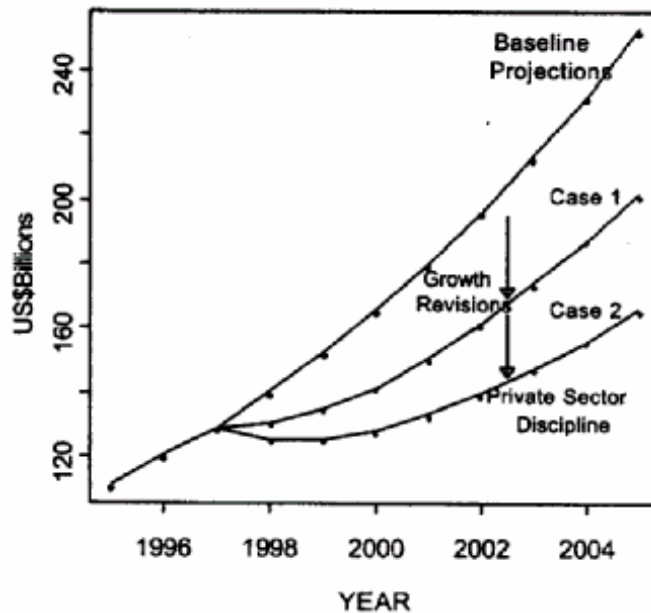
which might be learned from its problems. Finally, the paper will touch on the subject of the role to be played by the ADB in infrastructure financing in the Region and, in particular, about how ADB is working with host governments, project sponsors and other financiers to deal with the "distinguishing characteristic" risks of infrastructure finance in the Region.

II. Investment Requirements

The infrastructure requirements of the developing countries of the Asia-Pacific Region are enormous and growing in their magnitude. In the first half of the 1990s, investment requirements for infrastructure in East Asia¹ were estimated by ADB to be the order of US\$1,000 billion for the 1990s. Subsequently, they were estimated by the World Bank to be the order of US\$1,500 billion for the decade 1995 to 2004 as against US\$1,800 billion pre-crisis projection. The following chart indicates baseline projections for 1996-2005 infrastructure investment whereas Case 1 is based on the current GDP forecasts, while Case 2 adds the impact of a transition to a lower infrastructure-to-output ratio and a gradual 25% increase in efficiency in each sector in each economy. It highlights the magnitude of investment requirements, in excess of US\$120 billion per year, and the need for private sector participation.

Figure 1:
1996-2005 Infrastructure Investment Projections

Scenario	US\$ trillion	%
Baseline	1.78	100
Case1	1.53	86
Case2	1.37	77



Source: "Private Sector Participation and Infrastructure Investment

in Asia”, an Asian Development Bank paper prepared for the Finance Ministers Meeting, Asia Pacific Economic Cooperation, May, 1999.

Looking at the power sector, it is estimated that electric power is yet to reach 2 billion people out of the world's population of about 6 billion. Despite the fact that ADB lending to the energy sector totaled almost US\$1.14 billion last year, this represents less than 2% of requirements of Developing Member Countries (DMCs) of ADB. The task of finding sufficient financing for necessary capacity expansion is, therefore, truly daunting, but the economic penalties that accompany failure to meet power demand are worse. ADB economists estimate that around 20% of all industrial equipment in the Region is lying idle due to a lack of power. The economic and social cost of unserved energy needs in Asia is up to 10 times the cost of supply. ADB is headquartered in Manila. Each and every member of the Bank's staff and each of the other 8 million residents of Metro Manila can testify to the costs of brown-outs. During the critical power shortages of 1993 much of Manila had power for only a portion of each day and there were severe disruptions of industrial production and of most large-scale businesses; modern skyscrapers turned into solar ovens in the tropical heat. Any manufacturing project proposal in the Philippines which reached the Bank for loan assistance could not be entertained without standby captive power generators incorporated into the project. This additional investment cost made prices of the final products uncompetitive in the international market.

III. Private Sector Participation

The Asia-Pacific Region has been a leader in the developing world in recent years in effecting a dramatic shift in the development of infrastructure into the private sector. Traditionally, infrastructure development has been the responsibility of governments. In each country of the Region infrastructure investment has failed to keep pace with the requirements of expanding economies. Most countries of the Region currently are suffering an infrastructure gap between demand and installed infrastructure; in some countries of the Region the gap is already so large as to constitute an infrastructure crisis. The requirements for the expansion of infrastructure are fueled by growth of the underlying economies and, at the same time, it is recognized that the expansion of infrastructure is a pre-condition to further growth. Given the size of the financial requirements for such infrastructure and the budgetary constraints which most governments of the Region face, governments have come to realize that such infrastructure requirements cannot be met or financed by the public sector alone. The question of how best to finance infrastructure requirements is being addressed by such governments in a broader policy framework of economic liberalization, which contemplates a more limited public sector role in the economy generally, the encouragement of private sector economic activity, opening of the economy to international trade and foreign investment, and the development of deregulated domestic financial and capital markets.

Also contributing to the movement towards permitting private development of infrastructure in these countries has been the recognition that the performance record of such governments in public sector infrastructure development, construction, operation and maintenance has not been outstanding. Cost overruns, project delays, poor operation and maintenance and recurring operating losses have often plagued publicly-managed infrastructure projects. Many governments have concluded that private sector participation has become essential. However, due to the magnitude of the individual project costs, the long gestation periods for such projects, the need for large amounts of foreign debt and equity financing, and the shortness of the path of accumulated experience for such projects in the countries concerned, the new breed of infrastructure project presents a particular mixture of risks and a particular challenge to project finance professionals.

Having said that the Asia-Pacific Region has been a global leader within the developing world of the private sector development of infrastructure, the trend began with the first projects in power generation in People's Republic China (PRC) and the Philippines in the late-1980s. There have been more than thirty private infrastructure projects in the Philippines which have either been completed or are currently under implementation, most of which are in the power sector. The Malaysian market also has been quite active, with more than twenty toll roads, water supply and sewerage treatment projects financed in the private sector using Build, Own and Transfer (BOT) arrangements. The Bangkok Expressway Project has been completed and a rural telecommunications project, also in Thailand, was completed; both projects utilize BOT arrangements, and both are backed by Japanese sponsors. There are a number of completed highway projects in Indonesia funded by the private sector, and the financing for a major power project was concluded and the project has been completed and is now in operation. It has been estimated that about two-thirds of the private investment in infrastructure in East Asia is by investors from within the Region.

Private sector infrastructure projects financed by ADB have included the Navotas, Pagbilao and Batangas Power Projects, and the North Luzon Expressway Project all in the Philippines, Meghnaghat Power Project and GrameenPhone Project in Bangladesh, Kelanitissa Power Project in Sri Lanka, the Chengdu Water Project and Meizhou Wan Project in PRC, the Bangkok Expressway Project in Thailand, and the Fauji Kabirwala Power Project in Pakistan. In addition, the ADB has been a co-sponsor and investor in some of the investment funds established by institutional investors to invest in private sector infrastructure projects within the Region.

In other parts of the developing world, the focus has been on the privatization of existing public sector monopolies providing infrastructure services. In the Asia-Pacific Region the principal focus instead has been on private sector development of new projects. Today, the global action in power development is in the Asia-Pacific Region, and it is in the private sector.

There is much activity, and most of the principal players on the global scene are working on projects in the Region, with American and British power companies and power packagers being particularly active.

This is not, however, a full descriptive picture of private infrastructure activity in the Asia-Pacific Region. The euphoria which existed in 1994 over private development of infrastructure in the Region is today balanced by a more sober assessment by many potential project sponsors and financiers, who have seen a lack of progress on many proposed projects and significant implementation problems with other projects, particularly in India and PRC. PRC's progress with private power appeared to be quite promising during 1992 and 1993, when around 40 investment proposals involving foreign firms were put forward. This followed on from the first private power project in PRC, Hong Kong based Hopewell Holding's Shajiao B power station in Shenzhen, which came on stream in 1987. To date, however, no significant progress has been achieved with new projects though the effectiveness on 1 April 1996 of an Electric Power Law and the recent relaxation of inflation-dampening project and credit controls may signal a revival. In India, more than 200 memoranda of understanding for private power projects have been executed, but most are stalled in protracted negotiations and policy differences between the State and Central governments. Of the eight projects designated in 1994 for "fast track" approval, only two have reached financial closing, one of which has been the troubled Dabhol (Enron) Power Company project.

To complete this overview of the landscape of infrastructure finance in the Asia-Pacific Region, it is necessary to describe the principal sources of finance which have been available to the projects which have to date reached financial closing. The single largest source of finance for the private power projects in the Region has been the traditional export credit agencies of Japan, the United States and the principal European countries. What is notable about their support is that much of it has been on a project finance basis rather than with the support of sovereign guarantees of the host country which, at an earlier time, were a pre-condition to export financing. Thus commercial lenders and other project financiers have found the export credit agencies sitting on the same side of the negotiating table, assessing project risks and expecting to participate fully in the security of the project collateral. International development finance organizations – ADB and the International Finance Corporation, a private sector arm of the World Bank - have been active as senior lenders and equity investors and, at times, as subordinated lenders. The World Bank itself has also been a participant as a guarantor of commercial lenders on at least one Asian power project and has other, similar projects under consideration.

International commercial banks still have a rather cautious appetite for financing such infrastructure projects and are particularly concerned about sovereign risks. This caution reflects the stringent capital adequacy requirements under which such banks now operate, broad diversification of developing country risk in such banks' loan portfolios which limits individual

country exposures, close monitoring of such banks by their rating agencies after the recent period of financial restructuring at many such institutions, and some sobering experiences with developing country debt in the past.

Local financial institutions such as industrial development banks and commercial banks are often equity participants as well as project financiers though, given the current state of development of the financial and capital markets in many countries of the Region, their participation is often smaller than that of foreign financial institutions and is almost always in the form of short- and medium- term financing. A notable exception to this generalization is Malaysia which has financed the overwhelming majority of its private infrastructure projects domestically, with the Employees Provident Fund playing a prominent role. Thailand has also raised more of the financing for its private infrastructure projects domestically than is the norm for the rest of the region, primarily through syndicates of Thai commercial banks.

Special purpose infrastructure investment funds have mobilized several billion dollars (US) of resources for infrastructure projects. Some are regional in focus (such as the AIG Infrastructure Fund, the Asian Infrastructure Development Company (AIDEC) and the Peregrine-sponsored Asian Infrastructure Fund.^{2/}) Others are country funds focusing on infrastructure in a particular country.

The bond and private placement markets have to date been used only modestly in infrastructure financings in the Region. Two Enron power projects - the Dabhol Power Company project in India and its Hainan Island project in PRC - were to be financed by Rule 144A private placements in the United States. Both transactions were withdrawn when the Mexican financial crisis of 1995 caused an allergic reaction among institutional investors to all emerging markets debt instruments. The ADB used its guarantee facility to assist the National Power Corporation (NPC) of the Philippines to tap the long-term Euroyen bond market with a Yen 12 billion 20 year issue to finance a public sector power project. As institutional investors increase their appetite for longer-term Asian risk and as the domestic and regional capital markets within the Asia-Pacific Region mature, greater use of capital market instruments to finance private infrastructure can be expected to develop. In the immediate future, most forays into the international capital markets by project-related companies will require credit enhancement by project sponsors, international financial institutions such as ADB and the World Bank, or by financial guarantee insurers.

IV. Project Setting in Asia

The essential techniques of due diligence, project finance analysis and project design - risk identification, risk mitigation and risk allocation among the project parties - are characteristic of project finance transactions globally, and the current infrastructure project financings in the Asia-Pacific Region are no exception. Virtually all of the private infrastructure project financing

transactions in which ADB has been involved have common features. In the case of a power project, for the sake of illustration, the project would be conducted and financed through a distinct legal entity formed and operating in the project country. The shareholders may be primarily foreign parties^{3/} though most typical is a joint venture of foreign and local interests. The shareholders may be a combination of power industry players (such as a joint venture between a foreign power company and the local electric utility), prominent local companies just entering the power sector and looking to the foreign power company for relevant technical expertise, local and foreign institutional investors.^{4/} It is not unusual to find that the project sponsor has required an equity investment by the principal equipment supplier, engineering firm or construction company as a condition of their being retained to work on the project.

The financing package will typically involve 20-30% shareholder equity and significant leverage, with the debt being provided by export credit agencies, international financial institutions such as ADB or the International Finance Corporation, foreign commercial banks as lenders, and local financial institutions. The security for the senior lenders is based upon the assets of the project, including contract rights and cash flows. There is no offshore, hard currency revenue stream generated by export sales which can serve as the core of the debt service package and of the security. Infrastructure projects are more difficult in part because they are based on local currency revenue streams paid for their output, such as purchases of power by the local electricity company or tolls paid by local motorists. Lenders of foreign currency debt and foreign project sponsors are dependent upon the host government to assure convertibility of local currency receipts into foreign currency to meet payments due to such lenders or the sponsors.

Sponsor support is common, often in the form of subordinated funding to cover cost overruns or periodic cash-flow shortfalls and in the form of completion guarantees. Increasingly, project risks are sought to be ameliorated by fixed-price, date-certain turnkey construction contracts with explicit performance guarantees and liquidated damages provisions; by contracts with equipment vendors which contain workmanship warranties and guarantees; and by other firm, third-party contractual obligations, both on the "supply" side, such as for the supply of goods or services to the project, and the "delivery" side, such as off-take or take-or-pay arrangements.

Governmental support is also common, but policies differ significantly between countries. To facilitate the limited recourse financing of projects and recognizing the limited financial strength of some of the governmental entities contracting, for example, to purchase power or to provide fuel, governments have been prepared to guarantee the performance of such governmental entities in the Philippines, Pakistan and in India for eight so-called "fast track" projects. In Malaysia, Thailand and Indonesia government guarantees have generally been unavailable for private infrastructure projects.

V. Characteristics of Project Financing in Asia

The principal distinguishing characteristic of the project financing of infrastructure projects in the Asia-Pacific Region is the multi-dimensional nature of sovereign risks which must be dealt with in the project financing design and documentation. The principal task which lies ahead for the host governments concerned, for project sponsors and their financial and legal advisors, and for development finance institutions such as ADB is finding more effective ways of mitigating sovereign risk in the financing of infrastructure projects in the Asia-Pacific Region. It is only through the more effective mitigation of such risks that it will be possible for host governments and project sponsors to attract the very high levels of financing, and in particular, long-term debt financing, which are required to meet the infrastructure requirements of the Region over the next decade.

What, then, are the key features of project financing in the Asia-Pacific Region?

A. Local Currency Revenues

Infrastructure projects in the Asia-Pacific Region do not carry with them comfortable foreign currency flows of export earnings. This is characteristic of infrastructure projects generally and distinguishes them from the project financing of export-oriented natural resources projects. For infrastructure projects in the Asia-Pacific Region, the picture is complicated by the relatively high level of participation of foreign financial institutions providing foreign currency financing and the relative weaknesses of the host country legal and regulatory environments.

B. Sources of Financing

The second major characteristic relates to the sources of financing. For Asian infrastructure projects there are only limited sources of long-term debt. For example, for these projects, and whether due to country ceilings on the exposure of individual banks or otherwise, the limited commercial bank involvement in Asian infrastructure projects is a significant constraint to financing in most of ADB's developing member countries. Very often, the commercial banking portion is the most difficult to organize. There are not many, if any, American, Australian or New Zealand banks involved in the provision of long-term debt for infrastructure projects in the Asia-Pacific Region. This may be due to pressures at home. Despite the fact ADB has made a number of forays here to encourage these banks to become involved in cofinancing opportunities with ADB. To date commercial bankers from these countries have not been attracted by these opportunities.

The evidence to date suggests that international commercial banks are still uncomfortable with the risk profile of many private infrastructure projects in the Asia-Pacific Region. The level of their appetite will vary from

country to country and will also be dependent on the identity of the sponsors and of the other participating lenders. One of the principal challenges to the host governments and to international development finance institutions such as ADB and International Finance Corporation is to assist in mitigating the risks which are of most concern to the commercial bankers which are sovereign risks.

Much attention is being focused in the Region on two aspects of the mobilization of long-term debt. The first is on the further development of the local financial and capital markets to mobilize local savings and generate local currency equity and debt for investment in private infrastructure projects. Regulatory changes to permit domestic retirement funds and insurance companies to invest in, and lend to, private infrastructure projects would, in many countries of the Region, significantly increase the amount and lengthen the tenor of funding available for such projects. As an example, the Employees Provident Fund of Malaysia provided one-half of the debt financing required for the US\$1.5 billion Lumut Power Project in the form of fixed-rate, long term bonds which were locally rated; Malaysian commercial banks provided the balance of the debt financing as 15 year floating rate debt.

The second focus of such attention is on credit enhancement of Asian projects and related financing instruments in order to tap the institutional investor market, particularly U.S. institutional investors such as insurance companies and pension funds. These investors have strict investment guidelines, often linked to the rating of debt instruments. If credit enhancement techniques can be applied to Asian infrastructure projects, this will open potentially large sources of new investment funds.

C. Internal Rates of Return

The rate of return expected by the developer of an infrastructure project in the Asia-Pacific Region is usually significantly higher than the rate which would be acceptable for a similar project in a developed country setting. This is obviously a function of risk or perceived risk. The risks which are considered distinctive are the combination of risks; i.e. sovereign risks. Exposure to currency risk is a critical feature of infrastructure project investment. Project revenues are often generated in local currencies, while servicing of foreign debt and equity involves payment in foreign currency. Fluctuations in the exchange rate of the domestic currency, as well as capital controls limiting currency convertibility and transferability, create risk for foreign investors and financiers. There is also some premium for what might be described as "pioneer risk": the risks associated with being among the first to attempt a complex private infrastructure financing in a country with limited, if any, experience of such projects and in the context of a legal and regulatory environment which is still emerging. The major global players in the market for infrastructure projects are attracted to the Region because of the numbers of projects, their relatively large size and the prospect of high returns commensurate with higher risks and, possibly, more limited competition for certain projects.

VI. Sovereign Risks Associated with Private Participation

As project financiers complete their risk analysis of proposed private infrastructure projects in the Asia-Pacific Region, the risk which they find most difficult to analyze, to mitigate and to allocate is that series of related risks which describe the roles of the host government and government enterprises in such projects and the concerns of project sponsors and lenders about the due performance of such roles.

The roles include that of the host government as regulator of the infrastructure sector in which the project operates and which, invariably, involves a new and evolving regulatory regime. Private infrastructure defines the end of the provision of services in the relevant sector by a monopolist provider, be it a government department or government enterprise. Project sponsors and their financiers require comfort that a regulatory regime exists for the regulation of the project enterprise - be it a power plant, highway or urban light rail system - in accordance with transparent rules, consistently applied, and effectively enforced. Tariff setting is an important element of such a regulatory regime, since it is the principal determinant of project economics. But the regulatory regime must have other critical elements. It must assure non-discriminatory treatment of market participants and the non-abuse of dominant market position by the traditional monopolist. It must ensure the independence of the regulator from the government's continuing interest as owner of the traditional monopolist: the roles of regulator and market participant must be separated within government, and the independence of the regulator assured.

In many countries of the Asia-Pacific Region the pace of development of infrastructure projects has outstripped the consideration and resolution by the host governments of broader regulatory issues and the creation of effective regulatory regimes. The licensing of private telecommunications providers in India, both for cellular service and for basic telephone service, has preceded the establishment of the independent regulator which the Government's New Telecoms Policy contemplated. The creation of private power projects in the Region has not awaited the development of the new electricity sector regulatory regimes in which such projects will operate. Ironically and illogically, projects have proceeded under pressure from the sponsors and, in certain sectors (such as telecommunications), under pressures within the governments to realize substantial licensing fees to help reduce budget deficits, before the broader regulatory regimes have been evolved. The project sponsors and the host governments in their project documentation have attempted to insulate the projects from the broader regulatory regime which is to follow. The ADB and the World Bank are working closely with a number of governments to ensure that such regulatory regimes are debated, created and implemented in a timely fashion. ADB support for new private power projects in India, for example, is effectively pre-conditioned on the relevant state regulators have implemented a restructuring of the state-level electricity regulatory regime and on financial

and management reforms to ensure the financial soundness of the state-level electricity boards.

Private infrastructure projects in the Region reflect adoption by the governments of new policies to permit and encourage such projects in the private sector. Such policies involve, in some cases, the adoption of new laws (such as the BOT laws in the Philippines), new administrative policies and procedures, and the administrative implementation of such laws and policies to give them practical effect. While it may be reassured that infrastructure will enjoy greater efficiency due to the discipline, competition and profit-maximization of the private sector, this will not be enough. Subsequent problems in the implementation of these new government policies in a number of countries call into question the breadth of the consensus within government and within the broader political system backing such new policies and procedures. Projects have been plagued by inter-ministerial conflicts at the national level, conflicts between ministerial policy-makers and the career bureaucracy, conflicts between national policy-makers and administrators and their state or provincial level counterparts, and at times by vocal public opposition based upon hostility towards foreign investment or on concern that private infrastructure will be more expensive to the public than publicly-owned and -operated facilities.

There is also the role in such projects of the government and government enterprises as a supplier of goods and services which are critical project inputs, such as fuel supplies to a power project or basic utilities (water supplies, sewerage services, electricity or steam) to a project site. These obligations are addressed in project documentation with the governmental supplier of such services, with such obligations often being guaranteed by successively higher levels of government to maximize the likelihood of performance and, in the event of non-performance, to ensure recovery against a governmental entity of financial strength.

There is the role of the government and government enterprises as a customer for the project's outputs, for example, as the electricity purchaser from a power project. The central document in a private power project is the Power Purchase Agreement, which sets forth the power purchase obligation and the on-going pricing formula for such purchases. The purchaser in such projects in the Asia-Pacific Region is invariably the government electricity company. In many cases, such companies are poorly capitalized, badly managed, overstaffed and generally inefficient. The contractual obligations under such agreements are guaranteed by successive levels of government, as in the case of supply agreements, to maximize the likelihood of performance and, in the event of non-performance, to ensure recovery against a governmental entity of financial strength (and, often, the governmental entity with which the foreign sponsor has dealt in making the original decision to invest).

There is also the broader role of the government as a provider of a legal framework for the creation and enforcement of contractual rights relating

to the project, including the collateral security rights of the project lenders. Closely related is the role of the government as a provider of a broader regulatory and administrative framework for doing business, which includes predictable and reasonably efficient regimes for the establishment and operation of companies and other business entities, for obtaining business licenses, for determining and complying with environmental standards, and for meeting the tax obligations of the project companies and their staff.

These risks are in addition to the classic risks of governmental expropriation (expropriation risk) or the failure of the government to make foreign exchange available to a project to service its foreign debt and meet its other foreign currency obligations (convertibility and transfer risk). These risks in the aggregate are sovereign risk.

Project finance transactions in general and project finance transactions in developing countries in particular are considered the most complex legal transactions in the financial world today. Remedies for deficiencies in the domestic legal and regulatory framework for a project, for deficiencies or inefficiencies in the companies law or other laws regulating commercial activity, and incentives for a project (be they commercial incentives or tax incentives) are often built into the project documentation. Agreement of the parties and the law of contract are viewed as appropriate and effective means of addressing such deficiencies and inefficiencies in the legal and regulatory framework. Where possible, foreign investors insist on such contracts being governed by the law of an established, international commercial jurisdiction, such as the laws of New York or the laws of England, and insist on dispute resolution taking place through international arbitration under an established arbitral system in a recognized international center, such as at the ICC Court of Arbitration in Paris or the London Court of International Arbitration. Foreign lenders insist upon such a choice of foreign law and the jurisdiction of foreign courts (typically in New York or London) as a non-negotiable condition to their participation in financing such a project. While the foreign lenders invariably get their way in such choice of law and choice of forum, the foreign investors' rights in respect of such a project - as shareholders and managers of the project company and as parties to the critical project documentation (such as a Power Purchase Agreement and the agreements providing for the supply of critical project inputs) are most often governed by the laws of the host country, though generally with provision for some form of international arbitration. Even where local law governs, the project documentation attempts to address, by agreement of the parties, many of the deficiencies and inefficiencies of the domestic legal and regulatory framework.

It must, therefore, be recognized in assessing the legal risks profile of a private infrastructure project in the Asia-Pacific Region that the effective determination and enforcement of the parties' rights will be dependent upon the local courts, whether for determination in the first instance of the project sponsors' rights, say under a Power Purchase Agreement, or in enforcement of foreign lenders' rights under the project financing documentation as embodied

in a foreign court judgment or an international arbitral award. Typically, there will be no substantial pool of offshore assets and no pool of foreign sales proceeds outside the host country to which the foreign lenders can look for satisfaction. The web of legal rights and obligations governed by foreign law is inextricably interwoven with rights, obligations and procedures governed by domestic law and which will be determined in a domestic forum.

There is a certain leap of faith involved in proceeding with projects and providing financing for such projects on the basis of complex legal documentation in part governed by foreign law but which is likely to depend for its effective enforceability on the interpretation of those agreements in the domestic legal system of the host country and on a court system and judges with little experience of complex commercial transactions. It is because of these concerns that international financial institutions such as ADB and the World Bank are increasingly engaged in law-related technical assistance to their member governments, providing consultancy services and training to enhance the integrity of the regime of economic laws which govern private sector economic activity (including private infrastructure projects) and to enhance the skills of government counsels and judges responsible for administering and interpreting such economic laws and the contracts which govern private sector economic activity.

These concerns about legal risks become more profound when one appreciates that the host governments have multiple roles in respect of a typical private infrastructure project in the Asia-Pacific Region. The government and government enterprises are more than regulators, suppliers and customers: the government as custodian of the law-making process and the regulation-making process is capable of making changes in laws and regulations which are adverse to the project and which, to the extent that aspects of the project are governed by domestic law, become part of the contractual web which defines the rights and obligations of the project parties. The exercise of such law-making and regulation-making powers by governments is constrained by principles of public international law and by such government's bilateral and multilateral treaty obligations. In this respect, bilateral investment protection treaties and multilateral conventions such as that establishing at the World Bank the International Center for the Settlement of Investment Disputes (ICSID) provide some protection and comfort.

To sum up these observations, the principal distinguishing characteristic of the project financing of infrastructure projects in the Asia-Pacific Region is the multi-dimensional nature of the sovereign risks which must be dealt with in the project financing design and documentation. The principal task which lies ahead for the host governments concerned, for project sponsors and their financial and legal advisors, and for development finance institutions such as ADB is finding more effective ways of mitigating sovereign risk in the financing of infrastructure projects in the Asia-Pacific Region. It is only through the more effective mitigation of such risks that it will be possible for host governments and project sponsors to attract the very high levels of

financing, and in particular, long-term debt financing, which are needed to meet the infrastructure requirements of the Region over the next decade.

VII. The Case of Bangkok Expressway Company Limited Project in Thailand

It may be useful to examine the case of one private infrastructure project in the Asia-Pacific Region which has encountered major problems in implementation, and to consider how sovereign risk has played out in respect of the project. Bangkok Expressway Project, in which ADB was a lender and an equity investor is a "successful" project in the sense that the project is operational. Most other private infrastructure projects which have not been able to mitigate sovereign risks to the satisfaction of the project financiers are "unsuccessful" in the sense that they never reach financial closing.

On 16 October 1990, the Asian Development Bank approved an equity investment of US\$10 million in the project company, Bangkok Expressway Co. Ltd. (BECL). This gave ADB an equity stake of around 4.5 percent in the capital of BECL (total equity US\$220 million), with the Japanese construction company Kumagai Gumi Co., Ltd. investing US\$144 million for a 65 percent stake in the company. Thai interests held approximately 30 percent of the equity, though this holding was fragmented between a number of investors.

Concurrently, ADB approved a loan of US\$30 million to BECL. This loan was part of a total long-term debt package of US\$880 million. The largest portion of the long-term debt (US\$650 million) was to be provided by local banks, an unusually large proportion of domestic financing for a private infrastructure project in the Region; an additional US\$200 million was to be provided by a consortium of local and foreign banks.

The Bangkok Expressway Project was promoted by Kumagai Gumi for the purpose of establishing an elevated 37 km long multi-lane toll express system in Bangkok, known locally as the Second Stage System or "SES". The project was to be implemented as a build, operate and transfer (BOT) scheme under a 30-year concession agreement (the SES Agreement) between the Expressway and Rapid Transit Authority of Thailand (ETA) and BECL. The total cost of the Project was estimated at US\$1.05 billion.

ADB was the fifth largest creditor of the project and, with its equity investment, the project's fourth largest financier. It was anticipated that a public offering of BECL shares would be done on the Security Exchange of Thailand after the opening of the priority component of the project and that ADB would eventually exit as a shareholder by selling its BECL shares on the market.

As is typical of a private infrastructure project financed on a limited recourse basis, the financing structure and documentation were complex. The main project agreement, the SES Agreement, became the backbone of the project and set out clearly the rights and obligations of the parties during construction

and in the subsequent 30-year period of operation. Among other things, the Agreement defined the applicable toll structure, set out the formula for revenue sharing and explained the methodology for future toll fee revisions. The Agreement had detailed provisions dealing with "exceptional events" which could undermine the Agreement, including increases in inflation rates or interest rates and the inability of the Expressway authority to effect toll fee increases as scheduled. The validity of the Agreement was confirmed by a formal legal opinion of Thailand's Ministry of Justice. In addition to the loan agreements, there was extensive security documentation creating security in the shares of the project company,^{5/} in all relevant project documentation and in the project company's cash-flows from toll collections; inter-creditor agreements were in place, and there were the usual arrangements among the shareholders of BECL. All parties were advised and represented by international and local counsel, the documentation was heavily negotiated, and the final legal obligations of the parties were confirmed by comprehensive legal opinions.

The project documentation eloquently confirmed the urgent need for this major piece of transport infrastructure, as recognized by the Thai authorities. ADB justified its support for the project in terms of the economic and social benefits, ADB's endorsement promoting Government of Thailand's privatization efforts, mitigation of possible political risks through ADB participation, and an envisioned catalytic role of ADB.

For all intents and purposes, the government had taken appropriate initiatives to create a legal framework to undertake privatization or private infrastructure in the transport sector.

The turnkey nature of the construction contracts had the project delivered at a target cost, within a target time, with these obligations supported by appropriate warranties and performance bonds. Upon completion of the complex and demanding construction phase, BECL would assume responsibility for operating and maintaining the expressway in accordance with the provisions of the SES Agreement.

The project evaluation was supported with a detailed traffic analysis and a financial analysis depending on a critical review of toll fees and revenue sharing, which was subjected to appropriate sensitivity tests. There was also an overall economic analysis for the sector.

In short, as a project financing exercise, the Bangkok Expressway Project and its financing would pass any test of sound risk assessment and mitigation, supported by appropriate legal documentation. Then, what went wrong?

(i) Tolls

According to a formula under the SES Agreement, BECL was to share

in tolls collected for the entire Bangkok expressway system upon the achievement of certain milestones in the construction of the SES. In addition, the tolls were expected to be increased by the Thai authorities from Baht 15 to Baht 30 (that was, from approximately US\$0.60 to US\$1.20). With the toll increase and BECL's sharing of tolls, this was to provide BECL with appropriate cash-flow in order to service its debt.

The proposal for toll increases became a political issue in Thailand, and there emerged a fundamental difficulty in establishing any increase, quite apart from the stipulated increase to Baht 30 (US\$1.20). Moreover, there was a dispute between BECL and ETA as to whether the appropriate project milestones had been achieved, such as to commence the sharing of revenues.

(ii) Operation of the SES

Although it was clear from the SES Agreement that BECL would operate and maintain the Second Stage Expressway, ETA contended that, due to certain unspecified legal constraints, BECL could not operate the SES. As a result, ETA proposed that operation and maintenance should be the sole responsibility of ETA.

Clearly, this was inconsistent with the fundamental concepts underlying the BOT award of contract. BECL resisted strenuously any suggestion that it should be deprived the opportunity to operate and maintain the SES. To the project lenders, the ETA's position appeared to be a fundamental breach of the SES Agreement.

(iii) Suspension of Works

Under these rather difficult circumstances, the Thai banks which were providing the onshore credit facilities stipulated certain conditions for further draw downs of funds to BECL. The conditions related to the perceived increase in risk as a result of the dispute between ETA and BECL. BECL could not agree to the conditions and, as a result, further disbursements from the Thai banks were suspended. Negotiations commenced to resume disbursements; however, BECL remained starved of funds.

As a consequence, BECL defaulted in the payment of interest to the project financiers, including ADB.

In view of the lack of funds (and particularly in view of BECL's reluctance to complete the project, with the threat of a take-over by ETA), BECL suspended further works on the project. BECL argued that it could not knowingly continue to incur expenditures where it lacked the means to pay for those expenditures. ETA resorted to the Thai courts and was successful in compelling the opening to the public under ETA management of a completed portion of the Expressway on the basis of provisions in the Thai Civil and Commercial Code permitting the exercise of extraordinary powers in situations

of "national emergency". BECL initiated conciliation procedures in Thailand under the terms of the SES Agreement, as the preliminary step towards the commencement of international arbitration proceedings against ETA.

The financing banks, while sympathetic with BECL's position on its right to operate the SES, believed that it would be counter-productive to suspend works. From their perspective, it was most important to complete the works, to make the SES operational, and to begin generating cash-flow which would permit proper servicing of their debt.

(iv) Conflict and Resolution

The offshore financing institutions faced a number of difficulties with the project:

- The preponderant amount of financing came from the onshore banking syndicate and, as such, the Thai banks very much influenced the course of events in dealing with BECL and the Thai authorities.
- As there were 30 offshore financial institutions involved, individual institutions each had quite a small stake in the total financing. It proved difficult to achieve consensus or agreement on an action plan among such institutions.
- Under the project documentation, the offshore financial institutions could not unilaterally exercise rights against the project security - any enforcement of security required the concurrence of the onshore banks. The Thai banks were unprepared to declare an Event of Default.

Ultimately the Thai banks, in conjunction with the Thai authorities, organized a takeover of BECL by a local Thai consortium. The shares of all foreign shareholders, including the Bank, were purchased and the outstanding debts owed to the offshore banks were prepaid in their entirety, including prepayment premiums. In other words, all foreign investors and foreign financiers were taken out of the equation.

Two years later, the tolls were increased and BECL completed a very successful initial public offering of its shares on the Stock Exchange of Thailand.

What was missing here? What might have been handled differently? In retrospect it appears that, despite all formal legal approvals for the project having been obtained, there was not a consensus within the Thai government as to the role of private infrastructure or as to the appropriateness of this project being undertaken on a private infrastructure basis with foreign investors and financiers. No such consensus appears to have existed within government (as evidenced by ETA's opposition to BECL operating the Expressway as provided

by the SES Agreement) and there was insufficient consensus to ensure implementation of the increased tariffs contemplated by the SES Agreement and which were required to ensure full debt service. When difficulties arose, none of the equity investors (including the Thai investors who were co-venturers with Kumagai Gumi or ADB), none of the foreign lenders (including ADB) and none of the other parties to the transaction was able to bring sufficient pressure to bear on the Government to ensure performance of the project documentation in accordance with its terms. While legal proceedings were commenced, ultimately the parties adversely affected by the Government's actions decided not to pursue aggressively the legal remedies available to them under the project documentation.

What has been the impact of this experience on the parties concerned? The Bangkok Expressway project has been completed and is now being operated by EAT. Kumagai Gumi remains actively involved in infrastructure projects within the Asia-Pacific Region, as do the financial institutions, including ADB, which participated in the Bangkok Expressway project and whose interests were bought out. The Bangkok Expressway experience has complicated the process of organizing the project financing of other private infrastructure projects in the Bangkok region, notably Bangkok Elevated Road and Train System (BERTS) which reportedly has encountered significant implementation difficulties.

VIII. Mitigating Sovereign Risks

Looking at private infrastructure projects in the Region, the level of interest of international commercial banks in such projects could be higher if their concerns about sovereign risk could be addressed more effectively. There are a number of initiatives by ADB which address this challenge: mitigating the sovereign risk of private infrastructure projects to commercial lenders.

The ADB is probably uniquely suited to address sovereign risk, since the sovereigns about whose risk commercial lenders are most concerned are among the shareholders of ADB and its principal borrowers.

The ADB is owned by its 59 member countries, 43 from the Region, and 16 from outside the Region; there are 40 DMCs eligible for ADB financial assistance. Japan and the United States are the two largest shareholders of ADB each holding 15.9 % of subscribed capital.

Talking about the uniqueness, it is the uniqueness about the relationship that exists between ADB and its borrowing member countries. The relationship has been built over 35 years' experience, during which ADB has made critical contributions to the development programs of its members. The relationship includes long-term commitments to the development of particular sectors, and a level of knowledge of such sectors at ADB which is unparalleled in the private sector. The relationship includes an on-going dialogue on

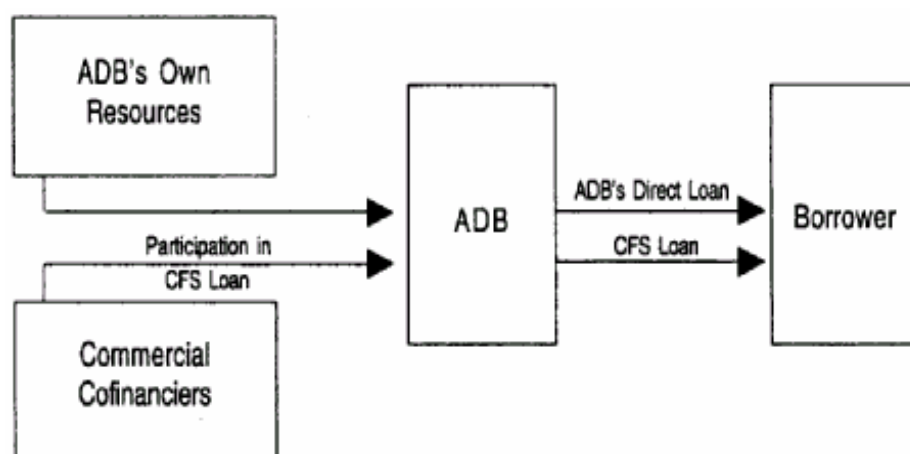
government policy in such sectors which transcends even the closest relationship which such governments have with their leading commercial bankers and underwriters. ADB is far more comfortable with the sovereign risks of such countries than is the typical commercial banker. ADB's comfort is reflected by its AAA credit rating despite a loan portfolio full of the sovereign risks about which other financial institutions are so concerned. It is for this reason that ADB and comparable multilateral financial institutions may have a particular catalytic role to play in helping other financial institutions reach a level of comfort with the sovereign risks inherent in private infrastructure projects.

Through cofinancing with ADB there are three approaches to mitigating sovereign risk in private infrastructure projects in the Asia-Pacific Region for which ADB can play a critical role. The first involves the prearranged sale to commercial lenders of participation in ADB's Complementary Financing Scheme. The second involves use of ADB's partial credit guarantee. The third involves use of ADB's political risk guarantee.

A Complementary Financing Scheme

The Complementary Financing Scheme (CFS) involves the prearranged sale to commercial lenders of participation in an ADB loan. Under the CFS, the ADB remains the lender of record, and the participating commercial lenders have no recourse to ADB in the event of default on debt service. In international bank loan market, these loans are sometimes referred to as "B" loans to distinguish them from direct, or "A" loans provided by multilateral institutions. As such, the CFS is similar to "B" loan program of International Finance Corporation.

Figure 2: The Complementary Financing Scheme of ADB



The obvious benefit of this scheme is that, though funded by commercial lenders, CFS loans enjoy the benefit of ADB's preferred creditor status since ADB remains the lender-of-record. Therefore, CFS loans enjoy the same privileges and immunities as those applicable to the Bank's own direct lending:

such as exemption from withholding tax; exemption from restrictions on remittance of interest and repatriation of capital; reduced likelihood of rescheduling, in the event of an external debt crisis in the borrowing country; and exemption from the special debt provisioning requirement of some lender countries. Additional comfort commercial lenders may find is an optional cross default clause where CFS loans can be linked to ADB's direct loan. In that a default on the CFS loan may trigger a default on the Bank loan. Cofinanciers providing CFS loans also benefit from ADB's project appraisal, supervision, and loan administration services.

The maturities of CFS loans (based on a project finance) typically vary from seven to eight years for industrial and manufacturing projects, and from 10 to 12 years for BOT/BOO infrastructure projects, which generally require longer-term financing.

For CFS loans, the Bank charges market-based fees for its account, as well as for the account of the participating institutions (CFS lenders). These fees are based on the estimated costs of arranging (one-time front-end fee) and administering (annual fee) the CFS loan.

CFS loans are generally available in DMCs of ADB which have below investment-grade credit ratings. The CFS is applicable to projects both in the public and the private sector; but it must be used selectively for public sector projects. CFS loans are available in private infrastructure projects in which ADB participates. During the period 1970-2000, ADB arranged 39 CFS loans for 37 projects in 9 DMCs, for a total of US\$1.17 billion. As a recent case, the first BOT water supply project in People's Republic of China (PRC), Chengdu Generale des Eaux-Marubeni Waterworks Company Project, was cofinanced by commercial lenders using the CFS for the amount of US\$21.5 million out of total US\$74.5 million debt.

B Partial Credit Guarantee

The Partial Credit Guarantee (PCG) of ADB provides comprehensive coverage to commercial cofinanciers of all commercial and political risks for a specified portion of a borrower's debt obligation and has been generally used to guarantee debt service during the later maturity of a commercial cofinancing. In effect, with PCG the maturity of a commercial loan can be extended. This may be appropriate when lenders are not willing or able to provide a financing tenor long enough to match the cash flow of a project. Alternatively, PCG can guarantee a portion of principal and interest payments payable throughout the term of a borrowing. Consistent with ADB's risk sharing policy with cofinanciers, the PCG is designed to cover that portion of the debt service that the cofinanciers are prepared to take, leaving the remaining portion to the cofinanciers on an uncovered basis.

There is no limit on the amount of PCGs for public sector projects;

however, all public sector projects must have a host government counter-guarantee. For private sector projects, on the other hand, for which there is no such guarantee or indemnity, ADB's single project exposure limit, comprising direct lending and/or equity investments and PCG support, is \$50 million or 25 percent of project costs, whichever is less.

As an illustration of PCG coverage, ADB extended the guarantee to National Power Corporation (NPC) of the Philippines to obtain the longest possible maturity of 20 years and reducing the borrower's all-in cost of financing of ¥12 billion fixed rate Euroyen bond for its Northern Luzon Transmission and Generation Project in November 1995. PCG extended only to the bullet repayment of the bond's principal amount; interest payments on the bond were guaranteed by the Republic of the Philippines.

C Political Risk Guarantee

The Political Risk Guarantee (PRG) facilitates commercial cofinancing of ADB-assisted projects guaranteeing payment of all or part of the project's debt service against specific political (or sovereign) risks. PRGs are only available in respect of projects in which ADB is also a lender and/or an equity participant. PRG coverage may include any combination of currency inconvertibility and/or nontransfer; confiscation, expropriation, nationalization, or deprivation of project assets; political violence, such as strikes or civil disturbances, that negatively affects the project; and breach of contract, such as nondelivery by state-owned entities of inputs (e.g., fuel supplies) or nonpayment for outputs (e.g., power or water).

PRGs are designed to mitigate political risks on which commercial lenders require assistance from a multilateral institution or private insurer while they are prepared to take on the commercial (credit) risks of a project. Since the political risks covered by a PRG concern outcomes resulting from direct or indirect control of the host government, the government may provide a counter-guarantee or indemnity to ADB. This indicates further assurance to cofinanciers and ADB of the host government's commitment to the project.

Such guarantees will need to be written so as to be very specific as to the risks covered and the trigger mechanisms for calling the guarantees. These will vary from country-to-country and from project-to-project. In order to call a partial risk guarantee, it will be necessary to establish that (1) one of the enumerated risks has materialized in contravention of an express contractual undertaking by the government or a government-controlled entity in respect of the project and (2) a debt service default has occurred as a result of the materialization of such risk.

If the PRG is counter-guaranteed by the host government, there is no limit on the amount of PRG. For those projects with PRG support but without the host government's counter-guarantee, ADB's total PRG assistance may be up to US\$100 million or 50 percent of project costs, whichever is less.

The PRG fee structure has three components: (i) a front-end fee, (ii) a standby fee and (iii) a guarantee fee. The front-end fee covers due diligence and other up-front costs. The stand-by fee applies to the amount of cofinancing covered by the PRG that has not yet been disbursed. The amount of the guarantee fee depends on the perceived level of the risks covered, and on whether the PRG is counter-guaranteed by the host government. If it is counter-guaranteed, the Bank charges a guarantee fee of 40 basis points per annum on the guaranteed amount. If not counter-guaranteed, the guarantee fee is charged at market rates.

A recent example of a PRG assisted project is Kelanitissa BOT Power Project in Colombo, Sri Lanka which was approved in 2000 and involved a cofinanced amount of US\$52 million. The PRG covers breach of contract by the Government of Sri Lanka under the implementation and other agreements, including payment obligations relating to currency convertibility and transfer risk; expropriation and confiscation, change of law and events, which make project agreements unenforceable; and breach of fuel supply and power purchase agreements. The PRG support enabled the borrower to mobilize the long-term debt from commercial lenders at significantly better terms than it could achieve on its own credit.

IX. Conclusion

This study of infrastructure finance in the Asia-Pacific Region has surveyed a vast and varied landscape. The infrastructure requirements of the Region are, as a product of the Region's dynamic economic growth, massive in scale. The related financing requirements are unprecedented.

International commercial banks and private sector institutional investors remain highly selective in their willingness to lend long-term to private infrastructure projects on a limited recourse basis. Substantial progress in attracting greater participation by such banks and institutional investors will require the mitigation of the risks of governmental non-performance in respect of such projects.

Mitigation of such risks requires action by the concerned governments in clarifying and solidifying the policy, legal, regulatory and financial frameworks for such projects. Through government guarantees, project risks, such as the ability of a public utility to pay its private suppliers, can be transformed to sovereign risk. DMCs can reduce their exposure by replacing full credit guarantees with more narrowly defined guarantees such as power purchase agreements. Such unbundling of risks presumes that the parties can be trusted to honor their commitments; if they cannot be trusted, investors will prefer full guarantees.

This helps clarify why DMCs with low credit ratings rely heavily on full financing by international development institutions and/or export credit

agencies, whereas DMCs with higher credit ratings offer guarantees for specific risks. Support by international development institutions and export credit agencies appears to substitute for an international contract enforcement mechanism.

Greater attention needs to be given by project sponsors and their financing institutions to ensuring as broad a basis of knowledge and information as possible about private infrastructure in general and about the inherent constraints within which financial transactions must be enacted.

NOTES

- 1/ The selected East Asian countries comprise the People's Republic of China (PRC), Indonesia, Republic of Korea, Malaysia, Philippines, and Thailand.
- 2/ The Asian Development Bank is an investor in the AIDEC and Peregrine Funds.
- 3/ As was, for example, the case with the Dabhol (Enron) Power Company project in India which was wholly foreign owned by Enron, GE Capital and Bechtel.
- 4/ Such as the Asian Development Bank as an equity investor or investment funds such as AIDEC.
- 5/ An agreement between the Onshore and Offshore Creditors and BECL providing for a pari-passu sharing of security extended by BECL.

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