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Alfredo E. Pascual

*Director, Private Sector Operations Division, Asian Development Bank*

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# Private Sector Participation in Infrastructure: Experience in Asia and the Role of the Asian Development Bank\*

Alfredo E. Pascual\*\*

I will start with a brief introduction to the Asian Development Bank (“ADB”), and then talk about the experience in our region with private sector participation in infrastructure.

## I. ABOUT ADB

ADB is a multilateral development finance institution established in 1966 with thirty-one member countries as its initial shareholders. It now has sixty-three member countries, forty-five of which are from the Asia and Pacific region. Its clients are the region’s developing countries. We can look at ADB as a working partnership of the developing countries of the region and the developed countries of the world.

We are headquartered in Manila, Philippines and have twenty-one resident missions and other offices in ADB’s developing member countries in the region. Local presence brings ADB close to the countries we serve. We have representative offices in Frankfurt for Europe, Tokyo for Japan, and Washington, D.C. for North America.

ADB operates in a region that is home to two-thirds of the world’s poor. Realizing that many hundreds of millions of people have not benefited from the region’s economic development, ADB decided in 1999 to make poverty reduction its overarching goal. The vision is an Asia and Pacific region free of poverty. All our work in ADB is focused on making this happen.

ADB is engaged mostly in public sector activities, which constitute more than ninety-five percent of ADB’s financing portfolio. These activities involve financing of government investment projects and reform programs with sovereign loans and provision of policy advice through technical assistance.

There is a small and growing part of ADB that deals directly with the private sector. This is our private sector operations department, which I represent. We believe that the private sector is the engine of economic growth. Development of a strong and dynamic private sector is crucial to long-term, rapid growth, which is a necessary condition for sustained poverty reduction.

ADB has the advantage of being able to do both public and private sector operations under one roof. On one hand, we can help governments of our

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\* The views expressed in this presentation are those of the presenter and do not necessarily reflect the views and policies of the Asian Development Bank (“ADB”) or its Board of Governors or the governments they represent. The presentation draws some materials from the ADB publication entitled *Developing Best Practices for Promoting Private Sector Development in Infrastructure*, April 2000.

\*\* Director, Private Sector Operations Division, Asian Development Bank.

developing member countries create an enabling environment for business through policy dialogue out of our public sector activities; and on the other, we can catalyze the entry of private investments through direct participation in these investments out of our private sector operations. Our catalytic role is based on the risk mitigating effects of ADB's presence in a project. The ADB participation sends a signal of market confidence, which can "crowd in" private investment.

ADB's "dual capability" of public and private sector operations offers important synergies. Direct involvement in private sector operations gives ADB hands-on experience with impediments to private investment that can inform its public sector policy dialogue and the design of its public sector interventions. At the same time, by financing pioneering private projects in a particular sector, ADB can test the soundness of the regulatory environment for private investment or demonstrate the feasibility of innovative financing structures by actually taking risk along with private investors and lenders. Thus, ADB's private sector operations can have a significant "bottom-up" influence on improving regulatory frameworks to help governments open sectors to private investment, domestic and foreign.

We have a number of instruments for assisting the private sector. We can make equity investments and give loans without sovereign guarantees to private sector projects and financial institutions. We can extend political risk guarantee or credit guarantee coverage to commercial lenders. We can even provide an umbrella facility where commercial lenders lend money through ADB, making ADB the lender of record and thus sharing ADB's immunities and privileges as a multilateral while retaining all risks.

We have all these instruments, but in the end, what is our real product? What is the business of our private sector operations? It is risk mitigation to catalyze investment.

## II. PRIVATE SECTOR PARTICIPATION IN INFRASTRUCTURE IN EAST ASIA

During the period just prior to the so-called Asian financial crisis of 1997, the emerging economies of East Asia were growing rapidly. Such growth meant a massive demand for investments in power, roads, telecommunications, and other infrastructure facilities. Existing bottlenecks in power (e.g., the Philippines), transport (e.g., Thailand), water (most of Asia), and telecommunications had to be addressed to sustain further growth. However, government budget and international aid together could not meet the financing requirements. The private sector became a convenient alternative source of funding, as well as expertise. Thus, East Asia witnessed a rapid expansion of private investment in infrastructure assets and a sharp increase in private sector participation in service provision.

Entry of private investment was facilitated by such techniques as project finance, which enabled project developers to achieve financial leverage far beyond what their own balance sheets could support. Various forms of private sector participation—such as build-own-operate ("BOO"), build-operate-transfer

("BOT"), build-own-operate-transfer ("BOOT"), build-lease-transfer ("BLT"), and concessions—provided the mechanisms by which project risks were allocated to parties who were supposedly able to manage them best. International private equity funds helped solve the capital limitations of project sponsors. In addition, international financial institutions, such as ADB, International Finance Corporation ("IFC"), and bilateral agencies, contributed with their enthusiastic financing support.

Most transactions mainly involved the creation of new infrastructure capacity—e.g., water treatment plants, individual power generating plants, and container ports—for mega cities, including Jakarta and Manila. Little was done in areas involving more complex customer-oriented activities such as water distribution and power distribution. Fewer still were divestments of existing state-owned infrastructure assets. The experience in East Asia contrasted with the experience in Latin America, where entry of the private sector involved purchases of existing state-owned utilities. Because of the way private sector participation was structured in East Asia, there was little need to reorganize utilities and/or to restructure the relevant sectors. Most of the deals were done on the basis of take-or-pay contracts, particularly in the power sector where existing utilities simply contracted supply from new power-generating plants established by private investors.

Under the government guaranteed power purchase agreements, the allocation of risks was such that the private investors were insulated from customer demand and market risks. The government absorbed these risks, committing to pay the supplier even if it did not take the contracted quantity. Such contracts imposed huge contingent financial obligations on the part of state-owned utilities and host governments.

The Asian financial crisis of 1997 brought into sharp focus the weaknesses of the structures used for private sector participation. With loss of investor confidence, private investment contracted sharply, limiting the capacity of governments to stimulate economic growth. Privately financed infrastructure projects suffered. For example, as demand for power declined with the receding economy, the shortage of power supply turned into an oversupply. Partially completed power plants stagnated and deteriorated. Contracts for plants that had yet to be built were canceled. Take-or-pay commitments were not honored and some of contracts were renegotiated.

Most international developers withdrew from the region. The withdrawals were, of course, brought about by the adverse consequences of the regional crisis, but they were compounded by setbacks suffered by the developers in their home countries.

### III. LESSONS LEARNED

What lessons have we learned from the East Asian experience? There are several, but today I will focus on just four lessons: strategic planning by

governments, unbundling for competition, cost-recovering tariffs, and local currency financing. These lessons imply best practices. There is broad consensus on them, but the reality is that they are difficult to achieve. I will touch on some of the issues and challenges we are facing in realizing these best practices.

Lesson One: government should specialize in planning, structuring, and regulation while the private sector should specialize in management, investment, construction, and financing.

Government acceptance, if not pursuit, of private sector participation in infrastructure was due in part to the failure of governments to plan and anticipate future bottlenecks and make timely strategic investments. This was the case in one country where the government did not move to address the shortage in generating capacity until after the country had suffered brown-outs of eight hours at a time. This led to the signing of a number of take-or-pay contracts with independent power producers.

Failure of governments to maintain and strengthen their role in strategic planning of infrastructure can result in unsustainable projects that do not present the least costly solution.

We agree that governments must concentrate on planning, but the requirements for infrastructure financing are huge. Based on ADB estimates, the financing need of Asia is as much as \$180 billion annually during the next ten years. How much of this is assured? The estimate, based on the peak in 1997, is that six percent of the funding requirement might be met through private investment. ADB, World Bank, and other multilateral and bilateral financial institutions might be able to provide up to about four percent. We have ten percent of the financing requirement assured. What about the ninety percent balance? How will this be met?

It appears that there is a need to reassess role of governments. The funding needs of the region will likely increase due to the growing intra-regional integration, which could lead to greater demands for capacity in transport, power, and other infrastructure systems. The governments in developing countries in the Asia and Pacific region might ultimately have a funding role while continuing to partner with the private sector. In addition to funding, the partnership with the private sector would also cover management of infrastructure facilities.

The expertise available from foreign developers might not come just with the deployment of capital that normally goes with it. Now more and more, as illustrated in the water sector, the international operators are not prepared to commit their own capital for creating capacity. However, they welcome opportunities to lend their expertise through management contracts for running the resulting facilities.

We are now reassessing the infrastructure provision in East Asia. Currently, ADB, World Bank and Japan Bank for International Cooperation are jointly conducting a major study. Commenced in September 2003, the study will look into the lessons from experience on the appropriate roles of the public and private sectors in infrastructure planning, regulation, financing, risk bearing, and operations.

Lesson Two: where possible, competition must be introduced in service provision to shift the risk to the private sector. Where competition is not possible, effective regulation of price and quality of service must occur.

Experience in several countries has shown that unbundled infrastructure sectors, where individual components are managed separately, perform better than centrally controlled networks. Of course, the market is quite complicated; but with technology, the coordination of different components of the network can be facilitated at a reasonable cost.

Unbundling the infrastructure sectors is an important technique for reducing natural monopoly and promoting competition. Many components of the network can support competition. For example, in the power sector, many countries are separating networks into generation, transmission, and distribution—and in some cases, a fourth segment responsible for retailing power to customers.

In East Asia, many countries have embarked on power sector reform programs to introduce competitive markets in electricity. The most advanced is Singapore, which started restructuring in 1995. Other countries such as the People's Republic of China ("PRC"), Indonesia, Republic of Korea, Philippines, and Thailand are at various stages of restructuring. With the possible introduction of competitive power markets in these and other Asian countries, there is a need to have flexibility in the long-term power purchase agreements that underpin investments in new BOT generating plants in the interim. The relevant power purchase agreements should contain pre-termination provisions, which allow project participants to disengage based on pre-defined payments that are fair while protecting the interests of all parties.

At this time, it will not be easy to introduce competitive power markets in the developing countries of East Asia. In establishing competition in the generation segment, difficulties may arise in attracting investors in merchant plants. Financial losses incurred by merchant plants in the United Kingdom and the United States would discourage investors from venturing into emerging markets where the power industry is likely to go through wide swings in the business cycle and in the consequent price fluctuations from periods of surpluses to shortages. With no central planning, supply uncertainties would emerge in the face of growing demand because new entrants could be at a competitive disadvantage. In addition, power price could also be driven up by the higher cost of financing merchant plants that have to deal with unmitigated market and political risks.

Merchant plants could be more expensive to finance in relation to BOT power plants that are supported by long-term power purchase agreements. Unmitigated market and political risks would require greater risk premiums for both debt and equity. Lower financial leverage with debt-to-equity ratios of probably no more than two-to-one will also raise the overall cost of capital.

Lesson Three: operating and capital costs have to be covered by user fees, plus subsidies from tax revenues, if needed.

Infrastructure services must be paid for either by the users, who will bear the full burden of operating and capital costs, or by taxpayers who will share part of the burden. It does not matter whether the private sector is involved in providing the service. There is no free lunch. Occasionally, international donor agencies provide grants to cover part of the cost, but this is rare and exceptional, limited only to selected areas, particular the very poor sectors. Given the limited amount of government subsidies available to fund new investments, tariffs will inevitably have to be raised and used as a source for repaying debt incurred to make new investments.

Cost reductions due to improved efficiency brought about by private sector participation could mean that price levels that were not sustainable under public provision could now cover costs. However, in situations where tariffs are far below costs, efficiency improvements would not be able to negate the need in many situations for tariff increases, at least in the absence of continued subsidization by taxpayers.

What are the impediments to achieving cost-recovering tariffs? There is the notion that the poor cannot afford increased tariffs. To make matters worse, the required tariff increases can be magnified when existing systems have incurred so much losses, including technical losses due to inefficiency and commercial losses due to theft. In addition, politicians are not keen to implement tariff increases. They fear that to do so would erode their political good will and benefit their opponents in the next election.

In the water sector, in particular, the urban poor do not suffer from high tariff because many of them are unconnected to the system. The urban poor are able and willing to pay and are, in fact, already paying water vendors and other informal sources ten to twenty times the cost of piped water for their supply. By comparison, monthly power bills, which consumers tend to pay willingly, amount to four times monthly water bills on average. The important thing is to get the poor connected. If subsidy is to be provided, it should go toward connection, which is the major hurdle for extending water services to the poor.

At this point, I would like to cite the case of privately funded roads where there are no user charges. India is building inter-city highways by bidding out and awarding design-build-finance-operate contracts to private concessionaires. The concessionaires are to be paid out of a pool of funds coming from a special levy on petroleum. All motorists, not just the users of the particular highways being financed, pay for the capital and operating costs incurred by the concessionaires.

Lesson Four: local currency financing is best suited for projects dependent mainly on local currency revenues.

Experience in Asia and elsewhere (e.g., Latin America) illustrates that international project finance usually carries the risk of currency mismatches in the financing package. This is true particularly of power, water, and toll road projects, which have revenues in local currency. Telecommunications and port projects normally generate significant foreign exchange revenues. The need to

resort to foreign debt and foreign equity generates service requirements in foreign exchange. Even equity financing by foreign investors, however, carries exchange risks. This is because in the take-or-pay contracts with state-owned utilities, such foreign equity investments are protected against currency risks and are guaranteed minimum returns.

Substantial risks associated with currency mismatches were exposed in the 1997 Asian financial crisis. Few infrastructure projects can withstand brutal devaluations ranging from forty percent to fifty percent as experienced in Indonesia and the Philippines. Even projects with built-in pass-through mechanisms for adjusting tariffs to account for currency depreciation in their respective offtake agreements also suffered as the affordability levels of consumers decreased. The sustainability of increasing tariffs due to devaluation was a major issue. The root problem is that capital markets in most Asian countries are not developed deep enough. This prevents a tailoring of local currency debt to finance long-lived assets.

Hence, there is a priority on programs to deepen the domestic capital market, particularly the bond market. An example of such program supported by ADB is the Asia Bond Market Initiative, which was endorsed by the so-called ASEAN+3 in December 2002. ASEAN+3 includes the ten member countries of the ASEAN (Association of Southeast Asia Nations—Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam) plus the PRC, Japan, and Republic of Korea—countries constituting East Asia. The purpose of the Asian Bond Market Initiative is to better circulate local money within the region and funnel it into Asian public and private sector bonds.

Many Asian countries are also, on their own, and sometimes with assistance from ADB, pursuing policy reforms to create an environment conducive to developing domestic bond markets. To boost these efforts, ADB plans to issue its own local currency denominated bonds in selected developing Asian countries as benchmarks for long-dated issues. Initial targets are India, PRC, Philippines, and Thailand. The local currency proceeds of the bond issues will be used by ADB for lending to infrastructure and financial institutions in the respective host countries.

Aside from generating local currency funds through bond issues, ADB is also planning to perform cross-currency swaps with either the host governments or market institutions as counter-parties, depending on the degree of development of the domestic financial markets. In January 2004, ADB approved its first swap and financing facility. This involves local currency financing of \$200 million equivalent for the Philippines. The swap is with the Treasury of the Philippine Government. The related peso lending facility will provide long-term, fixed rate peso-denominated loans to selected banks in the Philippines to lend to infrastructure and other businesses without any sovereign guarantee.

Local bond market development is a long process. In the meantime, ADB and other international financial institutions are also undertaking other schemes

to facilitate local currency financing by local lenders. For instance, ADB uses its partial credit guarantee instrument to provide comprehensive all-risk coverage for part of a lender's debt exposure. By offering this guarantee, ADB is encouraging local lenders to stretch out tenors and match financing requirements of long-lived infrastructure assets. This guarantee is also used for risk sharing, i.e., to increase the lending appetite of local lenders for larger amounts. With many Asian countries now enjoying very liquid banking systems, using ADB's guarantee is more suitable than ADB funding these local lenders with loans. The ADB partial credit guarantee is also available for local currency bond issues by infrastructure companies.

Other international lenders, including export credit agencies, are also trying to use their guarantee instruments to facilitate local currency financing. Some other international lenders have supported local currency lending by local banks by making dollar deposits in the local banks to collateralize the local currency loans by such banks. The use of foreign currency deposits as collateral can also support third-party loans such as by local insurance companies by coursing the deposit to a trustee in the local banking system.

In the large economies of the PRC and India, local banks are now very liquid and are able to provide long-term local currency loans from ten to fifteen years at very competitive interest rates. Thus, in these countries, there is less dependence on foreign banks for project finance. Additionally, Malaysia and Thailand have local banks that are now active in financing infrastructure projects. However, one drawback is that the interest rate is not fixed for the whole tenor of the loan but instead goes for periodic resetting.

Not every developing country will be able to promote a domestic bond market to meet the growing need for infrastructure. Countries relying on foreign borrowings for their infrastructure requirements need to find a way to manage the associated exchange risk. One proposal is a devaluation liquidity backstopping facility, which was recommended in 2003 by the World Panel on Financing Water Infrastructure chaired by Michel Camdessus, former Managing Director of the International Monetary Fund (and in which I participated on behalf of ADB). This facility is designed to enable service providers to continue meeting foreign currency obligations (such as debt servicing) that suddenly become more onerous following a large devaluation. An international agency with an excellent credit rating (one or more of the multilateral financial institutions would be natural candidates) would provide the facility. It would pay the foreign lenders the part of the debt (and possibly equity) service which exceeds the reimbursement capacity of the project. The amounts paid by the facility would create long-term loans to the national government (or to the local government with a guarantee by the central government). Its loans would in turn be guaranteed or repaid by the host government, which would recoup the proceeds from a specific surcharge on tariffs over a period that is politically and socially feasible. This approach would generate sufficient revenues over the long term to repay the loan.

#### IV. CONCLUSION

I would like to end my presentation with some thoughts on ensuring sustainable private sector participation in infrastructure. For this, we need to go back to basics—focus on the economics of the project and alignment with the interest of the host country. Economic rates of return should exceed financial rates of return. The project must be backed by a viable commercial tariff structure, reflecting the customer's willingness and ability to pay. Exclusive concessions must be awarded on a transparent and competitive basis. And finally, the project must be seen and accepted as a fair deal for all stakeholders.

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