

# **Vietnam**

## **Country Framework Report on Private Participation in Infrastructure**

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## Acknowledgment

This Country Framework Report for Vietnam is one of the first in a series of country reviews aimed at improving the environment for private sector involvement in infrastructure. Prepared at the request of the Government of Vietnam, Country Framework Reports have three main objectives:

- To describe and assess the current status and performance of key infrastructure sectors.
- To describe and assess the policy, regulatory, and institutional environment for involving the private sector in those sectors.
- Through the above, to assist policymakers in framing future reform and development strategies and to assist potential private sector investors in assessing investment opportunities.

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The report was initiated by Andrew Steer, the World Bank Country Director for Vietnam and prepared by a core team led by Aldo Baietti (team leader) and Russell Muir (Country Framework

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## Executive Summary

### **Vietnam's Recent Performance in the Infrastructure Sectors**

**Significant improvements in the supply of infrastructure have been made in recent years...**

The dramatic increase in the provision of infrastructure services in Vietnam since the late 1980s greatly facilitated rapid growth in GDP and exports. In the transport sector, the Government has accepted several large loans to rehabilitate and expand the roads and waterway networks while in the power sector, electricity generation has doubled and crude oil production tripled. Historically, increased public spending and institutional reforms in the state sector have contributed to this marked expansion in infrastructure services.

***...but the performance is still short of the Government's targets ...***

Despite these laudable developments, the infrastructure in Vietnam suffers from a number of major inadequacies which the Government recognizes. The two tables below highlight the performance of the state-owned enterprises and government service agencies which dominate in all

sectors of infrastructure in Vietnam. Even with some improvement in performance in recent years, the current indicators are still below the Government's own targets for the sectors. This performance is set against international benchmark indicators such as, coverage and access, efficiency measures of physical performance, and quality standards.

In addition, many of the state-owned infrastructure companies in Vietnam are characterized by poor financial performance and rely heavily on subsidies from the state budget or ODA funds to fund both maintenance and capital investments. These poor financial results are a consequence of a number of complex inter-related factors including: (i) tariff levels which are too low to cover all costs of operation and provide a fair return on the local investment capital; (ii) weak management know how and commercial orientation; and (iii) the perceived need by state-owned firms and organizations to achieve social objectives at the expense of financial and commercial ones. Lastly, the impact of the recent East Asia crisis has had a negative impact on the Government's overall financial position. In recent months, this has been characterized by large and

**Table 1. Vietnam's Infrastructure Performance Compared with Neighboring Countries**

	Electricity		Water		Telephone mainlines per 1,000 people/e	Railroad traffic density (1,000,000T U/km)/f
	Access to electricity (%)a	Transmission and distribution losses (%)b	Access to safe water (%)c	Unaccounted for water (%)d		
<b>Vietnam</b>	<b>51</b>	<b>16</b>	<b>47</b>	<b>69</b>	<b>21</b>	<b>1.1</b>
India	88	18	85	26	19	10.1
Lao PDR	14	n.a.	51	33	5	n.a.
Indonesia	39	12	65	53	25	3.2
Philippines	58	17	83	47	29	0.5
Thailand	87	9	89	38	80	3.9
Malaysia	90	11	89	36	195	1.5

a/ Vietnam's figure is for 1996 and provided by Ministry of Planning and Investment. Figures for other countries are for 1994 and are from Asian Development Bank Electric Utilities Databook.

b/ Vietnam's figure is for 1998 and provided by the government of Vietnam. Figures for other countries are for 1996 and are from World Development Indicators.

c/ Figures are for 1996 for Vietnam, Lao PDR and Philippines, 1995 for Thailand and Malaysia, 1993 for India and Indonesia. All are from World Development Indicators.

d/ Figures are for capital cities in 1995. Data for Vietnam (Hanoi) is provided by Hanoi Water Business Company, for the Philippines (Manila) by Metropolitan Waterworks and Sewerage System, and figures for other countries are from Asian Development Bank's Water Utilities Databook.

e/ Figures are from for 1997 and are from ITU.

f/ Figures are from World Bank Railways Database.

**Table 2 . Vietnam's infrastructure performance compared to Low- Income Countries and East Asia Region**

	Vietnam	Low Income/a (excl. India and China)	East Asia and Pacific
Electricity T & D losses (%), 1996/b	16	19	9
Electricity production per capita (kwh), 1996	225	238	902
Access to safe water (%)c	47	55	77
Average cost of local call (US\$ per three minutes), 1996	0.108	0.098	0.110
Telephone mainlines per 1,000 people, 1996	21	16	60
Telephone mainlines per employee, 1997	16	40	113
Roads, paved (%), 1996	10-15	18	n.a.
Paved roads in less than good conditions (%), 1996	91	20/d	n.a.
Railways (km/1,000 people), 1995	0.039	0.106	n.a.

Source: World Development Indicators, World Bank Rail Database

a/ Low Income countries are those with GNP per capita \$785 or less.

b/ Figures are for 1998 for Vietnam and 1996 for East Asia and Low income countries.

c/ Figures are for 1996 for Vietnam and 1993 for East Asia and Low income countries.

d/ Best practice for developing countries.

sudden drops in exports and a loss of confidence in Vietnam as a foreign investment destination.

**.... and yet the private sector has had a limited role in the infrastructure sectors.**

The policy of promoting PPI is not new in Vietnam. For instance, on December 23, 1992 the Government amended the Law on Foreign Investment to make way for "Build Operate and

Transfer" (BOT) projects. A year later, the BOT Regulations were enacted by Government Decree. Yet, after six years there is still little evidence of private participation in the infrastructure sectors in Vietnam. The projects completed have been undertaken on an ad hoc basis, without any clear evidence of a policy designed to promote private participation in infrastructure (PPI). As such, there are still no replicable models for PPI projects in Vietnam which can provide investors the assurances that future transactions can be completed in a transparent and timely manner. The reasons for this are complex and vary from sector to sector, but three general points are worth noting:

- First, some sectors such as airports, existing ports, railway, and telecommunications are restricted to private ownership and management.
- Second, there are a number of other

restrictions on the ability of non-nationals to invest in the infrastructure sectors. As such, with extremely limited financial and technical capacity in the purely domestic private sector, little or no development has taken place.

- Third, the general business environment, while slowly improving, still makes investment in long-term, capital investment projects in infrastructure highly risky for both private sponsors and lenders. For example, tariffs in the water and power sector are currently set at levels below full-cost recovery and there is no transparent, independent system in place for the regulation of this and other issues impacting infrastructure operations.

In summary, very little progress has been made in PPI in Vietnam, as reflected by the sector-by-sector review below:

- **Power:** Only one Independent Power Project is in operation - a 375 MW plant in Hiep Phuoc near Ho Chi Minh City operated by Taiwanese company selling primarily to an industrial zone. There are several other BOT projects for generation in the pipeline such as Wartsila's 120MW plant at Ba Ria and the Phu My 2.2 combined-cycle gas turbine plant. However, some of these projects have been stalled in negotiations for significant periods of time. The Government has announced interest in pilot equitization projects for power distribution but no firm plans have been developed to date.
- **Water:** There is one BOT for water supply in HCMC which is at an advanced stage of construction. This project - the Binh An Water Corporation consortium headed by a Malaysian corporation - has a 20-year contract to supply 100,000m<sup>3</sup>/day treated water mainly to Bien Hoa Industrial Zone. However, this US\$36 million project is has yet to come to financial closure. Other BOT treatment facilities by Lyonnaise des Eaux and M-Power are being considered but none of them are near the final stages of negotiation.
- **Telecommunications:** Within the general scope to accelerate the development of telecommunications service in the country, the Government has promoted private sector participation in this sector. However, for various reasons including restrictions on foreign ownership and low domestic capacity, PPI in telecom has been largely confined to the funding of additional capacity, rather than direct management of the service level operations. As such, there are a number of Business Cooperation Contracts (BCCs) for international and local networks involving firms such as Telstra, France Telecom and NTT. However, these contracts do not involve the private sector partner in the direct management or operation of the systems. There are also a number of joint ventures for the manufacture of telecommunications equipment.
- **Ports:** There is one new privately owned and operated 1.2 million ton capacity bulk and steel facility in Baria Serese.

In addition there is a private container port facility in Ho Chi Minh City and an emerging private industrial zone with a port at Dinh Vu Industrial Zone. The equitization of facilities at Da Nang and Ben Nghe are under consideration as is the BOT construction of a transshipment center and landbridge through central Vietnam.

- **Roads and Bridges:** A Taiwanese company operates toll bridge and 17.8km of highway between the export processing zone of Saigon South and Highway 1. Several other BOT roads and bridges are currently being promoted or negotiated with unsolicited bidders. A BOT project for a major highway connecting Vung Tao and HCMC is being negotiated with Daewoo Corporation.
- **Rail:** There has been no significant private participation in the rail sector and very little equitization planned of core services. However, the government has recently announced its intention to seek bids for the rehabilitation of one line and has supported the idea of a separation of infrastructure from rolling stock.
- **Aviation:** Although the Government once solicited bids for a turnkey construction contract for an expansion to the Ho Chi Minh City airport, it was eventually suspended. Airports have since been brought under the auspices of the Prime Minister's office and are no longer discussed by the Government in relation to PPI initiatives.

## Why Should Vietnam be Interested in Private Participation in Infrastructure (PPI)?

*Government faces a dilemma in terms of satisfying growing demands for infrastructure combined with serious constraints in public funding...*

The deficiencies in the utility and transport infrastructure sectors must be resolved if Vietnam wishes to continue its drive to reduce poverty and substantially improve the well being of its people. According to the Government's own forecasts, the country must commit US\$ 3.0 billion annually, or around 12 percent of GDP, in each of the next three years in order to meet the infrastructure needs of the nation. Moreover, much of these investments will be in foreign exchange. State credit from banks is unlikely to be a significant financing source, given that bank restructuring is underway. Government has prioritized its funding such that its investment in infrastructure is unlikely to exceed 3 percent of GDP. ODA, even with accelerated disbursements, is unlikely to provide more than an additional 2 percent of GDP, thus leaving a significant gap of 7 percent of GDP, or US\$2.1 billion annually.

## *...and the Private Sector provides a critical way of filling this gap*

Financing of such a gap will need to be sought from private sources. But, these can only be effectively channeled if investors perceive that they will receive fair and equitable treatment under a pro-private sector environment that minimizes the non-commercial risks of these capital intensive projects. In recent years, many countries in the region and around the globe have transformed their public services to run like businesses rather than bureaucracies, and to introduce competition in infrastructure. In many cases, governments have looked to the private sector to provide technical expertise and new investment in infrastructure. The role of the private sector in infrastructure has been in two main areas:

- *Privatization of existing assets* including investment and management of the service delivery level (e.g. Manila water supply concession; the unbundling and privatization at the generation and distribution level in power in Latin America; and, liberalization of the telecommunications sector in the Philippines); and

- *Greenfield investment* in new assets (e.g. BOT projects in power and water in Thailand, the Philippines; toll roads in Malaysia and China).

On a global basis, private companies invested a staggering US\$352 billion in all infrastructure sectors during the period 1990-97, of which US\$212 billion went for divestitures and US\$141 billion for greenfield projects. Significantly, Vietnam's neighboring countries in East Asia accounted for over 36% of this overall figure. Yet, Vietnam has not benefited from this growth in private finance and expertise and the role of the private sector has been confined to a very few selected greenfield projects.

#### **What benefits can Vietnam expect from Private Participation in Infrastructure?**

All of the countries that have embarked on PPI programs involving significant changes in ownership relationships have done so with a view to securing specific benefits from PPI. The key advantages which Vietnam can expect from increased PPI include:

- *Increased Efficiency in Investment and Operations.* While private finance is important, it is not the fundamental reason for bringing private investment into the infrastructure sectors. In Vietnam, too much water is lost, too much power is wasted, too many roads are in poor condition, and too much rolling stock is not operational. Experience has shown that private participation substantially improves infrastructure companies' performance since private operators are driven by strong incentives to contain costs and increase productivity in order to realize returns on their investments. With PPI, there is strong evidence of lower cost overruns on construction, greater productivity from staff and more rapid adaptation of new

technologies and processes. Private infrastructure arrangements have allowed countries to access modern technology and skills and expertise in running complex enterprises in a commercial manner. Finally, increasing efficiencies through PPI at existing facilities may make costly new construction and expansion unnecessary. This report presents evidence that private owners can achieve significant improvements in productivity through better use of existing assets. Considerations of this kind are important in Vietnam, where skilled resources are extremely limited.

- *Access to Private Finance and Increasing Government Revenues.* If Vietnam establishes a policy regime and business environment that is suitable for PPI, it can expect investment flows in two areas: greenfield investments (such as the proposed Phu My 2.2 project) and concessions/sales of existing companies. This policy regime for greenfield projects should include a careful assessment of the costs and benefits of additional private sector investment - particularly independent power projects and bulk water supply contracts - with particular emphasis on ensuring that the private sector bears a suitable burden of the commercial and market risks associated with these projects. Nonetheless, in the right circumstances, access to private finance - particularly when this is focussed on the sale of existing assets - can replace the need for public expenditure and indebtedness in infrastructure, thus allowing governments the choice of channeling scarce fiscal resources to the core functions of Government in the social and health sectors. Where privatization is accomplished through

the sale or concessioning of existing enterprises, the revenues generated may also be used to pay down public debt. This policy has been adopted by a number of countries in Latin America. Lastly, privately owned infrastructure enterprises throughout the world - most of which are operating efficiently - have become a significant source of ongoing taxation revenues, in contrast to the large budget-drains represented by public enterprises in many countries.

- *Potential to Stimulate Foreign Direct Investment.* Greater efficiency in the infrastructure sectors can rapidly improve the competitiveness of all the manufacturing and service sectors, ultimately leading to further growth in foreign direct investment. Experience in reforming economies in Latin America, Eastern Europe and East Asia (e.g. Thailand, the Philippines, Indonesia, China) confirms the potential of infrastructure privatization or greenfield operations as a way to catalyze large inflows of foreign direct investment (FDI). This will be particularly important in Vietnam where FDI has fallen in recent months, reversing the strong growth trend in the previous three years.

### **What are the Key Policy and Regulatory Factors which have Influenced the Development of PPI in Vietnam?**

#### **While the Government continues to make efforts to improve the business environment...**

The Government of Vietnam has been trying to obtain private investment in infrastructure since 1993 and it has embarked on a series of reforms aimed at improving the business environment. Initiatives to this end have included:

- the enactment of a comprehensive decree for BOT (Build-Operate-Transfer) projects and other incorporated and unincorporated joint venture project structures including recent amendments;
- obtaining cabinet-level approval to implement projects on a BOT or joint-venture basis (e.g. in January 1999 the Government announced the selection of a private company through a competitive process for the development of the Phu-My-2-2 power plant; in April 1999 Petro-Vietnam and its partners signed three memorandums of understanding for the development of the first major natural gas project in Vietnam);
- the announcement of phased increases in the tariffs for electricity bringing prices significantly closer to the estimated long run marginal cost of supply
- the allocation of some responsibilities to line ministries to develop and negotiate with private infrastructure investors; and
- the establishment of a part-time BOT group in MPI in 1998 to help the line agencies in the implementation of BOT type projects in infrastructure sectors.

Over the past year, the Government has also held a series of meetings to discuss the business environment in Vietnam with representatives of the private sector and has made considerable efforts to address their legitimate areas of concern in recent months. Most recently, the Government issued a Decision to improve the country's business climate for foreign investment and from July 1, 1999 several measures intended to cut the costs of doing business will be introduced. First differential pricing for Vietnamese and foreigners will be gradually removed, starting with initial

reductions in rates for telecommunications, electricity and water. Second, foreign-invested enterprises will no longer be required to denominate the salaries of local staff in US Dollars. Third, the range of tax breaks, import duty exemptions and other incentives applied to "specially encouraged" foreign-invested entities, was widened to encompass a greater variety of enterprises. Fourth, the registration fee for foreign enterprises starting operation in Vietnam, and other business fees, are to be reduced. Fifth, personal income tax rates on Vietnamese workers/managers in foreign invested enterprises will be reduced and legislation to that effect is being drafted. Sixth, work permit procedures will be simplified for foreigners.

... **However, a number of problems remain**

Despite the Government's continuing efforts to encourage private investment a number of obstacles remain in the way of PPI projects.

- *Legal Environment.* The legal framework for PPI has been established through passage of legislation starting with the 1987 Foreign Investment Law, the 1993 decree to introduce concepts of BOT, and the 1996 decree to expand BOT schemes. In January 1999 further amendments were introduced to the law Governing BOT contracts. Nonetheless, some residual legal restrictions on PPI remain from the investors' perspective. The five main areas of concern are foreign exchange, state guarantees, loan security, lenders step-in rights and dispute resolution.
- *General Business Environment.* Excessive bureaucracy is also a commonly cited source of concern. For example, private consortia had to abandon projects to build or rehabilitate port facilities at Vung Tao and in Ben Nghe after

years of prolonged negotiations with the government. Daewoo Corporation's negotiation over a highway BOT project has been ongoing for three years.

- *Absence of a Regulatory Regime.* Vietnam currently lacks a well-developed regulatory framework that will enable the country to pursue a path of increased PPI. Existing arrangements cannot ensure that private investors and operators will be forced to abide by clear "rules of the game", partly because regulators (such as DGPT, VinaMarine and VR) are too closely involved in both policy making and the operation of their respective sectors.
- *Predominance Towards Negotiated Transaction Rather than Competitive Bidding.* While the Government has established transparent bidding procedures through Decree 88/1999/ND-CP, most projects to date, (all BCCs in telecom sector, the only BOT project in water, most power BOT and all transport projects) have been negotiated transactions. Strong interest expressed by reputable firms in the Phu My 2.2 project, the first competitively bid BOT project, confirms the importance of a competitive process.

**What Strategy Should Vietnam Adopt to Increase PPI?**

If the Government decides that it wishes to pursue a policy which places the foreign and domestic private sector in a pivotal role in the provision of infrastructure services, there are a number of different strategies that it could consider to achieve this objective. These fall into two broad categories: short term and medium term strategies, both which will require an alternative model for PPI.

### ***A strategy in the Short Term: A few bold moves....***

Vietnam's track record today on PPI is limited - a feature which potential international sponsors and financiers are quick to identify as a weakness when considering any new investments. It is therefore important for the Government to make a serious attempt to unblock financially and economically viable private investments which are stalled in negotiations and begin to assemble a track record of PPI successes. This means that timely decisions have to be made on the terms and conditions of a few key projects that are in an advanced stage of negotiation. Even if the decision may not be to go ahead with a particular project, it provides a clearer signal to a private sponsor than no decision at all. As such, there is much to be gained from coming to a firm decision - one way or another - on the two or three outstanding BOT projects in the power and water sector. The quick equitization or concessioning of an existing port under a competitive bidding process might also rejuvenate confidence in the Government's willingness to implement a serious PPI program, given the difficulties faced by international operators during their past attempts to invest in Vung Tao and Ben Nghe.

### ***... and continued progress with the business environment***

However, to achieve closure in a few outstanding PPI projects, a number of specific problems must be resolved in terms of the legal environment and the general business climate. For instance, the Government could facilitate further PPI initiatives by making some additional changes to some of the exiting laws and regulations governing issues such as foreign exchange issue, state guarantees, loan security, lenders step-in rights and dispute resolution.

Equally importantly, investors have complained about the absence of a central coordinating body in Vietnam for the PPI program and a general lack of experience among the officials selected to negotiate large infrastructure deals (both greenfield projects and concessions or equitization of existing operations). The Government should consider recruiting additional international legal and financial advisors to assist it in negotiating and closing transactions as it has done in the Phu-My 2.2 project.

Gaps remain between the Government's intent to proceed aggressively with its PPI strategy, on the one hand, and the realities of decision-making processes and business practices in Vietnam, on the other. Notwithstanding the establishment of the part-time BOT Group in the Ministry of Planning and Investment, the Government's ability to identify, design and execute PPI activities is limited. Policy makers and the technical staff of line ministries brought into dealings on BOT projects do not have an accurate picture of their respective roles, responsibilities, and requirements. The Government should consider establishing a "one-stop-shop" - a PPI Center - with predictable step-wise procedures for negotiating with the required authorities within a defined time frame. This should include responsibility for coordinating both "greenfield" investments or introducing different forms of private participation into existing companies through methods such as leases, concessions or equitization. The Government will thus limit the risks confronted by the private sector in negotiation, allowing them to calculate a cost of capital that reflects only the investment itself, and is not bloated by the risks associated with an unclear bidding process and an unpredictable legal and policy environment.

## The Medium Term: An alternative model for private participation - beyond BOTs

In developing a reform strategy for effective PPI, Vietnam has the advantage of being able to draw on the lessons of experience of a growing number of countries that have successfully addressed similar issues. To date, the Government has looked to the private sector only as a means of filling financing gaps for additional capacity - i.e. bulk water supply or generation capacity - rather than seeking the broader efficiency benefits that come with private ownership and management. In some instances it may be unwise for the Government to expand expensive capacity and for utilities and the Government to assume further financial obligations if demand could be met by improved efficiency at the service level. A better alternative would be to bring in the private investor to tackle the real inefficiencies at the service and customer level thus reducing requirements for additional expensive capacity.

### Impact of East Asia Crisis on BOT Projects

In the wake of the recent financial crisis in East Asia, the choice of PPI modalities and the hierarchy of preferences have shifted markedly. In particular, the crisis has exposed the weaknesses of the typical BOT scheme for bulk supply where core market reforms in the sector are not in place and where retail tariffs cannot be readily adjusted to recover costs in full. In a separate review undertaken by the World Bank in June 1999 on the impact of the East Asia crisis on PPI, there is strong evidence to suggest that Governments should approach these types of schemes very cautiously. Following the crisis, Governments in East Asia and their state owned utilities have amassed massive liabilities as a consequence of some of these poorly negotiated BOT schemes, particularly with IPPs in power. In Indonesia, the liabilities are estimated to surpass \$10 billion and over \$6 billion in the Philippines. Many of the utilities in these countries are effectively

bankrupt or are under serious financial distress. Moreover, the financial pressures of the crisis have accentuated the risk allocation weakness in these schemes. It has been found that under the terms of many of these BOT projects, most downside financial risks are borne by governments, thus almost fully negating the benefits of introducing private sector participation in the first place. The Report recommends that future PPI in the region should be undertaken in light of three fundamental guidelines. Namely: the Government should strive to restructure sector and privatize state-owned monopolies such that (i) market risks can be borne by the private sector; (ii) service level inefficiencies must be addressed early in the reform process; and (iii) private finance should be a complementary benefit, not the sole objective of PPI.

In the case of Vietnam, this suggests four main reform elements which should drive the Government's policy framework in the medium-term. These are:

- **Market Reform:** Restructuring markets to facilitate competition;
- **Financial Discipline:** Establishing cost-covering tariffs;
- **Regulatory Reform:** Establishing clear rules of the game; and
- **Ownership Reform:** Deciding the form and extent of private involvement.

**Market Reform.** International experience has highlighted that one of the critical elements which determines the level of efficiency in infrastructure is the degree of competition which exists in the sector. These reforms have involved introducing competition in two main ways: competition in the market and competition for the market. In many countries undertaking infrastructure privatization programs, private participation has been combined with the restructuring and "unbundling" (e.g. the separation of different elements of a service such as power into generation, transmission and

distribution) of infrastructure markets to enable beneficial competition in potentially competitive segments of these industries. Competition between private firms, or between public and private firms, can have an important impact in bringing market pressures to bear, forcing firms to reduce costs, provide services to consumers at competitive prices, and provide a high quality of service. Even in situations where competition "in" the market is not possible, lower costs and efficiency can be derived through competition "for" the market, through an open and competitive bidding process where firms bid on price, least subsidy, or lowest tariff to consumers.

In Vietnam's case, the Government should consider a variety of market reforms at the industry level. These might include options such as: (i) separating generation, transmission and distribution services in the power sector while still maintaining the enterprise in the public sector in the short-term to introduce efficiency; (ii) separating VNPT's core activities such as postal, long distance, mobile and value added services; and (iii) restructuring Vietnam Railways by continuing to spin off its non-core business units and separating rolling stock from infrastructure operations; and (iv) increasing competition in the port sector by decentralizing the major ports and allowing them to set their own tariffs at competitive levels

**Financial Discipline.** An important element of the proposed infrastructure reform strategy will be to move towards full-cost recovery and the removal of cross-subsidies in tariffs between different classes of consumers. Presently, most utilities in Vietnam are charging prices well below their costs with the result that the SOEs are unable to expand services beyond high density areas or even maintain the quality of existing services. However, tariff reform

and re-balancing, even when these changes are phased in over time, may give rise to charges that many users in low income countries cannot afford to pay. This is a particularly important and sensitive issue in Vietnam. Nonetheless, the Government must face the reality that there is no way out of this financing dilemma. Either costs must be recovered from consumers who make use of the service through cost-covering charges, or from the population in general through taxation. While the latter may be a viable way to pay for the shortfall, it distorts the fundamentals of the operation and gives a false notion of the true economic cost of the service. The alternative to the recovery cost option is widespread inadequacies in infrastructure which leave many who are willing to pay for services without access to these services. In addition, most private investors will not be willing to make large investments in infrastructure unless they are allowed to have a certain degree of autonomy over their operation and do not need to rely on government's political patronage to recover the full costs of operation.

**Business Environment Reform.** Vietnam's business environment has been improved through the passage of new legislation and an easing of bureaucratic pressures in recent years. However, as was noted above, there are still some fine tuning changes which will be necessary to maintain interest in PPI. In addition, it is important for the Government to begin the task of setting up independent, transparent regulatory bodies that establish clear "rules of the game" to govern the scope, rights and obligations of the private sector investors, consumers and the Government.

**Ownership Reform.** It is important for the Government of Vietnam to recognize that Private Participation in Infrastructure (PPI) can take

many forms, depending on the nature of the rights and obligations granted to the private sector. While all forms of PPI promise benefits, the more ambitious options such as concessions or divestiture present the largest benefits as highlighted in the table below.

to these concession options - particularly in the area of cellular operations.

*Water.* It is recommended that serious consideration be given to more far-reaching changes in the sector by pursuing a pilot lease agreement or a concession contract in an urban

### Benefits Grow with Degree of Private Involvement

Pontential Benefit	Management Contract	Lease	BOT	Concession	Demonopolize	Divest
Management Expertise	✓	✓	✓	✓	✓	✓
Tariff Discipline		✓		✓	✓	✓
Access to Private Capital			✓	✓	✓	✓
Capital Market Development			✓	✓	✓	✓
Sales Revenue						✓

The key recommendations are summarized below:

*Telecommunications.* In the case of Vietnam, the sector where more far-reaching reforms are likeliest to be the easiest and have the biggest impact on service levels and efficiency is telecommunications. Immediate attention should be given to reforming the BCC contracts. To ensure ongoing success it is recommended that BCCs be changed into more straightforward commercial arrangements such as, joint ventures that permit private operations, concessions or licensed operations. Moreover, there is a need to restructure the sector, separate post and telecommunication operations of VNPT, increase competition in all segments of the market, and create as transparent and efficient regulatory process where private participation in the sector is encouraged. Experience from other parts of the world suggest that with a transparent regulatory environment in place, there is likely to be a strong and rapid supply response form the private sector

area. These approaches which falls short of full divestiture give the private partner increased responsibility for the operation of the utility. In Vietnam's situation, it may well be that private sponsors and financiers view the investment and financial risks to be high at the present time and, as such, there may be little inclination on their part to commit investment and finance capital without substantive political and risk coverage from the Government. In such circumstances, the Government may wish to explore leases in parallel with public financing and rehabilitation of the system. Under such an arrangement, a system would be rehabilitated with public financing and then turned over for commercial operation to private operators who assume the market and commercial risks associated with the business. The Government on the other hand would need to ensure the de-politicization of tariff and allow the private operators to run the business within specified and agreed rules of the game. This model,

if successful, could then be graduated to a full concession, whereby investors would commit their own financing to the operation as greater confidence on the regulatory framework is developed.

*Power.* Major ownership reforms in the power sector should await the decisions on the type of market restructuring that the Government wishes to pursue. However, once the market-structure decisions have been taken, the Government's priority in ownership reform should be the equitization or concessioning of distribution perhaps starting with some pilot distribution projects. This would involve transferring ownership and management control to private parties, foreigners included. With distribution privatized, the problem of getting new generation projects privately financed will be greatly reduced, because private generators will have more confidence in getting paid if they sell power to financially strong, efficient, privately owned distribution companies. Privatizing distribution will also help the government to bear less risk in private generation projects, thereby strengthening its fiscal position.

*Ports.* The government should consider the decentralization of port tariffs and management and then pursue the concessioning of terminal operations for existing facilities. By concessioning terminal operations at existing ports, the Vietnamese or local governments can benefit from the expertise and access to capital of major port operators without having to concede the ownership of waterfront property or underlying infrastructure. The concession period should roughly parallel the life expectancy of major investments which would then be converted back to the government for reconcessioning after the contract has been concluded.

*Airports.* The government should consider the concessioning of terminal operations and/or airside services. Although a few countries have conducted outright sales of their airports and several countries have allowed the private sector to build greenfield air facilities, allowing private operators to manage and invest in existing terminals and runways at publicly owned airports under a lease or concession agreement is an economically viable option which may prove to be more politically acceptable than total private ownership. Passengers and carriers benefit as private sector operators have been able to modernize facilities and shift costs away from airside fees by developing landside business opportunities. This encourages air travel and tourism development.

*Railways.* Following the unbundling and equitization of non-core assets, such as hotels, rolling stock manufacturing and meal preparation, consideration should be given to the corporatization and eventual concessioning of rolling stock operations and perhaps the separate concessioning of infrastructure services. While the process of bringing the private sector into the railroad industry in Vietnam is probably not going to be a single step, several nations have pursued the path of concessioning their rail operations in order to reduce the public fiscal burden associated with rail subsidizations and to improve a deficient service.

## **The Structure of the Country Framework Report**

The main objectives of the Country Framework Report on Private Infrastructure in Vietnam are two-fold:

- To provide reliable information for potential investors on the current position of the key

### Summary of Key Actions

	Short-Term Actions	Medium-Term Actions	Longer-Term Actions
<b>Cross-Sectoral Issues</b>	<ul style="list-style-type: none"> <li>Amend laws impacting PPI projects</li> <li>Upgrade BOT Group to PPI Center</li> </ul>	<ul style="list-style-type: none"> <li>Rationalize Government bodies responsible for PPI</li> <li>Develop system for monitoring off-balance sheet risks of PPI projects</li> <li>Sector regulatory frameworks in place</li> </ul>	<ul style="list-style-type: none"> <li>Enact laws for PPI and to establish independent regulators in each infrastructure sector</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>Undertake study of optimal market structure and strategy for future reform</li> <li>Conclude pending transactions</li> <li>Implement tariff increases</li> <li>Pass Electricity Law and establish independent regulation</li> </ul>	<ul style="list-style-type: none"> <li>Restructure sector by separating generation and distribution from transmission</li> <li>Begin divesting distribution companies starting with a pilot transaction.</li> <li>Rationalize regional cross-subsidies</li> </ul>	<ul style="list-style-type: none"> <li>Move towards competitive markets</li> <li>Equitize a number of generating and distribution facilities</li> </ul>
<b>Water and Sanitation</b>	<ul style="list-style-type: none"> <li>Develop clear policies aimed at market reforms</li> <li>Develop plan for phasing tariffs to cost recovery levels</li> <li>Conclude Bihn Water BOT</li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement policy of tariff reforms</li> </ul>	<ul style="list-style-type: none"> <li>Conclude pilot lease or concession projects</li> </ul>
<b>Telecommunications</b>	<ul style="list-style-type: none"> <li>Change BCCs into joint ventures, concessions or licensed operations</li> </ul>	<ul style="list-style-type: none"> <li>Liberalize entry into all sub-sectors</li> <li>Separate posts from telecoms</li> </ul>	<ul style="list-style-type: none"> <li>Equitize some or all of VNPT's core businesses</li> </ul>
<b>Airports</b>	<ul style="list-style-type: none"> <li>Develop strategy for decentralizing control to encourage regional development and PPI</li> </ul>	<ul style="list-style-type: none"> <li>Consider concessioning terminal operations or airside services</li> </ul>	<ul style="list-style-type: none"> <li>Conclude several transactions of key airports</li> </ul>
<b>Railways</b>	<ul style="list-style-type: none"> <li>Further commercialize separate operating units</li> <li>Develop action plan for rail sector private sector participation strategy and</li> </ul>	<ul style="list-style-type: none"> <li>Separate non-integral services from core operations</li> </ul>	<ul style="list-style-type: none"> <li>Initiate concessions for rolling stock operations and infrastructure services</li> </ul>
<b>Ports</b>	<ul style="list-style-type: none"> <li>Decentralize and deregulate tariffs to encourage competition and eliminate cross-subsidization</li> </ul>	<ul style="list-style-type: none"> <li>Pursue concessioning of terminal operations or equitization of existing facilities</li> </ul>	<ul style="list-style-type: none"> <li>Invite private sector to develop new facilities only after full capacity of existing facilities has been revealed through private operations and investment</li> </ul>

infrastructure sectors in the country as well as the cross-cutting issues which have a direct bearing on the development of sustainable and efficient PPI;

- To describe and assess the supporting policy, regulatory and financial framework for attracting private participation in infrastructure (PPI) with a view to guiding future reforms.

The infrastructure sectors covered in the CFR are power, water, telecommunications, railways, roads, ports and airports. The Report is presented in a number of key inter-related sections as follows:

- **Part A: Cross-Sectoral Issues.** This section reviews the cross-sectoral issues impacting the development of private participation in the infrastructure sectors in Vietnam. The main topics covered are: general business environment; foreign investment regime; foreign exchange regime; tax regime; labor issues; environmental issues; and right-of-way issues.
- **Part B: Infrastructure Performance and Current Environment.** This section of the CFR examines a range of issues from the sectoral perspective. It includes a description of the structure, conduct and performance of the key infrastructure sectors, broad estimates of demand, public investment plans and the potential role of the private sector in fulfilling demand; and a description and assessment of the policy, regulatory and financing issues which on a sector basis will have a direct impact on the development and growth of PPI in Vietnam.
- **Part C: Government Action Program.** This section of the CFR outlines cross-sectoral and sector-specific recommendations for both short and medium actions flowing from the issues raised by the analysis in Parts A and B.



## CROSS SECTORAL ISSUES

Although the Government of Vietnam has, and continues to make, considerable efforts to improve the environment for private sector development, severe impediments remain which have direct consequences on the prospects for expanding PPI. The fact remains that - with the exception of the rural sector - much of the economy is still in the hands of the public sector. Moreover there are a number of obstacles that still need to be addressed if the private sector is to play a more significant role in the growth and development of the economy. These issues are addressed under the following broad headings:

- General Business Environment
- General Legal Environment
- Foreign Investment Regime
- Foreign Exchange Regime
- Tax Regime
- Labor Issues
- Access to Local Finance
- Environmental Issues
- Right-of-Way

### **I. General Business Environment**

#### **1.1. Trends in Foreign Direct Investment**

One of the key indicators of the relative attractiveness of a country's general business environment is the volume and quality of Foreign Direct Investment (FDI). In the case of Vietnam, the summary data below raises some important implications regarding the country's attractiveness as investment destination.

On the one hand, there is little doubt that Vietnam had been very successful in attracting a significant amount of foreign direct investment in recent years. Indeed, between 1994-97 FDI inflows averaged about US\$2.2 billion annually. In terms of impact on the economic structure of the country, FDI was equivalent to over 9% of GDP in Vietnam - well above those of China and Malaysia (5-6%). This made Vietnam the highest recipient<sup>1</sup> of FDI in proportion to the size of its economy.

On the negative side, a closer examination of the facts highlights that these large FDI inflows to Vietnam started to decrease dramatically even before the Asian crisis began in July 1997 at a time

<sup>1</sup> Among more than 100 developing and transition countries, excluding very small economies (with less than 1 million population).

**Table 1. FDI inflows to Vietnam (US\$ millions)**

	1991	1992	1993	1994	1995	1996
1997	1998*	<b>Total</b>				
Approvals	1,470	2,330	3,639	4,184	6,310	8,091
Actual	2,135	<b>32,224</b>				
	169	311	850	1,677	2,220	2,091

Source: FIAS

\* 1998 figures are annualized rates based on data for the first three quarters.

when worldwide FDI flows were still increasing, and Asia was still experiencing rapid economic FDI throughout 1998, and during the first quarter of 1999 was already down 68% compared with the same period last year. Equally importantly, the rate of projects that were actually implemented over period of 1991-1998 was disappointingly low. Although part of the fall registered in 1998 is certainly due to excess capacities and decreased liquidity in the region, the numbers suggest that there are more fundamental problems which are affecting Vietnam's ability to attract FDI.

### 1.2. Post-approval issues

The low implementation rate described above is partly explained by post-approval problems. These include excessive red tape, corruption, delays and uncertainties that investors face even after they receive an investment license, and restrictions on choosing the corporate structure and joint venture partners. A recent FIAS Report published in April 1999 concludes that the complex and opaque procedures in Vietnam can be as much of an impediment in doing business as those of China 13 years ago.

#### Post-Approval Delays: the Case of BOT Bulk Water Project

In the case of the private bulk water supply project for HCMC - the Binh An Water Corporation - there was a one year delay in the start of construction due to difficult right-of-way, resettlement and land use negotiations.

Land, in this case, was donated "free" by HCMC but the site was in a different province (Song Be) which would receive none of the services and thus reap none of the benefits of the BOT. Significant fees had to be paid by the BOT company for resettlement and land compensation before the project was approved and construction could commence.

### 1.3. Perceptions of Corruption in the Business Environment

There is great concern that advances made by the doi moi reforms aimed at improving the framework for investing in Vietnam have in recent years influenced foreign and domestic investors negatively due to fears of corruption at many levels in the bureaucracy. This has been expressed both formally and anecdotally by individual firms and private sector organizations in recent months.

Transparency International together with Göttingen University also shares those findings, Germany, which compiles and develops a **Corruption Perceptions Index**.<sup>2</sup> The 1998 index, which was released in September 1998 is developed based on information collected from extensive international publications and surveys. Out of 85 countries surveyed, **Vietnam** ranks poorly in terms of transparency and clarity in business practices, coming 74th, with a CPI score of only 2.5 out of a possible best of 10. This finding confirms the perceptions that corruption in Vietnam is not a trivial issue and can have a

<sup>2</sup> CPI relates to perceptions of the degree of corruption as seen by business people, risk analysts and the general public and ranges between 10 (highly clean) and 0 (highly corrupt).

serious influence on firms' investment decisions. In the case of PPI, these concerns are magnified, because these investments are inherently more risky, given their long-lead and gestation periods and the sunken nature of fixed assets.

A recent survey by the Vietnam Chamber of Commerce and Industry (VCCI) also confirms the existence of excessive bureaucracy in Vietnam. According to the survey, business-people in Vietnam spend more time grappling with bureaucratic red tape than attending to the needs of their businesses. Both state and private businesses spend fully one-third of their time getting approvals and passing inspections by the government's pervasive bureaucracy.

#### **1.4. Addressing Biases Against Businesses**

Over the past two years, foreign investors have become more vocal about some of the laws, regulations and practices which have added to their cost of doing business or have restricted them altogether. In other cases the concerns have had an impact on all businesses - both domestic and foreign. The Government has been increasingly sensitive to the concerns raised by businessmen in general and, in response, has issued Decision 53/1999/QD-TTg, dated March 26, 1999 to improve the country's tough business climate. Effective July 1, 1999, several measures to cut costs of doing business will be introduced, although more detailed implementing guidance is required in some areas. Some of the key announcement included changes to some of the discriminatory labor practices against foreigners (see also Labor section below) including the following:

- Differential pricing for Vietnamese and foreigners will be gradually removed, starting with initial reductions in rates for telecommunications, electricity and water.

- Foreign-invested enterprises will no longer be required to denominate the salaries of local staff in US dollars.
- The range of tax breaks, import duty exemptions and other incentives applied to "specially encouraged" foreign-invested entities was widened to encompass a greater variety of enterprises.
- The registration fee for foreign enterprises starting operation in Vietnam, and other business fees, will be reduced.
- Personal income tax rates on Vietnamese workers/managers in foreign invested enterprises will be reduced and legislation to that effect is being drafted.
- Work permit procedures will be simplified for foreigners.

## **2. General Legal Environment**

Foreign investors have reported that the Vietnamese legal system is complicated, and severely deficient in transparency, consistency and dependability. At a recent roundtable discussion, foreign investors rated Vietnam's unstable and unpredictable legal framework at the top of their list of factors which negatively impacts business performance.<sup>3</sup> Investors regard Vietnamese legal/regulatory environment to be less guided by clear case law and more subject to political interference than many other countries seeking to attract investment.

A recent example of this complexity and ambiguity is Decree 10 dated January 1998, which was intended to introduce "measures for encouragement and guarantees of foreign investment". The decree stated that any new law which would adversely affect the benefits stipulated in an investors' license would not apply.

<sup>3</sup> Vietnam Chamber of Commerce, 1998 meeting of the Private Sector Forum, 1998 Consultative Group Meeting, November 30, 1998, Hanoi

However, most private sector firms and international lawyers question whether a decree can effectively overrule a law or an ordinance within the strict hierarchy of Vietnamese legal system. Under this system, laws which are passed by the National Assembly, are considered the highest form of legal instrument, followed by ordinances, which are passed by the Standing Committee of the National Assembly when the Assembly is not in session. Lower in this hierarchy are decrees which are generally passed by the government to implement the laws or ordinances.

### **3. Foreign Investment Regime**

#### **3.1. Foreign Investment Law**

Matters dealing with foreign investment in Vietnam began with a legislation passed in 1977. This was subsequently replaced by the Law on Foreign Investment in Vietnam (FIL), passed in December 1987 which has since been amended 3 times, the latest in December, 1996. As the FIL itself provides only a general outline, it is important to refer to the FIL together with accompanying decrees and circulars. One of the most important accompanying decree is Decree 12 dated February 18, 1997, which implemented the 1996 FIL.

The FIL authorized three forms of foreign investment, namely joint venture, 100% foreign owned enterprise (100% FOEs) and business cooperation contracts (BCCs). The BCC is an arrangement mainly used in telecom sector, whereas foreign and Vietnamese party jointly conduct a specific activity for fixed duration. No separate legal entity is created under this arrangement, and while the foreign party shares in revenue streams, it is not allowed to hold equity in the operation.

Although 100% foreign owned enterprises are allowed to operate in principle, difficulties in

securing land and other pressures have made the joint venture the most feasible and practical option for most foreign investors. Furthermore, the licensing authorities have placed informal restrictions on the structure of joint ventures, requiring at least 30% ownership by Vietnamese. In mid-1998 the People's Committee of Ho Chi Minh City announced a plan to phase out joint-venture investments in favor of 100% FOEs. In future, 100% FOEs will be encouraged in all fields except for defense-related industries and perhaps some areas of telecom service.

#### **3.2. Investment Licensing Process**

In recent years, MPI has made great attempts to streamline the process for issuance of investment licenses and to address investor concerns about excessive red tape. The 1996 FIL amended two key factors that relate to investment licensing process. First, it shortened the maximum permitted time limit for project evaluation and for issuing investment licenses to 60 days, although this is not always adhered to. Second, and more recently, the Government has delegated the authority to issue investment licenses and to monitor foreign invested projects to the following provincial governments:

- Provincial Industrial Zone Management Board: projects up to US\$ 40 million;
- People's Committees of Hanoi and Ho Chi Minh City: projects up to US\$ 10 million;
- Provincial People's Committees: projects up to US\$ 5 million.

#### **3.3. BOTs under the Foreign Investment Law**

The December 1992 amendment to the FIL and the following 1993 decree introduced the concept of Build-Operate-Transfer (BOT) to entice foreign investors, establishing special

schemes outside their conventional laws. The 1996 FIL expanded the concepts of BOT and now defines BTO and BT.

By Decree 62/1998/ND-CP dated August 15, 1998 (Decree 62) the Government of Vietnam introduced new regulations on investment in BOT projects. Following comments by various private sector parties, the Government issued Decree 02 in January 1999, amending and supplementing a number of Articles in the earlier Decree. Although these developments by sponsors and financiers were all welcome, it is felt that a number of obstacles remain in the way of the timely implementation of BOT projects. The five main areas of concern are foreign exchange issues; state guarantees; loan security; lenders step-in rights; and dispute resolution. These issues are set out in more detail in Part C in the Proposed Action Plan.

### **3.4. Limited Government Coordination in Dealing with PPI**

Investors have complained about the absence of a central coordinating body in Vietnam for the BOT program and a general lack of experience among officials selected to negotiate large infrastructure deals. Gaps remain between the Government's intent to proceed aggressively with its BOT strategy, on the one hand, and the realities of decision-making processes and business practices in Vietnam, on the other. In particular, the government's ability to identify, design and execute BOT activities is limited. It has been widely observed that policy makers and technical staff of line ministries involved in BOT projects often do not have an accurate picture of their respective roles, responsibilities, and requirements.

## **4. Foreign Exchange**

### **4.1. Cautious Shift to Market-Determined Rate**

Until recently, the State Bank of Vietnam (SBV) determined daily official exchange rate in Vietnam. The Bank ceased announcing official rates in February 1999, reflecting a cautious shift toward a more market determined exchange rate. The SBV now announces the average exchange rate traded on the inter-bank market of the previous day, and Commercial Banks are now permitted to trade within a band of 0.1%. Although the band is much narrower than 7% that was allowed under previous system, the abolition of the official rate means that the dong could theoretically trade at around 30% above or below its current level within one year.

### **4.2. Foreign Exchange Management**

In general, remittance of foreign currency abroad is controlled and subject to the approval by SBV. A firm needs an authorization from SBV to (i) borrow foreign currency; (ii) convert dong to dollars; and (iii) open an offshore escrow account to provide the banks with security. According to the existing regulations, BOT projects, among others, are eligible to receive a conversion certificate (a guarantee from the State Bank that they can convert dong earnings to dollars in order to pay for current transactions such as imports, or interest payment). In addition, the procedures for converting local currency appear to be quite straightforward. However, many foreign investors remain concerned about the availability of foreign exchange. (See also the discussion in the section above on "BOTs under the Foreign Exchange Law"). To complicate matters, investors perceive that state enterprises and agencies receive priority in the allocation of foreign reserves.

The State Bank also sets maximum rates of interest that may be charged by local or foreign bank branches thus interfering with the market rate and affecting the supply that can be mobilized for investment. Currently, the State Bank approves loans from foreign financiers where the interest rate is 2% over LIBOR or less, which does not represent the real risk of lending in Vietnam. *Decree 63* clarifies the procedures for buying foreign exchange from the State Bank.

In September 1997 Decree 173 was introduced which requires companies to sell 80% of their surplus foreign current holding to banks. Initially, the firms were required to do so within 15 days, but now this must be done immediately. In addition, the Government lowered from \$7,000 to \$3,000 the amount of capital that can be taken out of the country without a formal declaration. Although the Government has indicated that Decree 173 is temporary, no timetable has been announced for removing this restriction. It is widely believed that until the domestic economy recovers, substantive reforms are unlikely to occur in this area.

## 5. Tax Regime

### 5.1. Relevant taxes

Most foreign investors may be affected by the following taxes:

- profit tax as prescribed in the Law of Foreign Investment;
- corporate income tax (CIT);
- value added tax (VAT);
- personal income tax on Vietnamese and expatriate employees;
- various withholding taxes;
- capital assignment profit tax;
- import/export duties;

These taxes are imposed at the national level. There are no local taxes. As a part of fiscal reforms, new legislation on corporate tax, VAT, and personal income tax came into effect in January 1999. Both the new corporate tax and personal income tax regimes are perceived as a step forward to a more progressive tax regime.

### 5.2. Corporate Income Tax (CIT)

CIT harmonized the different profits tax regime that existed for the domestic and foreign investors. CIT is now at a single rate of 32%, replacing taxes on profits previously levied at 25%, 35% and 45%, and is applied to all enterprises in Vietnam, whether domestic or foreign, including foreign parties to BCCs. However, in practice most foreign firms will continue to be subject to the profit tax as stipulated in the Law on Foreign Investment. Tax holidays will be available to companies which face heavier tax liabilities under the new regime. Firms which are currently paying the lower rate of tax will be exempt for three years from the new 32% corporate tax.

### 5.3. Personal Income Tax

Tax levels in Vietnam are generally high by both regional and world standards. In particular the personal income tax, charged to Vietnamese professionals at foreign invested firms can be prohibitive. Effective marginal rates can reach 60% for the top income bracket. The monthly income is divided into several brackets, each succeeding one being fixed at a higher rate from 10% to 60%.

Moreover, any income beyond VND 8,000,000 (US\$ 575) per month is subject to a surtax of 30% above and beyond the tax rate. As such, to pay an employee with a disposable income of US\$1,000 per month, an employer needs to pay about US\$3,400.

#### **5.4. Value Added Tax (VAT)**

VAT replaced the turnover tax, which was inefficient and levied on a sliding scale from 0%-30%. Most sectors of the economy will likely pay less under VAT. There are four rates of VAT: (i) 0% for exported goods; (ii) 5% for provision of essential goods and services (e.g. clean water, food stuff, medicine); (iii) standard rate of 10% for activities such as power generation, mineral products, postal and transportation services, and (iv) 20% for activities such as hotels and tourism.

### **6. Labor Issues**

#### **6.1. Labor Code**

The June 1994 Labor Code provides the general framework for labor issues including labor agreements, social insurance contributions, payments and rules for overtime, strike, and employment termination. Enterprises with direct foreign investment must give preferential treatment for employing Vietnamese citizens.

#### **6.2. Dollar-Denominated Wage**

Until recently, foreign enterprises had to pay wages at rates pegged to US dollars. As such, the recent large drop in regional currencies affected other countries' labor costs substantially and made Vietnam less price competitive overall. Most importantly, the practice of denominating wages in dollars reduces the potential gains of a devaluation that can be derived in labor competitiveness through devaluation. The Government has recognized this following discussions with the foreign private sector and responded by issuing Decision 53/1999QD-TTG which allowed for wages of Vietnamese employee be determined and paid in the local currency not dollars as of July 1, 1999. The wages must be indexed to inflation in increments of 10%.

#### **6.3. Recruitment of Local labor**

A rule that took effect on January 1, 1999 require foreign companies to hire local staff through state-run Labor Bureau. This requirement had been complicated, time consuming and costly, making Vietnam less competitive for accessing specialized labor. However, after listening to the concerns expressed by the private sector, as of July 1, 1999 foreign firms will be allowed to hire local staff directly if the Labor Bureau has not found a suitable local candidate within 30 days. In addition, foreigners who now wish to work for foreign-invested enterprises will be granted work permits under a more simplified and investor friendly procedure.

### **7. Access to Local Finance**

Over the past year, there has been a weakening in the performance of the local banking sector. All banks - both state-owed commercial banks and joint-stock banks - have over-due loans of about 14%. This is worrying since the weaknesses in the loan classification system may understate the actual extent of the problem. In addition, banks are highly leveraged - the ratio of foreign currency loans to foreign currency deposits is 125% - and face high exposure to exchange rate risk given the foreign currency loans made to many domestic borrowers who do not have dollar receivables. Significantly, nearly 70% of foreign currency loans are to state enterprises. In these circumstances, there is little prospect of domestic private sector firms securing access to local finance for PPI projects in the near future.

### **8. Environmental Regime**

There are a number of environmental laws and administrative issues with PPI activities in Vietnam. GOV recognizes that developing an effective and environmentally sound approach to

infrastructure development is vital, both for protecting the environment as well as for getting the proposed and signed projects on line. To enhance its effectiveness in this area, MPI has funded a \$3.5 million project entitled "Environmental Issues in Planning and Investment". As part of this program the government announced in April 1999 that it would be sending fifty officers from relevant agencies to China and the US to participate in training courses on environmental management.

### **9. Right of Way and Resettlement**

Current state regulations stipulate that resettlement and related financial compensation must be settled prior to any project construction. Although the Central Government is responsible for procuring land for BOT projects, financial compensation can vary widely from project to project. The Central Government normally authorizes local authorities to establish compensation schemes, and a sum charged to

private firms following closed negotiations between central and local administrative authorities. Although there has been no constancy in methods applied for calculating compensation, resulting in widespread difference in land compensation rates, the Government expects to complete an amendment to Decree 22/1998/ND-CP in October of 1999 that portends to universalize the approach resettlement and financial compensation.

Ministerial bureaucracy has also slowed the resettlement process. For example, National Highway No 51 land clearance was seriously delayed due to local government decisions which altered a previously approved compensation rate and caused an uproar among the local residents. Lack of transparency and consistency result in widespread non-compliance. In case of the Lang-Hoa Lac highway project and National Highway No. 51 upgrade project, difficulties in verifying land claims resulted in serious delays.

# B

## INFRASTRUCTURE PERFORMANCE AND CURRENT ENVIRONMENT

### I. ENERGY

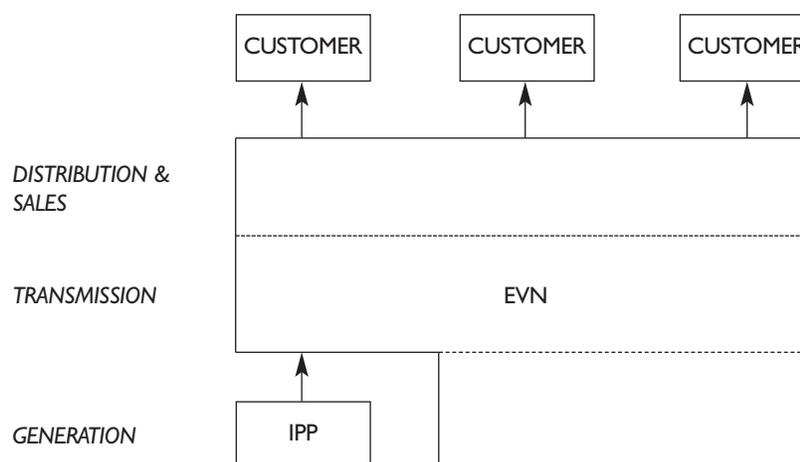
In physical terms, the power sector in Vietnam has developed and grown rapidly over the last decade. In policy terms, although the sector is still dominated by the state-owned EVN, the Government has started the process of reform. Tariffs have been raised nearer to costs. EVN has been made to run as a semi-commercial business. And the private power generation is being sought under the BOT framework.

The potential for an improvement in the performance of the industry and an expansion of its size is, however, still large. Realizing the potential will require the Government to continue to deepen the reforms it has begun to undertake to encourage private investment and operation. But if the Government does press ahead with fundamental reform, the opportunities for private investment that helps Vietnam achieve its goals will be enormous.

#### **1.1. Market Structure**

The state-owned Electricity of Vietnam (EVN) dominates the power sector in Vietnam, producing most of Vietnam's electricity and

owning the entire transmission network and much of the distribution network. But the Government is going through the process of opening the sector to private participation. In generation, there is a privately owned IPP at Hiep Phuoc selling power to EVN and to businesses in the Saigon-South industrial zone. Other private generation plants proposed under the BOT framework seem close to going ahead. In the distribution sector, too, there are players other than EVN. In many places, especially in rural areas, EVN sells bulk power to a separate local-distribution entity that in turn sells to final customers. Further, the Government is discussing the plans for pilot equitizations of small chunks of the distribution network. The existing market structure (ignoring the small, final distribution companies) is depicted in stylized form in Figure 1 below.

**Figure 1: Current Market Structure in the Electricity Industry in Vietnam <sup>4</sup>**

## 1.2. Physical Performance

Vietnam's power sector has developed rapidly over the last decade, with sales, for example, increasing from 4 terawatt-hours in 1985 to 18 in 1998 (see Table 1).

**Table 1: The Development of Vietnam's Power Sector**

Indicator	1985	1990	1995	1998
Peak Demand (MW)	n.a.	1,546	2,714	3,942
Sales (TWh)	3.860	6.185	11.198	17.838

Nonetheless, Vietnam's power sector is still small. Installed capacity is about 5,000 MW, about half that of the Philippines. Moreover, technical problems mean that about 20% of the power that is produced never reaches a customer, being lost instead in the transmission and distribution networks. Much of the country has no access to power at all and consumption per capita per capita is less than 200 kWh. Although much progress has been made, the opportunities for improvement remain large. Table 2 illustrates the potential for expansion and improvement by comparing Vietnam with some other countries in the region.

**Table 2: Selected Physical Indicators for the Power Sector in Vietnam and Elsewhere**

Indicator	Vietnam	Indonesia	Philippines	Malaysia	Thailand
Proportion of households with access to power (%)	51 <sup>5</sup>	39	58	90	87
Installed generation capacity (MW)	4,890	14,327	9,539	7,319	13,003
Electricity generation, 1997 (GWh)	19,151	61,199	29,698	45,453	80,068
Consumption per capita per year (kWh)	204	315	399	2,032	1,294
T and D Losses as proportion of power generated (%)	16	12	17	11	9

<sup>4</sup> The diagram also simplifies the actual structure of the market by ignoring autogenerators and small, off-grid systems in rural areas. Note also that EVN is undertaking a form of internal unbundling of its function, making various business units in generation, transmission, and distribution more independent from each other.

<sup>5</sup> Note that estimates vary widely. According to EVN, the access rate is as high as 50%.

### 1.3. Tariffs and Financial Performance

The tariffs charged by EVN are about 5 cents per kWh on average (dividing total revenue by kilowatt-hours sold), which is high enough to cover EVN's operating costs. However, it is important to note that the current tariffs are still below the long-run marginal costs and thus threaten the long-term health of the sector. Businesses and foreigners pay more than the average, while households using relatively little power pay less (see Table 3).

In other words, given EVN's total costs, tariffs are too low. Similarly, current tariffs are too low to cover the expected cost of generating and delivering additional power to satisfy increasing demand (estimated to be around US8 cents per kWh).

EVN's ability to continue to repay debt and make payments under power-purchase agreements (PPAs) will therefore depend on the progress the Government makes in increasing average tariffs-as well as on EVN's success in reducing its costs. Addressing this problem in July 1998, the

**Table 3: Summary of Nominal Electricity Tariffs, 15 December 1998**

Consumer Types	Typical price (US cents/kWh)	Maximum Price (US cents/kWh)
Residential	151 to 250 kWh/month 5.9	351 kWh and higher 8.2
Commercial	>6 kV, Normal Times 7.8	>6 kV, Peak Times 12.3
Industrial	>20kV<110 4.8	>20kV<110 11.4

Source: World Bank (1998), *Fueling Vietnam's Development-New Challenges for the Energy Sector*.

EVN has made accounting profits since its creation in 1995. In 1997, for example, its net income was around US\$37 million (see Table 4). Its debt-equity ratio, however, is low and its profits do not provide a commercial rate of compensation for the Government's equity investment in the company.

Government approved increases in average retail tariffs to US 5.5 cents/kWh on 1 May 1999, 6.2 cents on 1 January 2000; and then 7.0 cents 1 January 2001. It has also decided to gradually eliminate the difference between tariffs paid by foreigners and locals.

**Table 4: Selected Items and Ratios from EVN's Financial Statements <sup>6</sup>**

Item	US Dollars: Millions	
	1997	1996
Sales	807	664
Operating Income	86	174
Net Income	37	139
Current Assets	1,339	930
Fixed Assets	1,981	1,904
Total Assets	3,320	2,834
Current Liabilities	1,117	829
Debt and other Long-Term Liabilities	384	226
Government's Equity	1,759	1,778
Item	1996	1997
Return on Equity (%)	2	8
Ratio of Current Assets to Current Liabilities	1.14	1.12
Ratio of Debt to Equity	0.22	0.13
Estimated Non- Technical Losses (%)		4.4

<sup>6</sup> Audited Financial Statements for EVN for the year ended 31 December 1997.

## I.4. Future Demand and Investment Opportunities

### 1.4.1. Future Demand

Setting the price of power high enough to cover costs is critical because the demand for power is forecast to grow rapidly, despite the current downturn. Table 5 presents a recent (i.e. post crisis) forecast of the demand for electric energy and capacity.<sup>7</sup>

new generation capacity, costing an estimated US\$ 9.5 billion. Over the same period, considerable investments will also need to be made in transmission, distribution, and retailing. The World Bank has estimated that US\$ 2 billion will need to be invested in these areas between 1998 and 2002 (see Table 6)

The Government plans to finance part of these investments itself, using its own revenues and

**Table 5: Recent and Projected Demand for Electric Energy and Capacity**

	1996	2000	2005	2010	Growth Rate
Energy (TWh)	16.949	25.706	44.491	77.406	11.5%
Capacity (GW)	3.161	4.779	8.195	14.123	11.3%

The forecast is sensitive to several assumptions, including that prices will stay constant in real terms and that losses will be reduced. If tariffs were raised to 8 US cents per kWh, the estimate of the long-run marginal cost mentioned above and the estimated peak demand in 2010 would fall by 1,700 MW relative to the base-case estimate. Similarly, if losses were not reduced as assumed above, a further 850 MW or so of capacity would be required. The need for new investment in generation will therefore depend in part on reforms in the distribution and retail power business.

### 1.4.2. Opportunities for Private Greenfield Investment

These forecasts imply that between now and 2010 Vietnam will need around 10,000 MW of

borrowing, and the rest is to be financed by the private sector. The proportions of public and private financing have not been decided and any decisions are likely to be subject to change. Nevertheless, as shown in Table 6, the World Bank estimates that between 1998 and 2002 Vietnam will require approximately US\$ 6 billion of investment in power. About 40% of this are expected to come from public sector, 50% from ODA, and the remaining 10% from private sector. Given the scarcity of public sector funding including ODA, the government should alternatively refine its ground rules for greater private sector participation in the sector, and channel public funding to those activities and sectors which cannot attract private financing.

**Table 6: Power Financing Requirements and its Source 1998-2002 (USD million)**

Type of Investment	Finance Required	Public Investment	Export Credits and ODA	Private Investment
Hydro Plants	1,730	964	766	0
Thermal Plants	2,098	214	1,100	684
Transmission and Distribution	2,000	1,000	1,000	0
Total	5,828	2,178	2,866	684

Source: World Bank Report (1998), *Fueling Vietnam's Development-New Challenges for the Energy Sector*

<sup>7</sup> *Fueling Vietnam's Development*, World Bank.

### 1.4.3. Planned Equitization of Existing Assets

The Government's plans to equitize existing assets, though the transfer of both ownership and management control, are less developed than its plans for private greenfield investments. The Government is, however, interested in opening the distribution sector to the private sector and, as a start, it is discussing the equitization of a couple of small distribution units, including part of the Hanoi and Ho Chi Minh City companies' distribution systems.

### 1.5. Existing Private Participation

Private firms and individuals are already operating in the power sector, albeit at a small scale. There are some small private distributors (often just individual meter landlords), private autogenerators, and private generators dedicated to industrial zones.

The only operating privately owned power generator selling to third parties is Hiep Phuoc, a 375 MW plant in the South of Ho Chi Minh City. It was built by a Taiwanese company to supply an industrial zone and doesn't fall under the Government's BOT framework. The company negotiated a PPA with EVN only after the plant was constructed and the PPA, under which it sell power for 5.7 US cents per kWh, has a term of only three years.

Of the planned BOTs, Wartsila's 120 MW plant at Ba Ria is one of the closest to completion. The deal was a negotiated one. MOI and Wartsila signed the BOT contract on 19 September 1997. MPI granted an investment license on 24 September 1997. EVN and the project company signed the PPA on 25 November 1997, and MOI granted a government guarantee of EVN's obligations

under the PPA on 2 March 1998. Wartsila, the IFC, the primary lender, and the Government have reached agreement on key documents including the BOT contract and the consent-and-acknowledgement agreement designed to clarify and safeguard the lenders' rights.

Some of the proposed deals that have been negotiated, such as Quang Ninh, have involved informal competitions, the Government talking to several sponsors before selecting one for further negotiations. The first project that has followed a formal competitive process is the Phu My 2.2 combined-cycle-gas-turbine plant. In this case, the Government hired international consultants to help it prepare bidding documents, including draft project contracts, evaluate proposals, and negotiate with the winning bidder. Bids were received from six international consortia and publicly opened in April 1998. In September, the Government shortlisted three consortia and it is now negotiating with the first ranked led by EdF.

### 1.6. Restrictions on Entry

#### 1.6.1. Legal Restrictions on Entry

Although a draft is being discussed, Vietnam does not yet have a law that spells out the conditions under which firms other than EVN can enter the electricity business. There is no law, for example, stating that electricity is the exclusive preserve of the state. Any business wanting to enter the industry must get various permits, however, so entry is feasible only with the approval of the Government.

Although there is no law that sets out the Government's policy toward the electricity sector, the Government has made policy statements that set out its approach to private investment.<sup>8</sup> The following types of entry are welcomed in principle:

<sup>8</sup> See policy statement of the GOV (MOI) attached as annex to WB Project Appraisal Document for most recent T and D and disaster-recovery loan.

- private generation selling exclusively to EVN on a 20-year BOT basis
- private generation selling exclusively to businesses in export-processing and industrial zones
- private generation for a company's own consumption
- private participation in distribution.

There are no special restrictions on horizontal or vertical integration in the industry at present, deriving either from electricity-specific or general law. Nor are there any power-specific restrictions on foreign ownership of electricity assets.

### **1.6.2. Institutions Responsible for Approving and Facilitating Private Participation**

Private companies wishing to enter the power industry must make a proposal to the Government or respond to a proposal calling for private investment made by the Government. The formal procedures that private companies must follow under the BOT project are the same as in other sectors, with the Ministry of Industry being the lead technical ministry.

### **1.6.3. De-Facto Restrictions on Entry**

Potential investors in the power sector and their advisers have expressed several concerns about the process of getting permission to enter the sector, including

- the need for many permits
- slow decision making by the Government
- unclear (or according to some investors simply complex) decision-making processes
- corruption
- the "underdevelopment" of the legal system—a general lack of clarity and a belief that nothing is permitted unless positively provided for

- underestimation by the Government of the cost of capital.

They have also expressed concerns that the existing legal framework, while permitting private investment in principle, contains elements that discourage it, citing:

- difficulties in the application of international arbitration under international law
- limits on the security that lenders can take
- the non-transferability of land leases
- limits on the convertibility of the dong and associated problems such as limits on availability of dong, interest-rate caps on foreign-currency-denominated loans, and requirements to convert foreign currency into dong.

Most of the issues that concern investors are not specific to the power sector and are discussed more in the cross-sectoral section of this report above. Investors, potential investors, and their advisers also cite some power-specific factors that constrain entry by new private firms:

- The current rules for setting tariffs do not provide any assurance that the tariffs will cover costs—one of the reasons why EVN is considered a poor medium-term credit-risk.
- The rules governing the operation of the gas sector—and, in particular, the pervasive role of Petro-Vietnam—lead to long delays in the procurement of new gas supplies.
- EVN's role as both the purchaser of power from private power plants and a supplier of bulk power in potential competition with them may reduce its incentives to enter into PPAs with private power plants.

### **1.7. Risk Allocation**

The types of project that the Government has focussed on so far are independent power

producers (IPPs) selling power to EVN, and the proposed allocation of risks in these projects is similar to that seen in other IPP projects selling to a state-owned monopolist. The projects ensure that construction and operating risk, and some of the financing risk, is borne by the private sector (or foreign SOEs), not the Government. Under a BOT, for example, the Government is not responsible for operating the plant and does not lose if the plant's operating efficiency falls or operating costs rise. Similarly, because the Government holds no equity stake in the plant, it bears less of the financing risks in the project.<sup>9</sup>

Nevertheless, the Government retains exposure to commercial risks under traditional BOT projects of the type being planned in Vietnam. Most important, it bears demand risk: the risk that the profits from the project will be lower than expected because there is less demand than expected for the power produced by the plant, either because the total demand for power falls short of expectations or because new plants enter the market selling at a lower price.

As a corollary of this risk-bearing, BOT projects create liabilities for EVN and for the Government as the owner of EVN and guarantor of its obligations. These liabilities are off balance sheet for EVN and for the Government, but they are no less real than on-balance-sheet debt. For example, the present value of the liabilities assumed by EVN under a PPA with one IPP could be in the order of several hundred million US dollars. To put this number in context, Table 6 shows that the book value of EVN's existing debt is approximately US\$384 million.

The base-case forecast of electricity demand mentioned earlier implied that Vietnam will need about 10,000 MW of new capacity between now

and 2010, costing about US\$9.5 billion. If the Government were to secure this capacity in the form of IPPs selling to EVN and continued to own EVN (or indeed if it secured the capacity using traditional publicly financed projects) it would assume very large amounts of off-balance-sheet debt (on-balance-sheet debt in the case of publicly financed projects). Avoiding these liabilities and associated risks would require deeper reform, inclusive of unbundling EVN, creating a competitive market for power generation and alternatively for distribution, setting up an independent regulation and privatizing the state-owned assets commencing with a pilot distribution company.

### **1.8. Protection of Investors from Political and Regulatory Risks**

Protecting investors from political and regulatory risks over which they have little control is crucial to encouraging private investment in power, as in other infrastructure sectors. Accordingly, the BOT projects being developed in Vietnam provide equity investors with various protections. For example, the Government enters into a long-term contract with the investors, and investors may have recourse to international arbitration under, say, English law if a dispute arises between them and EVN or the Government.

Investors and financiers still have concerns with the strength of these safeguards. On the one hand, there are the issues raised in the cross-sectoral discussion in this report above (such as the circumstances in which international arbitration is available and would be effective). On the other hand, there are issues related to EVN's vulnerability to political and regulatory risk. Although investors will receive and welcome sovereign guarantees of EVN's obligations, they

<sup>9</sup> The Government also has no (on-balance-sheet) debt associated with a standard BOT project. But the PPA signed by EVN creates an obligation for the Government, as owner-and guarantor-of EVN, that is financially similar to debt (but not identical, because it is contingent upon the IPP company's being able to supply power). The Government therefore bears financing risks similar-though not identical-to those it would bear if it financed a public project with conventional government borrowing.

would prefer not to rely on them, being more confident of being paid if EVN can meet its obligations without the financial support of the Government. EVN's ability to meet its obligations is, however, exposed to significant political and regulatory risk. Its profits depend on actions taken by the Government such as whether it will oblige EVN to increase its costs by hiring more staff or lower its revenue by reducing tariffs. Because EVN is owned by the Government and because tariff-setting is political, these risks are high.

## **2. WATER AND SANITATION**

At the present time, the Water sector in Vietnam is entirely owned by the public sector. The Government has sought some degree of private participation by encouraging private BOT projects - mainly to provide bulk water supply to commercial customers in industrial zones. However, no private projects have yet to reach financial closure. Several BOT projects are currently in various stages of preparation in Hanoi and Ho Chi Minh City (HCMC). The most advanced is the Binh An Water Corporation project in HCMC, which has already started construction but has not reached financial closure. The Government's present policy does not encourage private involvement in water distribution systems or at the retail level. Water provision to urban customers is planned to remain in the responsibility of reformed State Enterprises at least in the first stage to the year 2000.<sup>10</sup>

### **2.1. Market Structure**

The water sector in Vietnam is highly decentralized, as in many other countries. National ministries retain authority over sector policy and approval of major projects, while the provincial People's Committees are responsible for water supply services in their respective jurisdictions. In urban areas Water Supply Companies are created to operate and maintain piped water systems. In rural areas these are known as Water Resource Service companies. Water Supply Companies (WSCs) and Water Resource Services are created as separate legal entities from People's Committees. However, most major decisions related to investment and tariff setting are largely influenced by the People's Committees. The structure and capacity of WSCs vary from province to province. However, in most cases their functions and

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<sup>10</sup> SAR, Water Supply Project, 1997.

responsibilities are poorly defined and they do not enter into contracts with their customers.

## **2.2. Technical Performance**

The table below summarizes some of the key technical and physical indicators of the water system in Vietnam and provides some benchmarks for comparing this performance with other water systems in East Asia and Latin America.

### **2.2.1. Coverage and Consumption**

Most of the population, especially in rural communities, do not have access to safe drinking water. Only 100 out of the 436 urban centers<sup>11</sup> with population over 5000 have access to piped water. Although these distribution systems serve 7 million people this is only 47% of the urban population. Service coverage in major cities has reached 60-70% of households in the major cities while in medium and small cities coverage is only 50% and 30% respectively. This performance is far below the standards achieved in the region and is one of the indicators which causes greatest concern to the Government. Per capita production and consumption volumes of water in the two major Vietnamese cities are also below regional standards.

### **2.2.2. Efficiency**

Only about 80% of existing capacity is utilized due to obsolete equipment. Physical water losses are substantial, and result mainly from old and faulty pipes and from an inadequate distribution system. For example, the Gia Lam water treatment plant in Hanoi has a capacity of 30,000 cubic meters per day, but daily output is limited to 5,000 to 10,000 cubic meters due to an inadequate piping capacity. Similarly, in Ho Chi Minh City, the municipal pipe network frequently overloads, springing leaks or overflowing when supply exceeds pipe capacity. The Ministry of Construction reports that approximately 60 per

cent of water pipes in urban areas date back to the 1960s, and most of the water supply projects ignore the renovation of existing piping systems. There are few real incentives to maintain or expand the distribution system. Non-revenue water (NRW) is extraordinarily high in Hanoi at 63.5 % in 1999. This means that roughly two out of every three liters produced generates no revenue, requiring the water company to recover all cost with only the remaining third. Inter Ministerial Circular (No. 02-TTLB) states that the acceptable water loss ratio shall be set by the Chairman of the People's Committee or the Mayor of the central cities, and that the rate shall be under 30%. However, since the Construction Units of Water Companies derive a majority of their income from construction activities, they tend to encourage capacity building rather than maintaining the existing distribution network or promoting better commercial practices in billing and collection. In addition, the table below indicates that the number of staff per 1000 connections in Vietnam is well above acceptable levels, suggesting the potential for significant productivity gains.

### **2.2.3. Quality**

The quality of drinking water is unreliable and compares unfavorably with WHO standards as well as those set by the Government of Vietnam itself. There is little wastewater treatment in place. In response to poor quality water supplies, many households now resort to tapping wells or plumbing rivers and lakes without adequately treating the water before use, risking the health of the entire communities. For example, dilapidated pipe systems and weak water pressure have forced the Water Supply Companies (WSC) in HCMC to use large water tanks to deliver clean water to many HCMC districts. In other areas, the WSC must drill wells that are often rushed and do not meet technical and hygienic standards. First built

<sup>11</sup> In total, there are 547 Urban Centers that are formally established.

**Table 7: Selected Physical Indicators**

	Vietnam		Philippines	Thailand	Malaysia
Population with access to safe water (%)					
- urban	53		93	89	100
- rural	32		77	72	74
- total	36		85	81	88
	Hanoi	HCMC	Manila	Bangkok	Kuala Lumpur
Consumption per capita per day (m3)	0.05	0.14	0.20	0.27	0.20
Unaccounted for water (%)	69	30**	48	38	36
Number of staff per 1,000 connection*	13	6	5	5	1
Water availability per day (hours)	18	24	17	24	24

Source: ADB Second Water Utilities Databank, World Development Indicators.

\* The ADB National Water Tariff Policy Study reports a figure of 4.6 for HCMC, and 28.8 for Hanoi.

\*\* Figure for 1998.

by the French in 1879, the city's pipe network has expanded over time to its current length of 2,000 kilometers. However, much of it is in need of repair, leading to large-scale leakage and water waste. Many contaminated water reservoirs have been in use for years without regular maintenance, while lack of public awareness also contributes substantially to the loss of one third of the city's total water supply. To date, only 7.66 km of additional water pipes has been built, while another 22 km require urgent upgrades.

### 2.3. Commercial Performance and Tariffs

#### 2.3.1. Current Tariff Rates

Water tariffs in Vietnam remain heavily subsidized up to 40 %. Within this system there are considerable cross-subsidies between different classes of consumers. The Ministry of Construction has indicated that on average, the tariffs approved by provincial people's committees reach only 60-70% of the level that would be required to cover capital and operating costs and to service debt obligations. For instance, from the data available, the cost of treating one cubic meter of water in Hanoi and HCMC is estimated to be approximately US\$0.25, whereas consumers on average pay only US\$0.13. Rough calculations

suggest that an average tariff level of US\$0.43 per cubic meter would allow Hanoi to finance 20 percent of its future investment costs in 2002 from retained earnings, as well as cover its operations and maintenance costs. Equally importantly, it may well be that tariff levels could be adequate if water losses could be reduced from the currently high levels in Hanoi to less than 30%. There is strong political resistance to increase water tariffs over time to full-cost recovery levels. However, it is worth noting that this policy only exacerbate problems of the poor since many poor Vietnamese who lack clean drinking water are currently compelled to pay informal sources nearly ten times the current tariffs.

#### 2.3.2. Tariff Setting Method

In theory tariff rates are proposed according to guidelines by WSCs subject to approval by People's Committees to cover production, sales and overheads (not maintenance and expansion). In practice, however, few WSC follow the cost recovery guideline and the rates cannot exceed the price ceilings imposed by the State Price Committee. For example, in the case of the Hanoi Water Business Company, the tariff increase suggested by the Company was reduced by the

People's Committee due to different assumptions on the operational costs. In addition, the Government has recommended step by step increases in tariffs to avoid sudden price upheavals, thus making tariff increases a slow process.

### **2.3.3. Metering**

Nearly all industrial customers are metered in Hanoi and HCMC, whereas 80% of households in HCMC and only 40% of households in Hanoi have meters. Households without meters pay a flat rate based on the assumption that they will consume only 4M<sup>3</sup>/month. Collection of tariffs is not a significant problem in Hanoi, as the WSC can now disconnect the service if a customer falls behind by 3 months.

## **2.4. Demand Forecasts and Public Investment Plans**

The government has formulated a two-stage water sector development strategy. The first stage focuses on system rehabilitation and institutional strengthening of the WSCs. The second stage would address demand and capacity expansion beyond the year 2000. Specifically, the Government aims to provide clean water for 80% of the urban population by 2000 (100% in Hanoi and HCMC). The Public Investment Program prepared in June 1996 estimates that total investment requirements for water supply (including rural areas) could be as high as VND 16,000 billion (US\$1.2 billion,<sup>12</sup>) of which VND 5,000 billion (US\$384 million) would be channeled through the State budget. According to the plan, ODA has been identified for about two thirds of this requirement - i.e. VND 10,560 billion or US\$812 million.

The government's strategy for the private sector is limited to BOT projects in bulk water provision mostly for industrial estates. The government is

justifying the high bulk water tariff rates by indicating that the new water supply would be strictly for the higher paying commercial customers. In practice, however, this policy only leads to a higher average cost of production which could be even more difficult to recover without substantive financial reform and tariff re-balancing. More generally and for the bulk of the system, water provision to customers at the distribution and service level is planned to remain with State Enterprises. Unfortunately, it is precisely at the service level where the efficiencies of private sector finance and management could have the greatest impact since it is the water supply losses in the distribution systems which are undermining viability of the water supply businesses in Vietnam. Simply involving the private sector through the expansion of BOT based bulk supply of treated water to the WBCs will not address the real problems and inefficiencies facing the sector.

Furthermore, in light of the increased fiscal strains on the Government in recent months, there is bound to be growing pressure to seek ways of reducing the state budget investment in the sector. This would suggest that the role of the private sector in terms of Foreign Direct Investment has become even more important if the Government is to achieve the investment levels it needs to meet its own quality, access and expansion targets in this critical sector of the economy.

## **2.5. Legal Environment and Regulatory Institutions**

There is no specific law regulating water supply in Vietnam. From the private participation perspective, the industry is subject to the same constraints inherent in the laws, regulations and practices that impact foreign investment and licensing in other infrastructure sectors. These

<sup>12</sup> US\$1 = 14,000 dong.

points are discussed in the section of the Report dealing with cross-sectoral issues (Part A above).

At the National level, three ministries deal with water resources: Planning and Investment (MPI); Construction (MOC); and Agriculture and Rural Development (MARD). According to the water law, MARD is in charge of Water Resource Management.

MPI is the central ministry responsible for the allocation of resources among sectors and preparation of consolidated Public Investment Plan. MOC has responsibility for appraising technical aspects of all water supply and sanitation projects for urban and industrial areas. MARD is responsible in coordinating water supply and sanitation for rural areas and the UNICEF funded rural water supply and sanitation program projects. Within MARD, the semi-autonomous Institute of Water Resources Planning is responsible for water resources planning.

Other important agencies in the water sector include the National Steering Committee for Water Supply and Environmental Sanitation which co-ordinates both rural and urban water supply. The Committee recently introduced similar provincial committees in 25 of the 61 provinces. According to Water law, Use of both ground and surface water is supervised by Ministry of Agriculture and Rural Development and discharges to water courses is regulated by Ministry of Science, Technology and Environment (MOSTE).

## **2.6. Private Participation in the Sector**

The current government policy is that water provision to urban customers should remain the responsibility of reformed state enterprises at least until year 2000. No policy has been expressed as to whether private provision of urban water service would be permitted after that point in time

although Decree No 44 issued in 1998 specifies that public utilities shall not be equitized.

As mentioned above, the government encourages private bulk water supply through BOT schemes with some form of take-or-pay arrangements - particularly for the industrial sector where foreign customers are able to bear higher tariffs. Whether a BOT project needs to be approved by the national government or by the provincial government depends primarily on the capital investment involved in the project. All the BOT water projects currently in the pipeline require approval by the national government. As Vietnam has a unitary government - i.e. there only is administrative, not legal separation between central and municipal/provincial governments - municipal government cannot sign enforceable and legally binding contracts. By the same token, the municipal government's legal obligation is also that of central government. For example, the HCMC Water BOT with BAWC has an inherent guarantee from the HCMC People's Committee. It is widely assumed that the National Government will step in if the People's Committees cannot meet this obligation under the contract.

A Malaysian consortium, Binh An Water Corporation (BAWC), is the only company that has actually started constructing a BOT-based water supply plant (see details in the Box below). The government has also approved another BOT by the joint venture between Lyonnaise des Eaux and a Malaysian company in HCMC. M-Power is currently awaiting the Prime Minister's approval to start a water supply plant BOT in Hanoi.

### **2.6.1. Binh An Water Corporation Limited: BOT bulk water supply project**

The Binh An Water Corporation Limited (BAWC), a 100% foreign owned consortium, has a 20 year BOT contract with HCMC Water Supply Company. The contract calls for BAWC to supply 100,000 m<sup>3</sup>/day of treated water on take-or-pay basis. Most of the water treated at the BAWC plant will be allocated to Bien Hoa Industrial Zone, where industrial customers can afford higher rates. In addition, BAWC will meet about 10% of HCMC's predicted demand. The BOT contract was negotiated, not competitively bid, with the People's Committee of HCMC in August 1994. A license was issued in March 1995. Construction started in December 1997 and was planned to be in operation by April 1999. Although the construction has nearly completed, project has been halted due to difficulty of reaching financial closure.

Some key characteristics of this BOT are:

- The project contract was negotiated with a single investment group. The BOT concept was used for the first time in the water sector in Vietnam and the government's inexperience led it to negotiate a deal with a single supplier rather than employ a competitive bidding process.
- There was a one-year delay in the start of construction due to difficult land use negotiations. Land was donated "free" by HCMC, but the site location was in a different province (Song Be) which would receive none of the services, and reap none of the benefits of the BOT. Various fees had to be paid for resettlement and land compensation before it was approved.
- The State Bank of Vietnam would not offer a guarantee to BAWC for the bulk sale contract with WBC. The only guarantee came from the HCMC People's Committee, based on an unaudited annual budget of US\$286 million. It is widely assumed that the National Government will step in if the People's Committee can not meet its obligation.
- Market risk and foreign exchange risk associated with this contract is almost entirely born by the government through a dollar denominated take-or-pay agreement and a guarantee from People's Committee.

#### **Allocation of risk in BAWC project**

Risk	(a) Party to bear risk
Construction risk	Private
Operating Risk	Private
Market/output risk	(i) Public
Transportation risk (pipe)	Private
Regulatory risk	Private
Exchange rate	(ii) Private

### 3. TELECOMMUNICATIONS

Vietnam has made considerable progress in telecommunications in recent years, particularly in the availability of modern basic service and cellular services. However, in common with many other developing countries, it suffers from a number of problems, including technical and managerial inefficiencies; unequal access, particularly between the rural and urban areas; shortages of capital for capital expansion; and restrictive regulations. These problems are exacerbated by a legacy of heavy centralized control. At the present time, the Government of Vietnam views telecommunications as a strategically important part of the country's infrastructure and prohibits private foreign ownership in operations while permitting only limited private participation through the funding of additional capacity. The main avenue for private foreign involvement in the operation of the telecom sector has been through Business Cooperation Contracts (BCCs) which are schemes where foreign companies finance capital investment and share in revenues with the telecom company but have no direct involvement in the operation of the systems.

Most BCCs, however, do involve the foreign partners to provide technical assistance and training to Vietnamese professionals on a wide scope of telecommunication operations. There are a number of factors in play which may encourage the Government to consider more fundamental reforms and liberalization of the sector. First, there is growing resistance amongst foreign investors in pursuing further BCC arrangements given the time-consuming negotiations involved in these projects which leave the private sector party with no control over the day-to-day running of the systems. Second, the Government is openly seeking foreign and local private sector views on

preferred forms of private participation in infrastructure in light of the dramatic falls in Foreign Direct Investment into Vietnam in recent months and the growing competition from other countries in the Region for foot-loose investors. Finally, there are legislative pressures that will emerge from the US-Vietnam Trade Agreement Talks and the entry requirements for World Trade Organization (WTO) membership which will require the Government to liberalize the telecommunications market.

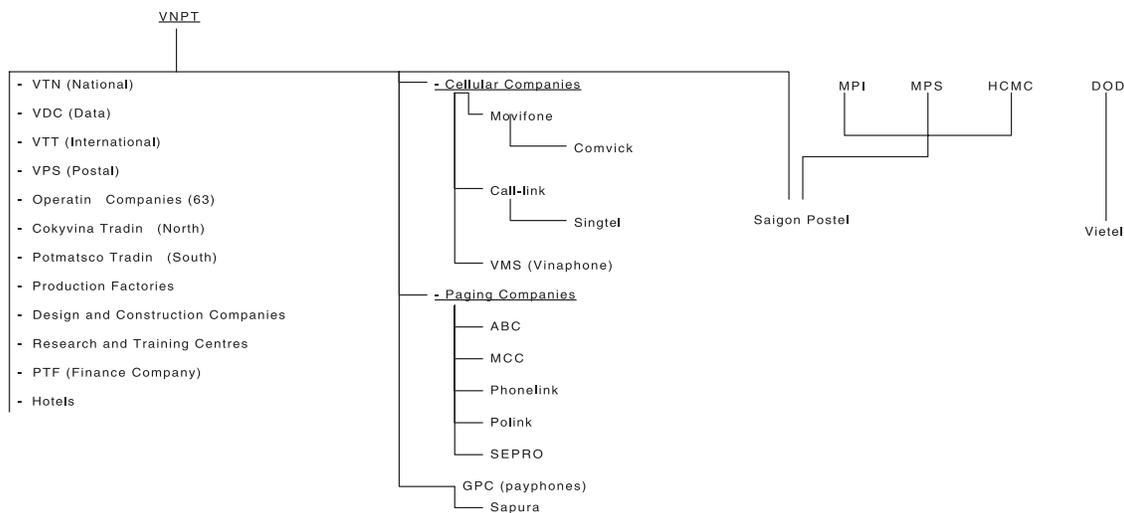
#### 3.1. Market Structure

Vietnam Post and Telephone (VNPT) dominates the sector, and it participates in almost all activities and enterprises, including those that have been set up to provide a modicum of competition in the sector. There is a proliferation of State-owned 'companies' for almost every telecom activity. (See details in the Diagram below). While this may be a good way to provide focus and accountability, it is not certain that they are companies in an international sense, and there is no financial information readily available that can be used to analyze their viability as trading entities. So far VNPT has equitized only one of its many companies and is currently planning to equitize four others (a hotel, a telecom manufacturer, and two postal construction companies).

#### 3.2. Technical Performance

Access: Progress towards access for fixed lines as well as mobile services have improved dramatically over the past 5 years: the number of main line grew from 0.4 per 100 inhabitants to 2.1 in 1998; and the number of cellular subscribers grew from 15,000 in 1995 to 225,000 in 1998. Since the network prior to 1990 was very small and essentially obsolete, Vietnam is now in the enviable position of having a very

**Diagram : Telecommunications Market Structure in Vietnam**



modern, fully digital network. The average waiting time for service is estimated at 0.7 years, although there are considerable variations between rural and urban areas.

is little reason, other than organizational, for the relatively poor efficiency figures. One local company that mainly deals with VNPT estimates that 60-70% of their time is wasted on overcoming

**Table 8: Ownership of Telecoms facilities and Internet access and usage in Vietnam cities**

	HCM	Hanoi	Danang	Can Tho
Total Households (thousands)	793	558	116	45
Telephone (%)	31.2	49.2	24.8	28.3
Mobile Phone (%)	4.3	2.7	1.6	2.1
Computer (%)	8.4	9.9	1.5	2.9

Efficiency: VNPT's operational efficiency ranks very poorly compared to its neighboring countries (see Table below). Given the state of the network, i.e. mostly new, digital and of recent vintage, there

bureaucratic blockages. They confirmed that obtaining a leased circuit can take around 6 months, but only after 'suitable pressure'.

**Table 9. Performance of the Telecom Sector**

	Vietnam	India	Philippines	Thailand
Main lines/ 100 inhab. I	2.1	1.9	2.8	7.9
Cellular lines/ 100 inhab. I	0.18	0.09	1.77	3.31
Payphones / 10,000 inhab.2	0.1	3.6	1.3	13.1
Staff/ 1,000 main lines I	50	24	9	7.3
Revenue per line in US\$ I	520	234	582	429

Source: ITU, World Bank. 1. 1997, 2, 1996

### 3.3. Commercial Performance and Tariffs

As with most other government controlled telecommunication companies, the tariffs in Vietnam are full of cross -subsidies and are not closely aligned to cost. For example, the highest tariffs are for basic telephoning where the costs are the lowest while the tariff for connection in the cities is higher than for the rural areas, although the costs are the reverse. Similarly, local call tariffs are very low whereas long distance and international tariffs are relatively high. This arises from a political agenda whereby those who can pay the most have the highest rates. This practice is a form of disguised taxation which places an additional burden on industries that are trying to be competitive, particularly if they are export-orientated. However, the Government is aware of some of these issues and as a first step has announced that from July 1, international telephone calls are to be reduced by an average of 10%. Nonetheless, there is a need to move ahead quickly to rebalance tariff and introduce independent regulations for greater efficiency and competition in the sector.

### 3.4. Demand forecasts and public investment plans

The government aims to double the number of telephones in Vietnam over the next 3-5 years. This will require investment of at least US\$ 1 billion per annum, particularly if greater emphasis is given to the rural sector. In addition, finance will be required for cellular, internet and network expansion. The government believes that some of the investment money required for telecommunications will come from ODA sources. However, it is highly unlikely that ODAs will provide sufficient funds to meet these ambitious investment targets.

This presents a major opportunity for the Government to turn to the private sector to meet some of these new investments. However, as noted above, there are serious concerns being raised from the international firms about the current forms of private participation and the restrictions that they entail. Furthermore some of the private companies that may have been potential investors in the past are now facing competitive threats in their home territories so that, unless the investment climate is very attractive, they are unlikely to show any interest.

### 3.5. Legal Environment

There is no law in Vietnam specifically on telecommunications, although the Government has proposed introducing one in 1999. The current regulatory framework is based around commercial regulations and decrees, in particular those that refer to the rules regarding foreign investment.

### 3.6. Regulatory Institutions

The primary regulatory agency is the Department General of Posts and Telecoms (DGPT). However its actions are constrained by other governmental agencies, including the Department of Planning and Investment (DPI) and VNPT.

DGPT's role involves:

- establishing the laws, policies and strategies for activities in postal, telecommunications and radio frequency management;
- issuing standards and regulations regarding networks, services, equipment, RF management and regulating the tariffs and fees for all services;
- granting licenses for the operation and making announcements of the opening and closing of national and international services; and

- inspecting and giving guidance in all telecommunications and RF issues in regard to Vietnamese law.

### 3.7. Private Sector Participation in the Sector

At the present time the main means of achieving private participation in Vietnam's telecom sector is by:

- local companies selling primarily CPE equipment;
- joint ventures with overseas manufacturers: there are presently eight such JVs; and
- the use of Business Cooperation Contracts (BCC) contracts.

BCCs are essentially Build-Transfer (BT) schemes and have been designed as a mechanism to circumvent the government's restriction on foreign participation in telecommunications operations. The BCC contracts are let without a bidding process, although the bidding within the contracts is by competitive tender. Instead

they are arranged through 'business relationships' that have been developed over time. Interestingly, all of the BCC investors to date are state-controlled government telcos, apart from Cable & Wireless. The table below lists the main BCCs in Vietnam.

While allowing access to much needed foreign capital and expertise, BCCs come at considerable cost to all parties: the government, the foreign investor, the end users and taxpayers. Similar and more developed schemes such as Build-Transfer-Operate (BTOs) have been widely used in Asia, where governments are reluctant to accept more standard commercial arrangements. In most cases such schemes suffer from several drawbacks including: (i) higher financing costs in respect of increased risks associated with BCCs; (ii) long negotiation and re-negotiation periods; (iii) concern over changes in market, technology and financial conditions; (iv) concerns that, near the end of the contract period, the investor will lose interest and stop investing.

**Table 10. Business Cooperation Contract (BCCs) (with VNPT)**

International Partners	Project Names	Value (US\$ million)	Date of License	Remarks
1. Telstra	International telecommunications	237.15	20 Oct 1990	Operational
2. Voice International (Australia)	MCC paging	0.725	21 Dec 1989	Completed the contracted phase
3. Sapura (Malaysia)	Prepaid phone cards	3.571	6 Oct 1993	Operational
4. Comvik (Sweden)	Mobile phone services	127.8	19 May 1995	Operational
5. Korea Telecom (Korea)	Telephone services (Hai Dong, Hai Phong, Hung Yen, Quang Ninh)	40	27 Apr 1996	Operational
6. Worldcorp Holdings	Telephone directory	0.82	17 Jun 1995	Operational
7. NTT	Telephone services for northern part of Hanoi	194.4	12 Nov 1997	Operational
8. FRC (France)	Telephone services for eastern part of HCMC	467	12 Nov 1997	Operational
9. Cable & Wireless (UK)	Telephone services for the southwestern part of Hanoi	207.06	8 Aug 1998	Being reviewed for termination in advance of the project term.

### 3.8. Restrictions on Entry and Competition

Currently there is no competition in fixed line telecommunications, even though the government has granted licenses to two other locally owned organizations: Saigon Postel and Vietel. The competition is limited because both of these organizations are Government agencies and the former has VNPT as a major shareholder. Consequently, under their present guise, the only competition is likely to be for capital, either from government or elsewhere. So far the DGPT has not defined the rules under which they will operate other than to say that they can both offer services nationwide, but not international services. Neither organization currently has any capital to invest. Although the current rules allow outside investment only through BCCs, these arrangements are only attractive when the investor has the security of a monopoly situation. Even if Saigon Postel and Vietel can attract foreign interest, the likely commencement of service will be some time away due to the time-consuming nature of the BCC scheme.

There is a degree of competition in cellular as there are three cellular providers- Mobifone, Vinaphone and Call-link. However, since VNPT is a major shareholder in all three firms real competition is very limited. The situation is similar with paging, where all companies are owned by VNPT. There seems to be a slightly greater element of competition in Internet access, but the gateway is controlled by VNPT. While 'callback' operators no doubt exist, there is a decree which makes them illegal. Also their operations would be limited by the scarcity of credit cards. VNPT is the only company providing data networks and dispatch radio.

## 4. TRANSPORT SECTOR ANALYSIS

To date, the Government of Vietnam has acted or announced its intention to involve the private sector in transport infrastructure<sup>13</sup> in four ways:

- BOT investments in ports, highways, and bridges;
- Consideration of a Rehabilitate Operate Transfer scheme for one rail line;
- Consideration of the equitization of selected existing maritime assets; and
- Construction contracting to meet donor conditionalities for sectoral loans.

At first glance, this program seems extensive including arrangements for private greenfield developments, the sale or equitization of existing assets and contracting of private sector firms for major construction projects. However, when viewed sector by sector and project by project it is clear that few initiatives have been undertaken and, of those underway, only small segments of one or two sub-sectors are represented. The matrix below illustrates the extent of PPI in transport infrastructure by sector.

### 4.1. Transport Sector Structure

As part of the 1994 state sector reforms, the Ministry of Transport was reorganized so as to recast its mission from its previous centralist and interventionist role to one in tune with a market economy. The Ministry of Transportation is now responsible for creating and implementing policy; setting standards; planning; programming; budgeting; and auditing instead of the daily micro-management of sector infrastructure; facilities; and transport services.

Four separate administrations were introduced:

- Vietnam Maritime Administration;
- Vietnam Road Administration;

<sup>13</sup> For the purposes of this analysis, transport infrastructure likely to attract significant private sector interest is defined according to two major criteria:

- Permanence or immobility of the assets, reflecting the characteristics of a natural monopoly; and
- Reasonable potential for user fees that provide cost recovery of at least operations and maintenance costs, if not capital costs.

Because of the first criterion, ports and airports are analyzed whereas shipping lines and airlines are not. As a result of the second principle, toll roads and bridges in high volume and industrial areas and on inter-city routes are considered, whereas rural and intra-urban roads are not. Finally, urban transit (light rail or metro) initiatives are unlikely to prove economically or financially viable in Vietnam at this time or in the medium-term and so urban transport is not addressed as part of this PPI analysis.

**Diagram 1: Transport Related Initiatives for Private Participation, by Sector**

	<b>Construction Contracts</b>	<b>Maintenance Contracts</b>	<b>Management Contracts</b>	<b>Leases</b>	<b>Concessions</b>	<b>Greenfield Joint Venture</b>	<b>Equitization/ Privatization</b>
<b>Ports</b>	<i>With donor funds</i>	None	None	None	None	<i>2 Operational</i>	<i>Under consideration *</i>
<b>Hwys/ Bridges</b>	<i>With donor funds</i>	None	None	None	None	<i>1 Operational</i>	None
<b>Rail</b>	<i>With donor funds</i>	None	None	None	None	<i>Partial ROT under consideration **</i>	None
<b>Airport</b>	<i>With donor funds</i>	None	None	None	None	None	None

\* Likely to have limited foreign participation

\*\* ROT = Rehabilitate Operate Transfer

- Vietnam Inland Waterway Administration;
- Vietnam Railways

The Vietnam Maritime Administration manages 16 companies, the Inland Waterways Administration Bureau runs 22 companies, and the Vietnam Road Administration manages 55 companies, including 6 freight transport enterprises, 1 passenger transport enterprise, 4 regional road management units, 40 sub-units, and 4 ferry groups. Each administration was given substantial autonomy and broad power over the centrally administered transport infrastructure.

In addition, eight special Project Management Units were formed to deal with the management of large-scale rehabilitation projects such as Highway No. 1. Foreign projects are administered by these units. Air transport (airports and the national airline) has been removed from MOT's purview, and instead reports to the Prime Minister.

#### **4.2. Entry Barriers and Limits on Vertical and Horizontal Integration**

There are numerous barriers to entry, both legal and informal, for investors in Vietnam's transport sector. Legal barriers include:

- The Government's definition of strategic assets, including nearly all transport sectors;
- The Government's restrictions on foreign investment.

##### **4.2.1. Restrictions on Vertical and Horizontal Integration**

There is not an explicit or legal restriction on vertical or horizontal integration where private sector participation is allowed in transport. In fact, the two port projects that are in operation include one built in part by active shipping lines (NOL and Mitsui) and another that is an extension of a steel mill. Both of these projects could be considered vertically integrated with other operations. Similarly, the Tan Thuan EPZ-Highway 1 Toll Road serves as part of the infrastructure network that the Taiwanese company has built in and around its export processing zone, Saigon South.

##### **4.2.2. Restrictions on Foreign Ownership**

There are severe restrictions on foreign ownership and management of transport infrastructure in Vietnam as defined in Decrees 56 and 28. In ports and rail, for example, there are limits on non-Vietnamese foreign ownership in the

to 10 percent and any foreign ownership (namely overseas Vietnamese) to 40 percent. It is not clear under what conditions, Baria Serese and the Mitsui/NOL facility were built given these restrictions.

#### **4.2.3. De Facto Restrictions on Entry**

Aside from the legal restrictions described above, the primary obstacles to investing in Vietnam's transportation infrastructure can be summarized as follows:

##### *Bureaucratic Overlap*

As with all areas of foreign direct investment in Vietnam, potential private sector transport operators or investors are subjected to confusing and overlapping bureaucracies that include:

- Prime Minister's Office
- People's Councils (at all administrative levels: provinces, cities, provincial townships, rural districts, urban districts and local communities);
- People's Committees (at all administrative levels as above);
- Transport and Urban Public Works Departments of the People's Committees;
- City Departments of Planning & Investment;
- The Ministry of Transportation & Communication;
- Sectoral institutions (such as VinaMarine and Vietnam Railway); and
- Ministry of Planning & Investment's BOTGroup.

The commitment to assisting the private sector to invest in and/or operate transport infrastructure varies tremendously from one institution to the next. Investors are often unable to detect which bureaucracy is promoting a project and which will put up obstacles and cannot focus its bids and negotiation strategies accordingly.

##### *Investment Processes*

Partially as a result of the many levels of involvement from governmental agencies, and partially because of the tradition of accepting unsolicited bids, investors often seek to develop a project by contacting the highest level of Government available to them. Since bidders have only one chance to have their initial proposals accepted or rejected, they try to avoid the risk of submitting first draft proposals to non-central organizations. By bypassing local agencies at the inception of the bidding process, investors sometimes find that local government officials put obstacles in the way of their long-term negotiation or the eventual implementation of a project. Moreover, the involvement of the one organization that is dedicated to bringing the private sector into the provision of public services, the part-time BOT Group, has been limited to that of advisor to line ministries and a disseminator of promotional material. The Center's authority does not allow it to identify projects, conduct feasibility studies, coordinate inter-agency responses to proposals or to assist the bidders to prepare in their negotiations with sponsoring government agencies.

##### *Negotiations*

The process of negotiation in Vietnam is one that is long and difficult. Investors complain that they have entered into agreements with the Vietnamese Government only to find that the conditions and requirements of the investment shift and that their positions are undermined by growing bureaucratic requirements as the negotiation appears to approach closure.

##### *Project Bankability*

Without bond markets, access to local financing or even equity markets (the stock market's 1999 opening has recently been

postponed for at least another year), transport projects in Vietnam suffer from currency mismatching risks and difficult exit strategies for investors. Given the financing drought that can be felt throughout East Asia--approximately 80 percent of FDI in Vietnam comes from within the region--and the lack of sovereign guarantees associated with Vietnam's transport projects, it is currently very difficult for projects to reach financial closure.

#### **4.2.4. Risk Allocation**

To date, the few private investments in transportation infrastructure that have come to closure have been built with little or no government volume, traffic or revenue guarantees and without standard levels of construction risk sharing. However, the levels of risk absorbed by the developers of the Vung Tao Expressway and Baria Serese are probably not indicative of future investors' willingness to absorb risk before investing in Vietnam.

- **Toll Roads:** Like IPPs and bulk water supply facilities, toll roads throughout the world have been built with volume or revenue guarantees provided by sovereign or regional governments. Recent experiences throughout Southeast Asia have demonstrated that reliance on guarantees for projects that are sensitive to macro-economic or regional downturns exposes those projects to risks that may be beyond the ability of the government to cover during periods of economic crisis. Another common approach to risk sharing in which a government's participation can be calculated without postponement as with guarantees, involves the use of government funds for construction of all or most of the facilities with the highway operator brought in only to manage, maintain

or expand the road. As described above, the first and only private sector highway project that is operational in Vietnam (Tan Thuan-EPZ Toll road), involved the Government's contribution to the project in in-kind equity (land, right of way), but did not involve guarantees.

## **5. AIRPORTS**

### **5.1. Market Structure and Ownership**

Vietnam has three international airports: Ho Chi Minh City, Hanoi and Da Nang. In addition, there are 13 domestic airports around the country. Institutionally, Vietnam's airports stand apart from the other transport sectors in that they fall directly under the auspices of the Prime Minister's office and are thus administered by the Civil Aviation Administration. This institutional arrangement does not bode well for future private sector participation in the management of the airports.

Although airports are hard currency earning investments that can either serve as bottlenecks to trade or, with proper management and investment, can facilitate tourism and commerce, the Government of Vietnam is not discussing private participation in its airport sector. In the mid-1990s, the Southern Airport Authority solicited qualification statements for a US\$200 million Build-Transfer, turn-key expansion terminal for Tan Son Nhat Airport (Ho Chi Minh City), but that bidding process was eventually suspended. There is no indication that the project will be resumed.

### **5.2. Physical performance**

The data below indicate that Vietnam's air traffic (at 1990 levels) was about 4 to 10 percent of the levels of the more developed Southeast Asian economies. This is despite a larger population and a difference in GDP considerably less than that of aircraft calls and passenger and freight figures.

**Aircraft, Passenger and Freight Traffic at Selected Asian Airports  
1985, 1990 and 1994 (Traffic of the Largest Airport)**

Indicator	Viet Nam	Indonesia			Thailand		
	1990	1985	1990	1994	1985	1990	1994
Aircraft	9,344	62,000	91,500	140,600	78,800	120,200	140,900
Passengers	609,698	3,933,000	7,526,000	12,243,000	6,536,000	14,329,000	18,765,000
Freight (tons)	11,608	57,000	172,400	245,300	168,200	405,900	587,800
	Philippines		Singapore			Malaysia	
	1985	1994	1985	1990	1994	1985	1990
Aircraft	81,500	64,700	75,800	108,900	145,300	65,800	73,100
Passengers	5,754,000	9,685,000	8,692,000	14,406,000	20,203,000	4,218,000	-
Freight (tons)	183,700	279,900	312,400	629,400	1,009,800	82,100	-
	India		Hong Kong			Korea	
	1985	1990	1994	1985	1990	1985	1990
Aircraft	64,900	58,500	84,600	74,400	122,900	50,100	113,200
Passengers	728,600	7,968,000	9,726,000	9,856,000	18,688,000	6,307,000	16,821,000
Freight (tons)	183,700	199,100	202,500	432,900	825,100	28,100	644,000

## 6. RAILWAYS

### 6.1. Market Structure and Ownership

Vietnam's rail network, owned and operated by the government agency Vietnam Railway, consists of about 2,600 kilometers of single-track line covering seven routes. The longest route is the Hanoi-Ho Chi Minh City line, which stretches 1,730 kilometers. This line is now serviced by an "express" train, which makes the journey in approximately 36 hours.

The Government of Vietnam has not traditionally allowed Vietnam Railway to consider the introduction of private sector participation in any aspect of its operations. Recently, however, the Government recently announced its intention to seek a BOT investment of \$130-million to upgrade the 600 km railway from Lao Cai to Cai Lan Port. It is unclear what role the investor will play in the operation of this line or how he will recover his investment in this rehabilitation project given the lack of previous experience of private sector operators or investors in Vietnam's rail network. Although Vietnam Railway is a vertically

integrated institution--with ownership of assets ranging from traditional rail services to rolling stock manufacturing, hotels, meal services and even food manufacturing facilities--restructuring of the institution and equitization or divestment of either core or ancillary services (except for one hotel and, now, the Lao Cai-Cai Lan line) has not yet been proposed.

### 6.2. Physical Performance

Although, the network extends from the Chinese border in the north to the major demand and production centers in the south, it suffers from under use and negligence. Rail is not a primary provider of transport services in Vietnam since traffic flows usually do not extend the length of the country, making long-haul transport modes unnecessary from a commercial perspective (although political and social unity may be highly valued by the Government). This is because, in terms of transportation, the key demand and production centers in the north and south do not constitute an integrated economy. Consumers in the north are more likely to purchase goods

shipped from overseas and producers in the south are more likely to seek raw materials from abroad than to purchase from the north. Furthermore, the subsidized use of coastal and in-land shipping, often carried out with military vessels, has made it impossible for VR to charge tariffs which could come close to covering operating expenses. To illustrate this point, in 1995 the rail network carried around 3.5 million tons and 1.92 million passengers, accounting for about 5% of total cargo and 12% of total passengers transported domestically.

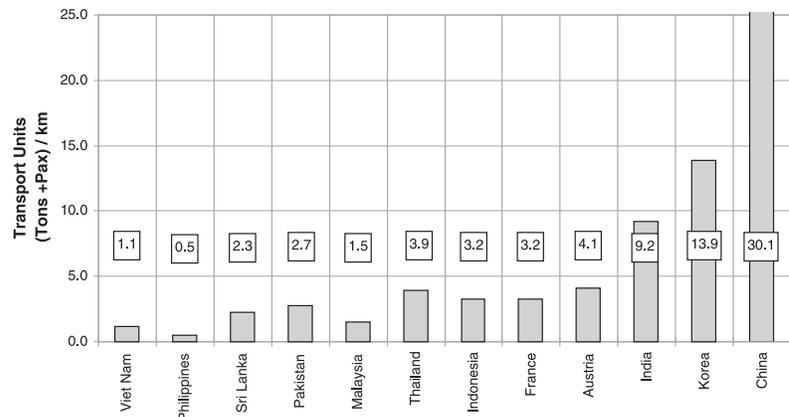
There are about 260 stations in the network and an average of one railway crossing every eight kilometers. The bridge network was severely damaged in the war, and the track beds are in poor state. Up to 40% of the 480 locomotives in the system are out of service at any one time. Although about 100 are steam engines and the remaining locomotives come from more than 15 different suppliers, Vietnam Railway notes that as of October 1999, it is running 200 locomotives TY7 of 400 horsepower capacity.

According to the latest sectoral report of the World Bank, train speeds average about 25 kilometers per hour for passenger trains and 15 kilometers per hour for freight trains. However, Vietnam Railways notes that the average speed of express trains from the North to the South is now 55 kilometers per hour. Standardization of track gauge and other investments have slowly begun to improve the rail system, though much renovation will be needed in the future in order to allow the rail system to compete with roads and waterways.

The diagram below shows Vietnam's utilization of its railroad benchmarked against other regional rail systems. By most standards, Vietnam's railroad is underutilized—only 5 percent of domestic cargo shipments and 12 percent of passenger movements are conducted over the railroad. This is a result of several factors including:

- Excessive subsidization of road use, coastal and in-land waterway shipping;
- Lack of integration between the northern and southern demand and production centers; and
- Under financing and poor maintenance of the railroad network, both infrastructure and rolling stock.

**Viet Nam's Comparative Railroad Traffic Density, in TU/km**



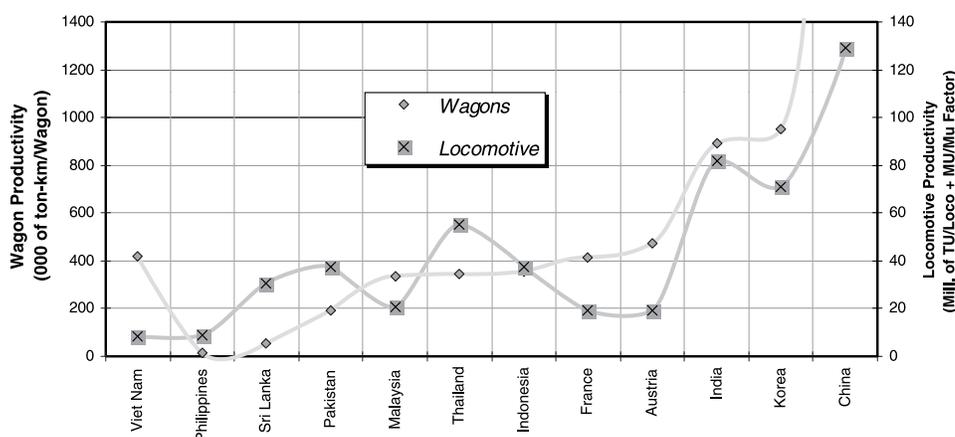
Source: World Bank

The poor utilization discussed above contributes to unusually high levels of inefficiency in the use of the systems rolling stock. The productivity figures presented below demonstrate how difficult it is for Vietnam to make use of its inventory of rail cars and locomotives.

### 6.3. Financial Performance

It is difficult to make definitive statements about Vietnam Railway's finances, both because the traditional methods of bookkeeping do not lend themselves to financial analysis and because

Viet Nam Rolling Stock Productivity



Vietnam underwent a significant period of inflation (almost a factor of 12 between 1988 and 1997). However, in order to give a general indication of the results, a costing study conducted by GTZ analyzed the effect on Vietnam Railway of the infrastructure separation. According to this study, Vietnam Railway's losses were as follows:

Vietnam Railways Indicative Financial Performance (1990-1995, Billions of VND)

Financial Indicator	1990	1991	1992	1993	1994	1995	CAGR
Total Revenue	143.3	277.3	394.0	469.8	607.1	798.3	41%
Total Costs	159.1	299.4	422.9	530.4	757.0	1006.7	45%
<b>Deficit</b>	<b>15.8</b>	<b>22.1</b>	<b>28.9</b>	<b>60.6</b>	<b>149.9</b>	<b>208.4</b>	<b>68%</b>

According to Vietnam Railway reports,<sup>14</sup> the railroad has broken even on operating costs since 1995. However, these operating ratios place all revenues against costs associated only with rolling stock operations. Consultants' review of the Government's contributions demonstrates that subsidies (into what is referred to as "infrastructure costs") have grown significantly during that period of time. Thus, the reported break-even on operating costs alone is not necessarily accompanied by an improvement in the railroad's

over-all finances, but probably a slight deterioration in results. Vietnam Railways reports that the Government settled bank loans in 1995 made to VR in 1995 and 1996 for investment purposes.<sup>15</sup>

#### 6.4. Current and Potential Private Sector Participation in Rail

To date, there is no significant private sector involvement in Vietnam Railways. However, the Government of Vietnam announced in March of 1999 that it intends to pursue two rail projects under the BOT scheme and efforts are ongoing to restructure the sector by separating core and non-core functions. While the two BOT projects may not prove to be feasible, they indicate a willingness on the Government to consider a role for the

<sup>14</sup> See "Vietnam Railways on the Way to Renovation," Vietnam Railway 1997.

<sup>15</sup> L.S. Thompson interview with Nguyen Trong Bach, Deputy General Director of Vietnam Railway.

private sector in the operation, or at least financing, of rail transport.

- BOT Project 173 is to build a railway or subway network in Ha Noi with an investment of \$600 million. The government claims it will open bidding in June 2000.
- BOT Project 174 is a \$130-million upgrade of the 600 km railway from Lao Cai to Cai Lan Port. It is unclear how the investor will be allowed to recover his investment in this rehabilitation project given the lack of previous experience of private sector operators or investors in Vietnam's rail network.

## 7. PORTS

### 7.1. Market Structure and Ownership

The maritime industry in Vietnam is controlled by Vinamarine, a state organization under the auspices of the Ministry of Transportation. Although Vinamarine is responsible for the country's seven major seaports, numerous minor seaports, the national shipping lines and barge companies, as well as the two major inland waterway systems along the Red River and Mekong Deltas, the actual operations of the public ports are carried out by different agencies and ministries from facility to facility.

#### Public Port Operators in Vietnam

Operator	Number of Ports	Volume of Cargo Throughput In 1995, 000s of tons
Ministry of Transport	10	14,514
Local	24	3,140
Other Ministries and Sectors	36	26,101
Total	70	43,755

Source: VINAMARINE (1996).

Vietnam's main port areas are Hai Phong (60 miles from Hanoi) and Vung Tau (75 miles from

Ho Chi Minh City), both of which are nominally intended for expansion by private investors, as described below. Although the ADB approved a US\$30 million loan to rehabilitate and upgrade port facilities in 1995, it is uncertain what role Ho Chi Minh City Port will play in the dominant southern trade given the development of other private facilities in the area. The country's only deepwater port is Cam Ranh Bay, built by the United States as a naval base during the war. The naval facilities in Cam Ranh Bay, including a shipyard, are currently under lease to the Russian Navy. The Government of Vietnam is currently deliberating on the future role of the facilities once Russia's 25 year lease expires in 2004. Although there are competing proposals for the development of a transshipment center that could serve a possible ADB-funded landbridge into Laos and northern Thailand, the port of Da Nang, at the mouth of the Song Han River, currently serves the central highlands and much of the transit traffic to and from Laos. Facilities are generally in poor condition.

The two major inland waterway systems serve as major transportation outlets, competing with both roads and rail. The first major inland waterway system is in the Red River area of the north and stretches approximately 2,500 kilometers. Along this system there are five main ports, of which Hanoi is the largest. The second major inland waterway extends 4,500 kilometers along the Mekong River and its tributaries in the south and contains about 30 ports including Ho Chi Minh City. Navigation can be difficult at times, especially during the dry season when channels can shrink to

as little as one meter in depth. Channels are not dredged regularly, further aggravating the problem.

## 7.2. Technical Performance

Vietnam's largest publicly operated commercial port, Ho Chi Minh City Port is currently accessible only to ships up to 10,000 dwt. The port suffers from draft restrictions and under-investment in its facilities. It now finds itself competing against a new private container terminal in Ho Chi Minh City, VICT (described in Part C, Section 3 below) which has a deeper draft entry and two modern gantry cranes. Hai Phong Deep-Water Port may eventually be upgraded as part of the development of Dinh Vu Economic Zone.

The cargo throughput data presented below tells a story about Vietnam's trade and port industry that has a few particular themes:

- Dominance of the Mekong Delta region in the country's economic activity;
- Imbalance of trade in favor of imports; and
- Relative insignificance of central Vietnam in international trade activities

In 1995 and 1996, southern Vietnamese ports handled three-fourths of the nation's containers and nearly the same portion of all cargo. That proportion is likely to have increased in recent years given the successful development of Saigon South's industrial park and the inception of private terminals at Baria Serese and VICT, both in southern Vietnam. While it is yet unclear if the industrial development in the south has helped to increase export tonnage and balance the trade, attractiveness of Vietnam to major container carriers and, hence, port investors, will depend in some part upon an equalization of exports to imports. In the data below, all regions suffered from an imbalance of trade of over 2.5:1, imports to exports. This imbalance increases the percentage of empty containers handled at the ports, decreases revenues per call for the carriers, and, in turn, puts downward pressure on the rates that can be charged by a potential private terminal operator. Moreover, VICT's new role as the first private, well-equipped container terminal and its proximity to Saigon South is likely to attract export containers, further undermining the role of the public facilities in the region.

**Cargo Throughput and Ship Calls at Ports of Vietnam**

	1995					1996				
	No. ship calls	Cargo handled (000 Tons)			Containers TEUs	No. ship calls	Cargo handled (000 Tons)			Containers TEUs
		Total	Imports	Exports		Total	Imports	Exports		
<b>Northern Ports Total</b>	<b>2,263</b>	<b>5,860</b>	<b>4,784</b>	<b>1,076</b>	<b>117,600</b>	<b>2,308</b>				<b>149,650</b>
Northern % of Total	32%	23%	25%	17%	23%	30%				23%
Ex as % of Im		22%								
Hai Phong	1,154	4,512	4,019	495	117,600	1,200				149,201
Nghe Tinh	356	310	251	59	-	397				500
<b>Central Ports Total</b>	<b>1,385</b>	<b>1,888</b>	<b>1,450</b>	<b>438</b>	<b>13,400</b>	<b>1,476</b>	<b>2,092</b>	<b>1,472</b>	<b>620</b>	<b>19,651</b>
Central % of Total	20%	8%	8%	7%	3%	19%	7%	7%	8%	3%
Ex as % of Im		30%					42%			
Da Nang	295	830	681	149	7,700	350	848	644	204	9,102
Nha Trang	279	243	308	35	-	289	426	362	64	1,863
Qui Nhon	376	447	246	201	4,200	412	554	308	246	8,500
<b>Southern Ports Total</b>	<b>3,390</b>	<b>17,204</b>	<b>12,547</b>	<b>4,657</b>	<b>388,387</b>	<b>3,870</b>	<b>19,728</b>	<b>13,828</b>	<b>5,901</b>	<b>484,111</b>
Southern % of Total	48%	69%	67%	75%	75%	51%	70%	68%	76%	74%
Ex as % of Im		37%					43%			
Sai Gon	1,379	7,212	4,903	2,308	76,987	1,435	7,340	3,798	2,692	106,000
Tan Cang	533	2,978	1,648	1,330	287,700	646	3,604	1,766	1,838	360,000
Total Saigon Ports	2,399	11,953	7,556	4,396	388,387	2,592	13,211	6,818	5,228	483,911
<b>Total All Ports</b>	<b>7,038</b>	<b>24,952</b>	<b>18,781</b>	<b>6,171</b>	<b>519,387</b>	<b>7,654</b>	<b>28,211</b>	<b>20,424</b>	<b>7,788</b>	<b>653,412</b>

### 7.3. Financial Performance and Cost of Service

The cost of maritime shipping of containers into Vietnam reflects the low volumes and poor access to facilities of the vessels. Draft and Dead Weight Tonnage restrictions require hubbing from Singapore or Hong Kong and a further feeder service from Ho Chi Minh City may be required to reach Danang and Haiphong. Two major international container carriers were surveyed for their delivered shipping costs from Tokyo to the three port areas of Vietnam as well as to Hong Kong, Manila, Bangkok and Singapore. The graph below demonstrates the shipping cost of a 20' container as quoted by these two companies, neither of which knew the purpose of the survey.

The lowest cost alternatives for each route is less than half of the lowest cost alternative to Ho Chi Minh and as little as 30 percent of the cost to Danang. This penalty of up to \$1000 per container is borne by the consumers of Vietnam. While a more efficient port system with greater vessel capacities may not directly reduce carrier fees overnight, it will be necessary if Vietnam is to continue with the trend toward containerization, gain greater economies of scale in trade, and provide access for larger vessels and more direct service from regional trading partners. This, in turn, will lower shipping rates, making imports cheaper for consumers and Vietnamese exports more competitive on the world market.

As for port operations, revenues are driven by national tariff levels except for container charges which are regional. This system should be broken down to the individual port level in order to encourage competition among the facilities and to reflect costs where they incur.

### 7.4. Demand Forecasts and Investment Opportunities

#### 7.4.1. Demand Forecasts

Historical economic growth in Vietnam has been the main driver of cargo. To the degree that the past reflects the future (i.e., Vietnam's ports serve their own hinterland and do not develop into major transshipment centers whereby cargo flows are driven by regional and world trade rather than national economic activity), demand for port services will depend upon economic recovery and reform over the next few years. The East Asia Transport Sector Unit reports (in Report No. 18748-VN, January 6, 1999) that, after a 6 percent drop in cargo flows in 1997, 1998 throughput should return to 1996 levels. This leveling off of general cargo movements follow many years of rapid growth driven by over-all economic growth.

Future growth in demand for general cargo port services in Vietnam is thus likely to be driven by four main factors, in decreasing order of significance:

- Development of the economy of the Mekong Delta in southern Vietnam;
- Development of the economy of the Haiphong-Hanoi corridor in northern Vietnam;
- The role of central Vietnam in the transshipment or movement by land-bridge of cargo to Laos and northern Thailand; and
- Continued containerization of break bulk cargo.

The first two factors can be considered almost independently of each other, at least for the medium-term, as the two demand centers of the north and south are not unified as an integrated economy. The challenges facing Vietnam Railways is, in part, a result of the same issue.

### **7.4.2. Investment Opportunities**

Medium-term investment requirements in Vietnam's ports will depend largely upon the ability of local governments to optimize the use of existing facilities. This may require the equitization of ports or concessioning of terminal operations at facilities that are otherwise considered strategic assets by the central government. The future of Ben Nghe and Danang is discussed in the context of their planned equitization in Part C, Section 3 below. A concessioning option for the major ports, however, would allow the government to retain ownership of the land and basic infrastructure while allowing the private operators sufficient time to recover any significant investments in, for example, wharf improvements, yard equipment and gantry cranes. It is likely that the Government will have to take a more pro-active and aggressive role in dredging in order for this alternative approach to PSP in ports to succeed.

Future greenfield port development will more likely depend upon the willingness of the private sector to absorb risk and to weather the complex negotiations that are an integral part of investing in Vietnam. The major BOT opportunities seem to lie in the central Vietnam industrial and transshipment development hubs envisioned by the Vietnamese Government and at incremental industrial zone growth outside of Haiphong and

Ho Chi Minh City. Given VICT's stated potential capacity of 550,000 TEUs per year, and the southern ports total current activity of only about 480,000 TEUs, it is unlikely that another greenfield facility will be required in southern Vietnam to serve local cargo flows. For this reason, PPI in ports should focus on investment in and improved operations of existing facilities rather than new construction.

### **7.4.3. Current and Potential Private Sector Participation in Ports**

The port sector of Vietnam has probably seen the most involvement of the private sector of any area of infrastructure to date. Like other sectors, however, this has primarily involved greenfield development of new facilities. Existing ports such as Ben Nghe and Danang have considered or are now considering equitization, but there has been no private involvement in these facilities so far. There continues to be tremendous speculation about the construction of transshipment facilities by private developers to serve a land bridge into Laos and Thailand through central Vietnam, but the projects are yet to come to financial closure. Meanwhile, private facilities have been built and are operational in Baria Serese and at the VICT terminal in Ho Chi Minh City and small private terminals are now being built incrementally as part of the industrial zone at Dinh Vu. These projects are described below.

**PROJECT: BARIA SERESE PORT**

Project	Status	Description
<b>Project Name:</b> Baria Serese Bulk & Steel Facility <b>Location:</b> 70 km south of Ho Chi Minh City.	<b>Approval:</b> Signed on June 22nd 1995. <b>Construction:</b> Now Operational - Phase II construction completed.	<b>Ownership:</b> Norsk Hydro (20%); SCPA - a division of France's EMC (40%), Vietnam Government and State-owned Im/Ex Companies (40%) <b>Government Guarantees:</b> None <b>Investors:</b> Norad, Banque Indosuez, IFC (\$10 million project) <b>Project Description:</b> The first private port in Vietnam, Baria Serese is a 1.2 million ton capacity bulk (fertilizer, grains) and steel facility south of Ho Chi Minh City. The business license was issued by SCCI (predecessor to MPI). According to IFC, they can set their tariffs as they choose and can charge in dollars and/or dong.

**PROJECT: VICT TERMINAL**

Project	Status	Description
<b>Project Name:</b> Thuan Dong Container Port - Vietnam International Container Terminal (VICT) <b>Location:</b> Ho Chi Minh City	<b>Approval:</b> License granted in 10/94; 5/97, <b>Construction:</b> Phase I construction complete - About to begin operations (as of 10/98).	<b>Ownership:</b> First Logistics Development Co. a joint venture company by Vietnamese Southern Waterborne Transport Co., Transport Chartering Co. (35%) and Mitorient Enterprises Pte Ltd. [Mitsui & Co (25%), Neptune Orient Lines (75%)](65%) <b>Government Guarantees:</b> None (?) <b>Project Description:</b> Presently Ho Chi Minh City has three operating ports, which last year handled more than 500,000 TEUs. Over the past several years, the volume of container cargo handled at Ho Chi Minh City has risen sharply, including 30% growth in 1996. VICT is the only Vietnamese port with modern gantry cranes. When all three phases are complete, the investors claim that the project will have a capacity of 550,000 TEUs per year with five berths and five gantry cranes. However, the MoT puts the current capacity at 80,000 TEUs and notes that the next phase (which has been approved) will increase the capacity to 160,000 TEUs.

**PROJECT: DINH VU INDUSTRIAL ZONE**

Project	Status	Description
<b>Project Name:</b> Dinh Vu Island Industrial Zone <b>Location:</b> 10 miles east of Hai Phong	<b>Approval:</b> Approved in August 1995; <b>Construction:</b> Now in first stages of construction.*	<b>Ownership:</b> International Port Engineering & Management Co. (Belgium), AIG (US), and Ban Chang (Thailand) <b>Government Guarantees:</b> None <b>Project Description:</b> What may eventually be a large industrial zone and deep-sea multi-purpose freight facility is currently being built on a reclaimed island near Hai Phong. Although the investors have estimated that the facility will cost \$560 million at completion, development of the industrial site is incremental, paralleling the commitment of potential users. To date, the Dinh Vu site has one committed investor, Caltex, which will operate on a small portion of the total available acreage. The oil products company is sub-leasing a 15-acre waterfront property which has been converted into a tank farm and barge terminal for product distribution in northern Vietnam. Although the consortium is filling Dinh Vu with dredge spoils from nearby sandbars, the access channel has not yet been dredged and is un-navigable by deep-sea vessels. *Despite the investors' description of the project, the MoT notes that no private terminals are under construction in Dinh Vu.

## 8. ROADS

### 8.1. Market Structure and Ownership

The Vietnam Road Administration is responsible for policy formulation, planning, guidance, control and operations in the sector. VRA was established in January 1993 (Decree 01-CP) as a department directly subordinate to the Minister of Transport. VRA has a substantial degree of autonomy and broad powers. It has legal status, accounts with the State Treasury and its own budget, which is reviewed by the Ministry of Transportation and submitted to the Prime Minister for approval. VRA is one of the five administrations under the Ministry of Transportation. VRA manages 55 companies, including 6 freight transport enterprises, 1 passenger transport enterprise, 4 regional road management units (Hanoi, HCM, Danang and Vinh), 40 sub-units, and 4 ferry groups. VRA is responsible for:

- All national roads and routes network in Vietnam.
- Management and maintenance of national roads and bridges.
- 88 highways and national roads with a total length of 15200 km.
- Management of transportation.
- Management of budget for repairs and maintenance.
- Management of projects that are less than 30 billion Dong.
- Collection of money from road tolls.
- Implementation of IMUs. VRA acts as guarantor for IMUs loans. VRA will pay from the budget if one of the IMUs cannot meet its financial obligations. So far, the IMUs have no problems in meeting its loan payment.

Regional Road Management Unit (RRMU) 1, RRMU3, RRMU4, RRMU5 and RRMU7 are under the portfolio of VRA. The RRMUs are responsible for maintaining 5275 km of national road network, and partially responsible for maintaining provincial roads and bridges in the various provinces and urban centers of the regions. In addition, they manage vocational schools concerned with roads, and health clinics for their personnel. VRA is under the portfolio of the Ministry of Transportation. RRMUs are permitted to borrow from commercial banks to maintain roads, and they are permitted to use the toll revenue to pay back the loans.

Provincial roads are managed by 61 Provincial Departments of Transport, and district and urban roads are managed by the District and Urban Departments of Transport. The network of national, provincial, district, and urban roads designated by the Government of Vietnam for maintenance is 72 km. Special-purpose roads are managed by different entities - including the Ministry of Agriculture and Rural Development, commercial estates, and other private interests. Village and subdivision roads belong to adjacent communities, which manage them. Coordination between the various agencies is weak.

Vietnam's road system is a 105,000 kilometer network including 10,732 bridges and 178 ferries. Only about 15 percent of the nation's roads are paved, and most of these are narrow and of poor quality. Resurfacing, pothole repair and ditch cleaning are currently insufficient to keep up with demand, leading to rapid deterioration of roads. The roads in the north are generally worse than those in the south. A number of the more important highways, including Highway 1, which links Hanoi and Ho Chi Minh City, and Highway

5, which links Hanoi with Hai Phong, are being repaired and expanded with international assistance.

## 8.2. Technical performance

Road traffic volume has increased rapidly in recent years as private vehicles have enlarged the vehicle fleet to around 310,000 units. In addition there are about 3,000,000 motorcycles. Heavy use of bicycles (estimated at over 1 million in Hanoi alone) and three-wheeled bicycle taxis (cyclos) creates congestion on the streets but there is little in the way of public transportation as a substitute. Two-wheeled vehicles and cyclos also are used extensively for carrying cargo.

While the Ministry of Transport has slated several engineering, design and consulting divisions for equitization, the conversion of existing roads or bridges into privately owned or operated infrastructure does not appear to be under consideration at this time, with the exception of two. Nonetheless, Ho Chi Minh City's Government issued bonds to finance its Nguyen Tat Thanh Road repair and upgrading project in 1994. Moreover, the Government has

allowed for the construction of one BOT highway outside of Ho Chi Minh City (described in 3.1.2 below) and is considering several other projects including a ring road around Hanoi and a BOT toll road between HCMC - Bien Hoa - Vung Tao Expressway that is being negotiated currently with Daewoo. The Government has also allowed for BOT participation in the Quan Hau Bridge across the Nhat Le River in Quang Binh Province (National Highway 1). The status of this project is uncertain although the private financing is being sought domestically.

## 8.3. Financial Performance and Cost of Service

The main network of national and provincial roads was maintained with a budget of \$77 million in 1997 (similar to 1995 and 1996 levels) although the World Bank's Road user Charges Model and the Transport Development Strategy Institute estimate that funding requirements for maintenance are about \$200 million per annum. With less than 10 percent of the road network of Vietnam paved, including nearly half of the national network, the financial requirements for upgrading and maintaining roads in Vietnam are

**Physical Indicators of Roads and Bridges**

Road Lengths in All Juridictions	1997
Road network length (km)	209,059 km
Paved roads (km)	20,620 km

Source: The Ministry of Transportation, VRA

**Growth of Vehicle Use in Vietnam (in 000s, 1993-1996)**

Vehicle Use	1993	1994	1995	1996	Compounded Growth %
Car	97.4	106.3	118.0	132.8	11%
Bus	38.8	42.6	60.4	66.5	20%
Truck	93.3	99.7	100.2	104.7	4%
Other Vehicles	74.7	71.7	86.6	96.7	9%
Motorcycles	2039.7	3083.6	3498.2	4159.0	27%

Source: The Ministry of Transportation, MOI, WB Report 18748-VN

clearly beyond the capacity of current budget. While increased fuel taxes are being pursued to fund road rehabilitation and maintenance, user fees for tolls are also being implemented. It is within this context that Vietnam's BOT toll road

## 8.4. Current and Potential Private Sector Participation in Roads

### 8.4.1. Operational Private Sector Road Investments

#### Project: Tan Thuan-EPZ I Toll Road

Project	Status	Description
Project Name: Tan Thuan EPZ-Highway 1 Toll Road and Bridge  Location: Ho Chi Minh City, Saigon South	In operation since 1997.	Ownership: Central Trading and Development Group of Taiwan (70%); Ho Chi Minh City (30%)  Government Guarantees: None  Project Description: The Tan Thuan-EPZ I Toll Road is a 17.8 km highway between Tan Thuan Export Processing Zone and Highway 1. It was built by CTD of Taiwan as part of their Saigon South development plan.

strategy has been propagated in recent years.

The current ability of toll facilities to cover investment costs of major expansions or of greenfield roads is limited by low car and truck usage (which combined total less than 5% of motorcycle use) and low ability to pay. The huge gap between car charges and motorcycle charges (12:1) is a further indication of the general public's inability to pay for cost-recovery tolls. Nonetheless, road usage will continue to increase in the future, particularly in urban areas and on main industrial corridors, making private toll road construction and operations more feasible.

The Government of Vietnam has begun to use private investors and private finance to expand and rehabilitate strategic portions of its road network. Although the completed projects of this type are few at this time, the Government continues to negotiate with potential investors and has added new ring roads, highways and bridges that may be open for investment under BOT type arrangements. The project below describes Vietnam's one operational private toll road and bridge:

### 8.4.2. Possible Future Road BOT Projects

The Government is currently in negotiations with Daewoo Corporation over the construction, on a BOT basis, of a major highway connecting Vung Tao with Ho Chi Minh City. It also announced on March 9, 1999 its intention to seek private financing for a number of new roads and bridges. At least some of these projects, such as the third ring road around Hanoi can be described as highly speculative. A description of the Daewoo project and a list of the proposed BOT roads (including the Daewoo project) that will be considered from the year 2000 are presented below.

Proposed Route	Estimated Capital Requirements	Distance
Construction of Ha Noi's third beltway.	400 million	70 km
Expressway linking HCMC, Bien Hoa and Vung Tau.	\$608 million	100 km
Upgrading of the National Highway 13 from Binh Phuoc to Ben Cat in Binh Duong Province.	\$80 million	40 km
Upgrading of National Highway 14 from Ngoc Hoi to Thanh My in Quang Nam Province	\$30 million	140 km
Upgrading of National Highway 18 from Cua Ong to Bac Luan	\$150 million	130 km
Construction of the Yen Lenh Bridge and Highway 38	\$72 million	1,500m
Construction of the Binh Phuoc Bridge	\$20 million	400m

Total BOT New Road Construction	\$1,008 million	\$ 5.9million per km
Total BOT Road Rehabilitation	\$260 million	\$840,000 per km
Total BOT New Bridge Construction	\$92 million	
<b>Total Expected Capital Requirements for BOT Road and Bridge Projects</b>	<b>\$1.4 billion</b>	





## SUMMARY OF PROPOSED ACTIONS

### Summary of Key Actions

	Short Term Actions	Medium-Term Actions	Longer-Term Actions
<b>Cross-Sectoral Issues</b>	<ul style="list-style-type: none"> <li>Amend laws impacting PPI projects</li> <li>Upgrade BOT Group to PPI Center</li> </ul>	<ul style="list-style-type: none"> <li>Rationalize Government bodies responsible for PPI</li> <li>Develop system for monitoring off-balance sheet risks of PPI projects</li> <li>Sector regulatory frameworks in place</li> </ul>	<ul style="list-style-type: none"> <li>Enact laws for PPI and to establish independent regulators in each infrastructure sector</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>Undertake study of optimal market structure and strategy for future reform</li> <li>Conclude pending transactions</li> <li>Implement tariff increases</li> <li>Pass Electricity Law and establish independent regulation</li> </ul>	<ul style="list-style-type: none"> <li>Restructure sector by separating generation and distribution from transmission</li> <li>Begin divesting distribution companies starting with a pilot transaction</li> <li>Rationalize regional cross-subsidies</li> </ul>	<ul style="list-style-type: none"> <li>Move towards competitive markets</li> <li>Equitize a number of generating and distribution facilities</li> </ul>
<b>Water and Sanitation</b>	<ul style="list-style-type: none"> <li>Develop clear policies aimed at market reforms</li> <li>Develop plan for phasing tariffs to cost recovery levels</li> <li>Conclude Bihn Water BOT</li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement policy of tariff reforms</li> </ul>	<ul style="list-style-type: none"> <li>Conclude pilot lease or concession projects</li> </ul>
<b>Telecommunications</b>	<ul style="list-style-type: none"> <li>Change BCCs into joint ventures, concessions or licensed operations</li> </ul>	<ul style="list-style-type: none"> <li>Liberalize entry into all sub-sectors</li> <li>Separate posts from telecoms</li> </ul>	<ul style="list-style-type: none"> <li>Equitize some or all of VNPT's core businesses</li> </ul>
<b>Airports</b>	<ul style="list-style-type: none"> <li>Develop strategy for developing control to encourage regional development and PPI</li> </ul>	<ul style="list-style-type: none"> <li>Consider concessioning terminal operations or airside services</li> </ul>	<ul style="list-style-type: none"> <li>Conclude several transactions of key airports</li> </ul>
<b>Railways</b>	<ul style="list-style-type: none"> <li>Further commercialize separate operating units</li> <li>Develop private sector participation strategy and action plan rail sector</li> </ul>	<ul style="list-style-type: none"> <li>Separate non-integral services from core operations</li> </ul>	<ul style="list-style-type: none"> <li>Initiate concessions for rolling stock operations and infrastructure services</li> </ul>
<b>Ports</b>	<ul style="list-style-type: none"> <li>Decentralize and deregulate tariffs to encourage competition and eliminate cross-subsidization</li> </ul>	<ul style="list-style-type: none"> <li>Pursue concessioning of terminal operations or equitization of existing facilities</li> </ul>	<ul style="list-style-type: none"> <li>Invite private sector to develop new facilities only after full capacity of existing facilities has been revealed through private operations and investment.</li> </ul>

## I. CROSS-SECTORAL ISSUES

### I.1. Legal Environment for PPI

As indicated in Part B, the Government of Vietnam has made significant progress in addressing issues that will impact the willingness of foreign investors to invest in PPI projects. However, there are a number of specific questions that have not yet been fully addressed under the 1996 Foreign Investment Law and the related Decree 62 dated August 15, 1998 and Decree 02 issued in January 1999. It is recommended that the Government gives high priority to addressing these five residual, but nonetheless important, legal issues which will continue to frustrate further PPI initiatives in Vietnam. These are:

- *Foreign Exchange Issues.* While Decree 02 requires the State Bank of Vietnam (SBV) to guarantee the conversion of VND revenue into foreign currency for certain prescribed purposes, concerns remain about the effect and enforceability of an SBV guarantee. In particular, foreign companies and lenders remain concerned about future foreign exchange shortages and how priorities would be allocated under such circumstances.
- *State Guarantees.* Decree 62 provides for the Government to nominate an "authorized state body" to guarantee (i) the performance of the financial obligations of Vietnamese enterprises that are involved in the implementation of BOT projects, and (ii) obligations under contract for the purchase and sale of goods and services by the BOT enterprise. However, there are a number of additional concerns including: (a) whether or not all or just some GOV bodies are authorized under the relevant Laws and to issue guarantees; (b) whether or not the Ministry of Finance could refuse to allocate funds to the GOV body that provides the guarantee if the amounts payable under a guarantee have not been approved in the State Budget; and, c) whether or not some GOV bodies could honor obligations to pay in foreign currency.
- *Loan Security Issues.* Most BOT projects require large foreign loans and foreign lenders are generally unwilling to provide funding unless adequate security is provided. Although the Decrees now allow buildings constructed from loan proceeds to be mortgaged in favor of foreign lenders, any mortgage or pledge granted by a BOT Company must be approved by the Government. More importantly, the land-use rights of the BOT are still excluded. As such, there is great uncertainty as to whether land-use rights can be passed on if the buildings are sold. In addition, Decree 62 does not allow the assignment or pledge of the foreign investor's interest to a Bank. These remain very real obstacles to the financing of BOT projects.
- *Lenders Step-in Rights.* Lenders to BOT projects need to be sure that where a BOT enterprise fails to perform its obligations under the contract, the lender can "step-in" to assume the role of the enterprise. Although the changes in Decree 02 allow for these rights, they remain conditional on approval from the Prime Minister on a case by case basis. This degree of discretion creates unnecessary uncertainty for financiers in this critical area of project finance and should be corrected.
- *Dispute Resolution.* Since Vietnamese laws and formal dispute resolution procedures are still largely untested, foreign investors and lenders require that disputes be taken up in a neutral forum; and that all major documents are

governed by foreign law. While most of these requirements have been addressed for some circumstances under Decree 02, one key issue remains unresolved. In the case where two Vietnamese legal entities are involved - such as, a Power Purchase Agreement (PPA) between the BOT company (legally a Vietnamese firm but with part or full foreign ownership) and a Utility Company - the starting point is that Vietnamese law applies. While BOT contract disputes may be resolved by way of foreign arbitration, this is of little comfort to a foreign investor if major disputes arise under the PPA and these matters must be addressed by a local arbitration center or court. This remains an issue that continues to frustrate the signing of BOT contracts.

## 1.2. Institutional Reform

Gaps remain between the Government's intent to proceed with its PPI strategy, on the one hand, and the realities of decision-making processes and business practices in Vietnam, on the other. Notwithstanding the establishment of the ad hoc BOT Group in the Ministry of Planning and Investment, the Government's ability to identify, design and execute PPI activities is limited. Potential and real investors in PPI projects have commented extensively that policy makers and the technical staff of line ministries brought into

dealings on BOT projects do not have an accurate picture of their respective roles, responsibilities, and requirements.

In light of this, the Government should consider establishing a "one-stop-shop" - a PPI Center - with predictable step-wise procedures for negotiating with the required authorities within a defined time frame. This should include responsibility for coordinating both "greenfield" investments or introducing different forms of private participation into existing companies through methods such as leases, concessions or equitization. The Government will thus limit the risks confronted by the private sector in negotiation, allowing them to calculate a cost of capital that reflects only the investment itself, and is not bloated by the risks associated with an unclear bidding process and an unpredictable legal and policy environment. International experience in countries as varied as the Philippines, Mexico and Bolivia (see Box below) highlights the importance and benefits to Government of a well-staffed PPI agency with access to key decision makers in Government. In Vietnam, there is also a strong case to be made for the use of ad hoc external foreign advisors to assist in more complex negotiations and in the preparation and implementation of concession, lease or equitization initiatives.

### ***Case: PPI Authority with Cabinet Rank***

#### *Bolivia's Ministry of Capitalization*

The creation of a cabinet-level authority to manage the PPI process is an approach that was used in Bolivia where a Ministry of Capitalization headed by a senior minister was established at the outset of the capitalization (privatization) program for state-owned utilities, selected transport systems and mines. In a period of just three years, the ministry oversaw the capitalization of public enterprises in the telecommunications, electricity, railways, airlines, airports, and hydrocarbon sectors. The process had strong political support at the highest levels: the Minister of Capitalization was understood to have 24-hour access to the President and to act with the authority of the presidency. Upon completion of the capitalization program, the Ministry was abolished.

### **I.3. Sharing of Risk in PPI Projects: Government and the Private Sector**

If the Government wishes to achieve significant progress with PPI, it must address the question of how to attract private sector investment in capital intensive infrastructure projects in both the short and longer term. International experience has shown that when Governments put in place good policies - in particular credible commitments to cost-recovering prices - investors are willing to invest with minimal government support. However, in many developing countries private sector investors fear that Government may renege on promises and they have requested some form of subsidy to make the transactions more attractive. These subsidies can range from outright grants or preferential tax treatment, debt or equity contributions by Government or guarantees of commercial risks.

In Vietnam it is recommended that the Government's medium to long-term strategy should focus on policy reforms in its infrastructure sectors that help the Government reduce the amount of commercial risk it must bear. The reforms should lead to improvements in commercial and technical performance and should include the implementation of tariff reforms leading to full-cost recovery. Sustained gains are likely to require allowing private participation at the service level (i.e. selling to customers directly), either by equitizing the existing state-owned utilities or by allowing greenfield private projects to sell directly to customers. Under these circumstances, the need for Government guarantees for commercial and market risk would be minimized. However, in the short term, and in the absence of these reforms, it is recognized that some form of subsidy is likely

to be a requirement if PPI projects are to come to closure.

In Vietnam, there has been a preference to focus on subsidies in the form of guarantees for greenfield projects. However, this approach raises some important issues concerning the allocation of risk between the private sponsors and the State in PPI projects - particularly in BOT projects such as bulk water supply projects and IPPs. There is a danger that poorly targeted risk bearing will undermine the benefits of PPI. Therefore we would recommend that the Government be cautious in its use of guarantees for greenfield projects. Ideally, it should only take on those risks where it can exercise some control over outcomes and minimize its exposure to more commercial risks - such as construction and market demand - where the private operators may be better placed to mitigate these concerns. Specifically, Government should be aware that it is taking on significant off-balance-sheet commitments and contingent liabilities when it enters into guarantees or long-term purchase agreements - such as power purchase agreements (PPAs) or bulk water supply contracts. These liabilities are likely to be most extreme in situations where the payments to the private operators guaranteed under PPAs exceed the tariffs charged to consumers. Moreover, since guarantees do not show up in Government's accounts, there is a danger that officials of state-owned companies or Government departments may not know the full extent of their financial exposure. As we have seen from other countries impacted by the recent East Asia crisis, severe recession or economic crisis can simultaneously trigger many guarantees; many of the government's contingent liabilities might thus become actual and current all at once. (see the box below).

### Box 1. Impact of East Asia Crisis on BOT Projects

In the wake of the recent financial crisis in East Asia, the choice of PPI modalities and the hierarchy of preferences have shifted markedly. In particular, the crisis has exposed the weaknesses of the typical BOT scheme for bulk supply when core market reforms in the sector are not in place and when retail tariffs cannot be readily adjusted to recover costs in full. In a separate review undertaken by the World Bank in June 1999 on the impact of the East Asia crisis on PPI, there is strong evidence to suggest that Governments should approach these types of schemes very cautiously. Following the crisis, Governments in East Asia and their state owned utilities have amassed massive liabilities as a consequence of some of these poorly negotiated BOT schemes, particularly with IPPs in the power sectors. In Indonesia, the liabilities are estimated to surpass \$10 billion and over \$6 billion in the Philippines. Many of the utilities in these countries are effectively bankrupt or under serious financial distress. Moreover, the financial pressures of the crisis have accentuated the risk allocation weakness in these schemes. It has been found that under the terms of many of these BOT projects, most downside financial risks are borne by governments, thus almost fully negating the benefits of introducing private sector participation in the first place. The Report recommends that future PPI in the region should be undertaken in light of three fundamental guidelines. Namely: (i) market risks should be borne by those parties most able to mitigate them - in this case, the private sector; (ii) service level inefficiencies must be addressed early in the reform process; and (iii) private finance should be a complementary benefit, not the sole objective of PPI.

If Government believes that it has no option but to proceed with guarantees for greenfield projects in the medium term, it is recommended that this be undertaken under as part of a well developed policy rather than as a series of uncoordinated ad hoc decisions. In particular, guarantees should be clearly identified and monitored by a professionally staffed group within Government. One option would be to have this function included as part of the remit of the PPI Center.

## 2. ENERGY

Recommendations for promoting further private investment in the power sector and ensuring that it benefits Vietnam are set out below under the following headings:

- Market Reform
- Financial Discipline
- Regulatory Reform
- Ownership Reform.

### 2.1. Market Reform

In the past, the structure of the electricity industry in most parts of the world was simple. In any given geographic area, there was only one company that produced, transported, and sold electricity; the industry was a monopoly.<sup>16</sup> In the last 15 or so years, however, electricity industries have undergone enormous structural changes, and

<sup>16</sup> Sometimes, there were separate distribution companies, but there was still no competition between them.

there is now a variety of market structures. In planning its strategy for further private involvement in the electricity industry, the Government needs to deepen its analysis of what rules it will impose in the area of the structure of the market. It needs also to decide how to complete the process of splitting (or *unbundling*) EVN into smaller companies and whether these companies should be made truly independent of each other, rather than simply being subsidiaries of a single holding company. Since the rules affecting entry and unbundling critically affect the private companies that invest in power, the Government needs to determine them as soon as possible.

### **2.1.1. Current Market Structure**

Vietnam's current market structure is a variant on the traditional, vertically integrated monopoly (see Error! Reference source not found. above). EVN is responsible for almost all generation, all transmission, and much distribution. The differences are that there is now one IPP selling power to EVN (at Hiep Phuoc), with others in the pipeline, and that EVN sells in some areas to smaller local distribution companies or cooperatives that in turn sell to final customers.

### **2.1.2. Competition in the Market for Electricity**

Electricity used to be thought of as a natural monopoly: a service best provided by just one firm. Now it is recognized that only some parts of the industry are natural monopolies, while others are potentially competitive. The transportation of electricity through high-voltage and low-voltage wires (in the transmission and distribution systems) may be a natural monopoly, but in big-enough electricity markets many companies can efficiently compete to generate electricity and sell it to consumers.

It is this recognition that has led many governments to undertake the restructuring mentioned above of the electricity industries in their countries. To encourage competition in the production of electricity, for example, they have separated generation from transmission. That separation makes it easier for generators to compete with each other by creating a level playing field: if one of the generation companies also owned the transmission system, that company could use its control of the transmission system to prevent other generators from selling power.

### **2.1.3. Alternative Market Structures**

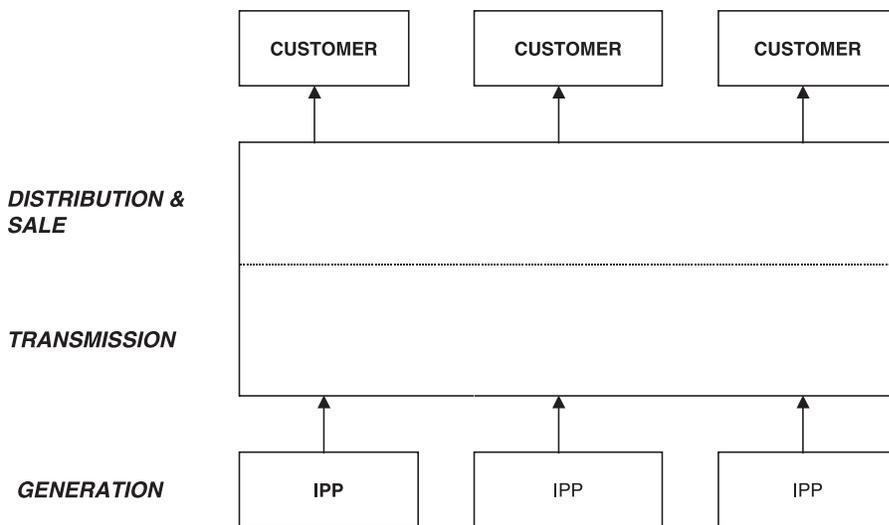
Although there are many possible market structures that Vietnam could adopt in the medium- to long-term as alternatives to the current system, two particular structures are frequently discussed:

- The single-buyer model
- The competitive market.

In a simple single-buyer model, the companies generating electricity are separated from the company undertaking transmission and distribution, which is typically the single wholesale buyer of power. Countries such as Thailand, Portugal, and Italy have introduced single-buyer models of different types.<sup>17</sup> Northern Ireland has a particularly simple version of the model, which is depicted in Figure 1 below. In Northern Ireland, each of four IPPs sell to the single buyer, Northern Ireland Electricity, which owns the transmission and distribution system and sells power to final customers, but does not produce any electricity itself.

<sup>17</sup> Real world power systems are typically complex and do not conform exactly to the simplified models discussed here.

**Figure 1: The Single-Buyer Model**



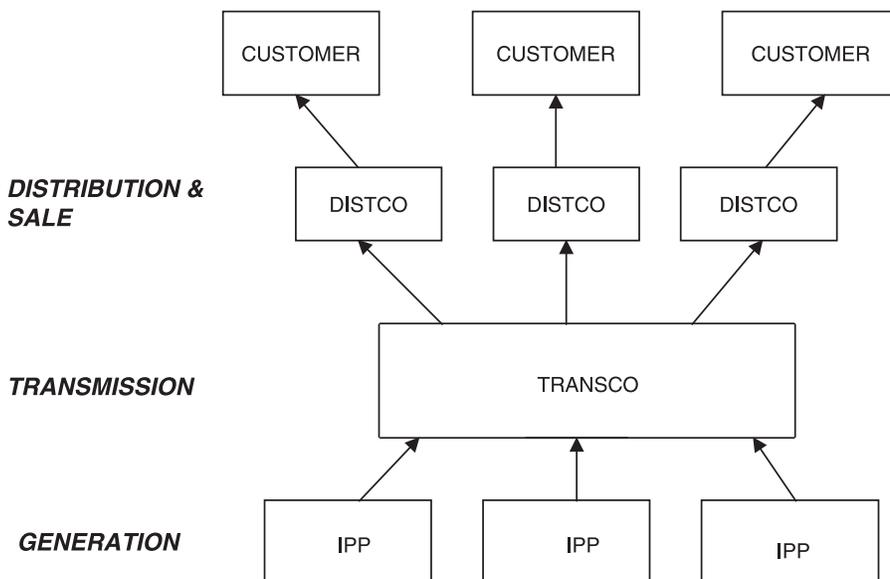
Single-buyer models are often thought to be well suited to small power systems. Their main advantage, relative to the traditional vertically integrated monopoly, is the facilitation of competition in generation, through bidding for IPPs (BOTs).

In the competitive-market model, there are typically many wholesale buyers of electricity as well as many generators. As in the single-buyer model, transmission is separated from generated, but distribution is also usually separated from transmission. The separate distribution companies and other energy users buy electricity from generators in a competitive market, in which prices are

determined by the balance of supply and demand. Variants of the competitive model have now been adopted in many developed countries (Australia, Canada, Finland, Norway, New Zealand, Spain, Sweden, the United Kingdom, and the United States) as well as much of Latin America (Argentina, Bolivia, Colombia, and Chile).

The Government of the Philippines is considering the introduction of the first competitive market in East Asia, similar to those introduced in the countries listed above. Figure 2 depicts the simplified structure of a competitive market.

**Figure 2: A Competitive Market**



When they are feasible, competitive markets probably encourage more innovation and lower costs than single-buyer systems. They also help the governments shift risk to the private sector—in particular, they help governments avoid bearing the demand risks that the Government will have to assume under BOT projects of the type currently being undertaken. But competitive markets work well only in systems in which there are several independent generators linked by a transmission grid that allows them to compete with each other. Even when they are feasible in principle their implementation tends to be complicated.

Market-structure choices are complicated and require careful analysis. Even if a strategic choice between, say, a single-buyer and a competitive model has been chosen, more detailed questions about the extent of unbundling need to be addressed:

- Exactly how much vertical unbundling should be undertaken? In a single-buyer model, should the single buyer also run the transmission system or should the two be separate? Should large power consumers be able to bypass the "single buyer," as in the European single-buyer model. In a competitive model, should generators be allowed to own distribution companies? Should the (potentially competitive) retail sale of power be separated from distribution (that is, from the naturally monopolistic low-voltage wires business)?
- How much horizontal unbundling should be undertaken in generation and distribution? How many separate generation companies should an existing company be split into? How many distribution companies should be carved out of an existing company?

A competitive system probably couldn't be implemented satisfactorily in Vietnam in the short term, because of the transmission constraints between the North and South and the relatively small size of the market. Yet moving to some form of competitive market is likely to make sense in the long term, and having a strategy now for moving there is highly desirable.

## 2.2. Financial Discipline

Private companies will invest in Vietnam's power sector only if they believe they will make money. Unless the Government is willing to give them subsidies, the Government therefore has to ensure that power prices are high enough to allow well-run private companies to make profits. Investors will look at prices today to see if they cover costs. But, just as important, they will try to judge whether tariffs will be adjusted to cover costs over the life of their investment.

In the IPP projects currently being negotiated, investors get their assurance about current and future prices from long-term contracts signed, or to be signed, with EVN, and backed up with a guarantee from the Government itself. If distribution companies are to be privatized, however, investors will have to be satisfied that the tariffs paid by final customers will be enough to cover costs, since those investors will sell power to households and businesses, not to EVN.

At present, the average tariff charged by EVN is about 5 cents per kWh. Cross-subsidies between customer classes (foreigners and Vietnamese, businesses and households) mean tariffs are considerably lower for some groups. The World Bank has estimated that the long-run cost of supplying power is in the order of 8 US cents per kWh. It is difficult to estimate such costs exactly, but it is clear that the current tariffs charged by

EVN do not cover full costs of the electricity system, including the costs of new investments made to meet future demand.<sup>18</sup>

The Government is therefore unlikely to be able to attract more private investors in electricity distribution, unless it raises tariffs significantly and also convinces investors that tariffs will cover costs in the future, despite political pressures to keep them as low as possible. (We discuss this

Future IPP/BOT deals will also be harder-though not impossible-to secure without retail tariff increases, for low tariffs jeopardize EVN's finances and investors do not want to have to rely on calling government guarantees in order to get paid. Recent experience in Pakistan illustrates the problems that can arise when IPP investors sell power to unprofitable state-owned power companies (see Box 2).

#### **Box 2. IPPs and Sector Reform in Pakistan**

In Pakistan, investors undertook IPP projects selling to the state-owned power company, WAPDA, on the strength of guarantees provided by the Government of Pakistan and international agencies.

The IPPs were introduced without fundamental reform of the other parts of the power market: transmission, distribution, and the sale of power remained the responsibility of a government-owned utility, and the government did not fundamentally change the political nature of tariff-setting. Over time, problems have arisen because technical and commercial losses have remained high, demand has been lower than originally forecast, and tariffs have not been increased to cover the costs. As a result, WAPDA has had difficulty paying IPPs for power.

The IPP investors' concern to be paid, and the Government's concerns not to exacerbate its fiscal and macro-economic problems have led to bitter disputes and have cost the investors dearly. The share price of one of the biggest IPPs, HUBCO, for example, fell 60% from its peak before the crisis.

### **2.3. Regulatory Reform**

Private investors in power need to know what rules will govern their operation. In addition to the rules that all (foreign) investors will be concerned

with, such as those concerning land rights and the repatriation of profits, investors in power need to know what rules govern:

- Market structure (see above)
- Their obligations with respect to the quality of services they provide and expansion of their networks
- The adjustment of regulated tariffs.

Working out tariff-adjustment rules that satisfy investors is perhaps the most difficult task, because investors know politicians face pressures to keep tariffs low. As in other sectors, the best way of ensuring that tariffs cover costs over the long run is a combination of

- Introducing competition where that is feasible, permitting the prices of competitively provided services to be set by a market, not by regulation.
- Setting clear, efficient, and fair rules for

adjusting regulated prices in contracts with investors and other regulatory instruments (such as laws) that are difficult for the government to change unilaterally.

- Depoliticizing the adjustment of regulated prices according to those rules, by giving the task of checking, approving, or making tariff adjustments to specialized bodies that are independent of politicians.

The options that need to be considered in the power sector are the same as those which arise in other infrastructure sectors. Having considered their options, many countries have now chosen to introduce independent regulatory agencies in the energy sector. To refer

<sup>18</sup> Although EVN shows an accounting profit in its last audited financial statements (for the 1997 year), its accounting profits are insufficient to compensate the Government of Viet Nam for its equity investment in the company. In other words, it is making an economic loss.

again to one of the examples mentioned earlier, in Northern Ireland, electricity and gas tariffs are regulated by the Office for the Regulation of Electricity and Gas (Ofreg). Its head is appointed by politicians, but the Office has power to adjust tariffs by itself. In the State of Victoria in Australia, to take an example of competitive market, regulated prices are set by the Office of the Regulator-General, an independent body regulating tariffs not just of electricity and gas but also of water supply and of port and rail services. In the Philippines, the independent Energy Regulatory Board regulates both electricity and gas.

Passing an electricity law will help clarify the Government's policy here and, depending on the details, may give greater assurance to investors. It is unlikely, however, to resolve the problems conclusively.

## **2.4. Ownership Reform**

### **2.4.1. Progress to Date**

Vietnam has already started the process of ownership reform in the power sector, with the introduction of the Hiep Phuoc IPP and the BOT generation projects being under preparation, such as Phu My 2.2 and Ba Ria. Pilot distribution equitizations have also been discussed. But much remains to be done.

As discussed earlier, the most important aspect of ownership reform is the appropriate allocation of risk between the principal agents in both greenfield and equitization transactions: in this case, the Government and the private sector investors (see Figure 3, for a depiction of some options in terms of the legal transfer of ownership and the economic transfer of risk). The key factors that determine whether an agent should bear risk are the degree to which the agent can influence or control the outcome that is risky and the agent's ability to bear

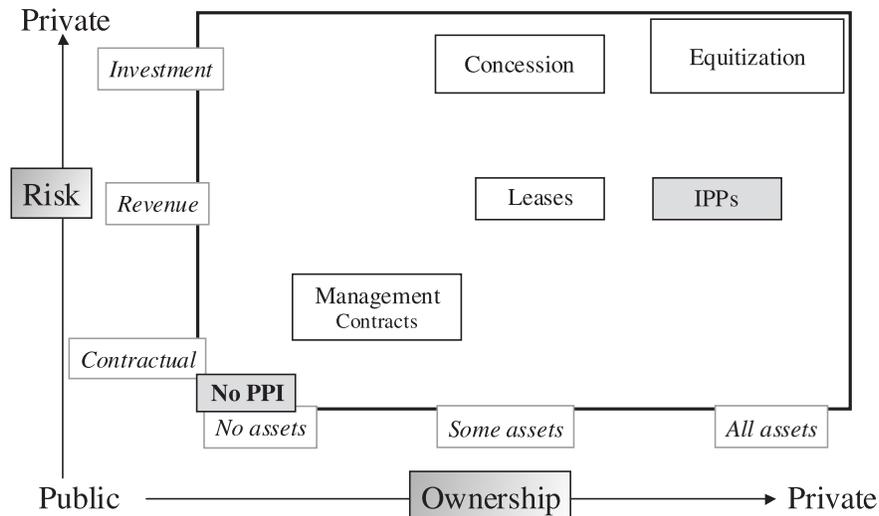
or mitigate the risk. Therefore, in Government's case, it should assume responsibility for policy and regulatory risks over which it has direct control; e.g. honoring commitments on currency conversion, remittance of funds, fuel supply and tariff schedules. On the other hand, the private sector operators should normally bear construction and operating risks. For example, the BOT contracts that are currently being negotiated at Ba Ria and Phu My 2.2 would ensure that construction and operating risks are borne by the private sector.

### **2.4.2. Risks Remaining with the Government**

At the same time, the Government would retain the risk that the power produced by the plants will not be sufficiently valuable to make the initial investment worthwhile. That may happen if future demand turns out to be less than predicted (see Box 1 above) or if future electricity suppliers are able to offer power at lower prices.

The Government would bear these "demand and technology" risks through the signature by EVN of a long-term power-purchase agreement, guaranteed by the Government. These contractual obligations create significant "off-balance-sheet" liabilities for the Government and EVN. Although the liabilities will not show up in the EVN's balance sheet-and would not show up in the Government's balance sheet either if the Government were to prepare financial accounts-they are nonetheless real and resemble ordinary debt obligations. Just as publicly financed power projects can significantly increase the Government's ordinary "on-balance-sheet" debt, privately financed BOT can create off-balance-sheet debt with similar implications for the Government's finances. For example, the net present value of the payments that would have to be made under a long-term power purchase

Figure 3: Power: Ownership Reforms Option



agreement (a measure of the Government's off-balance-sheet debt) could easily amount to more than \$1 million per MW of capacity.<sup>19</sup>

#### 2.4.3. Further Ownership Reform: Equitizing Distribution and Shifting More Risk to the Private Sector

Fully privatizing power generation by shifting demand and technology risks to the private sector would require privatizing distribution through equitization or concessions. If that were achieved, private distribution companies could sign any long-term power-purchase agreements with private companies, potentially removing the requirement for Government to bear demand and technology risk. Privatizing distribution would in turn require the tariff and regulatory reforms mentioned above: the Government would have to raise tariffs to cost-covering levels and establish satisfactory systems for further adjusting them in the future. Privatizing distribution would have the further advantage of allowing highly motivated private investors to cut technical losses and improve billing and collection, thus reducing the need for new generation.

Although BOT IPP projects are more common than the privatization of distribution, many countries now have private distribution companies (either as stand-alone distribution companies or as part of vertically integrated ones). In the region, the Philippines has long had private distribution companies. Elsewhere, examples of countries with private distribution companies include Argentina, Australia, Bolivia, Brazil, Canada, Chile, China (Hong Kong), Côte d'Ivoire, India, Kazakhstan, Morocco, Senegal, the United Kingdom, and the United States.

#### 2.5. Summary of Recommendations

We recommend that the Government:

- Undertake a study of the optimal market structure for the power industry in Vietnam, considering in particular
- the extent to which EVN should be unbundled,
- the rules governing entry in the sector
- the appropriate strategy for moving, in the medium to long-term, toward some form of competitive market.

<sup>19</sup> The exact amount would depend on the details of the contract, including the required capacity and energy payments, any minimum dispatch requirements, and the formulas for increasing the payments over time, and on estimates of various parameters, such as the appropriate rate at which to discount future payments back to present values.

- Implement the tariff increases as agreed
- Continue progress on creating new tariff-adjustment systems, including a regulatory agency, that help ensure that future tariffs cover future costs and help persuade investors that this will be so.
- Make the privatization of distribution its priority in ownership reform and having determined options for market structure (see recommendation above)-undertake the privatization of at least one, significant distribution system as a pilot.
- Develop a strategy-based on the reform of market structure and distribution privatization-for transferring demand risk from the public sector to the private sector.
- Develop systems for monitoring the risks (and thus the off-balance-sheet commitment and contingent liabilities) the government continues to bear in private power projects.
- While the development of toll roads on a BOT basis is substantially complex due to problems of traffic forecasts, the Government should explore alternative models where existing operations can be bundled with new investment requirements to facilitate the financing of such road projects.

### **3. WATER AND SANITATION**

The main policy recommendations for promoting PPI in the water sector are set out below under the following broad headings:

- Market Reform
- Financial Discipline
- Regulatory Reform;
- Ownership Reform; and
- Summary of Key Policy Recommendations

#### **3.1. Market Reform**

With the proposed development of a few private BOT bulk water projects, both the main urban WSCs in HCMC and Hanoi seem to be moving toward vertically unbundled sectors in which bulk water supply, often supplied by the private sector, is separated from distribution. Rather than allowing ad hoc PPI projects to re-define the market structure of the sector, the government is encouraged to establish a clear policy toward market reform and restructuring in which the sector is viewed on an integrated basis and where a range of options are considered with a view to maximizing the benefits from private participation.

Although vertical unbundling offers benefits such as more transparent costs in each segment of the industry, possibilities for increased benchmark competition and the separation of processes with differing environmental challenges, it also has some significant drawbacks. These include higher contracting and coordinating costs between independent buyers and sellers and the loss of economies of scope in operations. Most importantly, a move toward vertically unbundled market will fail to address the main problem currently facing the water sector in Vietnam, i.e. inefficiencies in the distribution system. Private sector participation confined to bulk supply alone

may in fact exacerbate system inefficiencies by raising unrealistic prospects of new BOTs "solving" the water supply shortage problems. This is particularly important since Government's medium-term policy focus should be on improving management systems and commercial pricing in the distribution system down to the service level. Without improving distribution operations, maintenance, metering, human resources and institutional strengthening, more than 50% of new production in some cities will be lost - it will literally disappear "down the drain".

In addition, given Vietnam's limited track record with PPI, potential private investors in BOT bulk water supply are likely to require the Government to bear significant risks through the provision of guarantees to the private sector for demand and foreign exchange risk through take-or-pay contracts linked to hard currencies. In the absence of a careful policy which identifies, prices

for example, a long-term concession contract for an urban area. Equally, recent discussions with private sector investors and lenders in the aftermath of the East Asia Crisis suggests that some project sponsors and lenders are dubious about the real value of guarantees associated with project financed projects. Indeed, some investors have indicated that they would prefer to enter into long-term franchises or concessions where there is some control by the private operators over the customer base at the service level than relying on guarantees from government utilities under BOT contracts. Under franchise or concessions structures, the private operator is more concerned about Government support for the enforcement of customer obligations to pay for services rather than direct guarantees of demand. The Government should therefore carefully consider promoting private participation in an integrated system. Options for ownership reform are discussed in the following sections.

### **Box 3. PPI Trends in Water and Sewerage Sector in Developing Countries**

By the end of 1997, nearly 100 water and sewerage PPI projects have been implemented in developing countries. Of these, concession contracts account for 50% of all water and sewerage projects, and 80% of all private capital investment with total investment commitment of US\$20 billion. This trends reflect the reality the water sector in developing countries. Most developing countries not only need to expand capacity and distribution networks, but also face high levels of unaccounted for water and inefficient services. While the creation of new capacity detached through BOTs from the management of distribution networks can exacerbate system inefficiencies, concessions can encourage improved management and maintenance of whole network.

and charges for these guarantees, there is the risk that the Government may be assuming unnecessarily large contingent liabilities.

There is widespread evidence based on international experience, that Governments can adopt a range of strategies to maximize the benefits from private participation. These might include pursuing more fundamental market reforms which allow Government to shed market risks through,

### **3.2. Financial Discipline**

It is recommended that the Government of Vietnam adopts a clear policy which would lead to the application of full-cost recovery tariffs in the water sector. This policy is important for a number of reasons. First, the present situation where water is sold at levels well below full-cost leaves the WSCs in a financially weak position with unclear incentives for the management responsible for day-

to-day operations. It is evident from the statistics on high levels of unaccounted for water in the urban systems that there are insufficient funds from retained earnings for the WSCs to finance the maintenance of the current distribution system let alone allow for much needed capital investment in new capacity. As such, WSCs must rely on increasingly constrained Government budgets or ODA sources to fund much needed expansion. Second, most investors will not be willing to make large investments in infrastructure unless governments commit to charging tariffs for services which allow the full recovery of costs. Finally, heavily subsidized tariffs can encourage over-consumption of scarce resources and send misleading signal to infrastructure providers.

general through taxation. The alternative is widespread inadequacies in infrastructure which leave many who are willing to pay for services without access to these services.

Equally, there is growing international evidence to support the claim that subsidizing utility services such as water and electricity for broad consumers groups is a crude and inefficient way of attacking poverty reduction for the poorest groups in society. The issue of targeting subsidies as an interim measure in the move towards cost-recovery tariffs is a topic which should be examined in more detail by the Government in the coming months. Issues to be examined might include: the identification of the poorest target groups and how the subsidy might be implemented.

#### **Box 4. Targeting Subsidies and Full-Cost recovery: Guinea and Chile**

Raising prices to cost-covering levels can be politically difficult for many governments and Vietnam is no exception. However, some countries have developed programs to augment consumer prices to full recovery levels gradually over time, while making up the difference to operators through partial subsidies (e.g., a water distribution lease in Guinea). There are legitimate social goals regarding the provision of basic services to the poor which may be addressed through specifically targeted subsidy schemes. In Chile, for example, a comprehensive subsidy scheme has been developed for low-income users of public services. A survey of households identified those which qualified for subsidy assistance to ensure that spending for certain basic services, such as water, do not consume more than a certain percent of households' income. However, households failing to pay their share of the bill have their subsidies suspended. Such a scheme carefully targets the neediest, whereas broad subsidies to the sector in general often benefit the better-off who already have access to service, while the poorest lack access entirely.

However, tariff reforms and re-balancing may give rise to charges that, in low income countries, many users cannot afford to pay the full cost for services. This is a particularly important and sensitive issue in Vietnam. Nonetheless, that cost recovery tariffs would deprive the poor is a misled conviction, and the governments must face the reality that there is no way out of this financing dilemma. Either costs must be recovered from consumers who make use of the service through cost-covering charges, or from the population in

Sustainable action by the Government to address losses in the water sector also requires a hard look at institutional structures and incentives. Even under the present public ownership arrangements, the corporate and management structures of water supply institutions should be reformed to provide incentives for minimizing costs. Haiphong WSC, for example, operates on an incentive management system with competent management team and the percentage of water

loss is relatively low ranging from 15 to 20%. Similarly, good accounting systems are essential for the tariff guidelines to be meaningful. New accounting standards were introduced recently with the help of international assistance and these programs are now focusing on training of accountants in the sector.

Finally, a related element of financial discipline in the sector will be the need for a clear and consistent policy towards Government guarantees for BOT projects. In the near-term, it may not be possible to eliminate the need for sovereign guarantees in all cases. Where guarantees may be required, the Government should recognize, value and price them and manage these commitments on a commercial basis.

### **3.3. Regulatory Reform**

Although there is little private participation in the water sector to date, it is recommended that the Government uses the coming months to address some of the fundamental issues associated with the regulation of the sector drawing, as appropriate, on best international practices.

Private investors in the water sector will need to be sure not only that current tariffs are sufficient to cover the costs of an efficiently run firm but that tariffs will be allowed to increase if costs increase because of factors outside their control. As in other sectors, the Government should develop a regulatory system that facilitates tariff adjustments that are fair to investors, as well as to customers. For example, in the case of the Manila water concessions awarded to two private sector consortia of local and international companies, the private companies are anticipated to make up to US\$7 billion investment over the life of concession. In this case, responsibilities of the Regulatory Office include enforcing the concession agreements,

reviewing tariff rates, monitoring water quality and other performance obligation, and conducting public hearings with customers.

The regulatory issues are particularly acute in the water sector because of the critical nature of piped water to the social and economic well being of customers, which naturally increases the pressure on political authorities to keep tariffs low. Investors have legitimate concerns about regulation since they are often required to make investments that are both long-term - often with asset lives of over 50 years - and irreversible. Once pipes are laid in the ground, investors cannot respond to tariff cuts by digging the pipes up and starting business somewhere else. In addition, it is important to clarify which projects need approval, by what agencies, and who has legal right to sign the contract. In Vietnam these matters have been very complex and often difficult to resolve.

### **3.4. Ownership Reform**

Vietnam has yet to consider any model in transferring ownership-and therefore risk-from the public to the private sector. However, in the case of the water sector, it is lagging behind the PPI reforms being considered and implemented in the Region and in other developing countries. With the Government's target of doubling the access to safe water up to 70% of the population, there is clearly a large role for the private participation in the sector.

In theory, there are many private scheme options that the Government can consider including: service contracts; management contracts; leasing contracts; BOTs, concessions; and full divestiture. In practice, a concession or full divestiture may offer the best choice overall. While all forms of PPI promise some benefits, the more ambitious options such as concessions or

divestiture present the widest range of advantages since most risk is transferred to the private sector and the operators have strong financial incentives to maximize efficiency.

Looking ahead, the diagram above may be a useful tool for the Government to analyze some of its policy options for the sector. Cote d'Ivoire provides an example where gradual transition was necessary because of private firms' unwillingness to commit their capital. The detail of the case is set out in the box below.

It is recommended that the Government adopt a twin-track strategy for ownership reforms in the sector involving limited BOT projects in the short term and more fundamental reforms in the medium term.

First, since the Binh An Water Corporation's BOT in HCMC is at an advanced stage but has not yet reached financial closure, it is recommended that the Government and the sponsors and financiers work in good faith to implement this project in a timely manner.

#### **Box 5. The Water Lease in Côte d'Ivoire**

**Original arrangement:** SODECI is, an Ivorian company owned 48 percent each by local interests and a French company, started operations of the water supply system in urban and rural centers a few decades ago. The government was in charge of elaborating and implementing the investment program. While SODECI did not have to be consulted it was obliged to maintain and operate any additions made to the existing system. SODECI was however guaranteed compensation if the amount of water actually consumed was less than forecast.

**Problems:** In urban areas, the percentage of the population with access to drinking water rose rapidly (to reach 87 percent in Abidjan and 60 percent in other urban centers); efficiency also improved (leakage of only 12 percent; collection rate of 98 percent from private customers; less than eight employees per 1000 connections). However, the financial situation of the sector progressively deteriorated, partly because of macro-economic problems in the country and partly because of problems in the regulatory framework. Investment decisions, made without consulting SODECI, were based on extremely optimistic consumption forecasts and required extensive borrowing by the authorities. When the forecasts failed to materialize, SODECI's revenues were protected by allowing the company to retain some of the funds intended for the construction fund. In 1986 the financial crisis was such that no investment could be made.

**New arrangement:** A new contract was signed in 1987 in an attempt to address these problems. To improve coordination between investments and operating needs, SODECI was given responsibility for submitting investment plans to the government for renewals, extensions and social connections. SODECI's revenue guarantee was canceled to give SODECI stronger incentives to perform well. Today, SODECI provides service close to the standards of industrial countries at a cost to consumers which is no higher than in neighboring countries with similar economic conditions, where tariffs do not cover costs and service lags behind. Unaccounted-for-water is about 17%, collection from private customers remains around 98%, and there are now only 3 staff per 1,000 connections.

**Remaining challenges:** Some problems remain however. Public users do not pay their bills, and, as a result, SODECI seeks compensation by keeping the share of the tariff that should be allocated to debt payments. Also, investment and maintenance decisions are still complicated by the separate between the responsibilities of the Government and the company. And because the Government retains financial responsibility for some investments, it bears financing risks that in full concessions are transferred to private parties.

However, with future BOTs the Government should be careful to accept as little of the business risk as possible bearing in mind the recommendations on contingent liabilities set out in the section on Financial Discipline above

Second, it is recommended that serious consideration be given to more far-reaching changes in the sector by pursuing options that tackle the service level problems of operations to improve efficiency. Ideally, this should be undertaken through a concession or divestiture. However, if the private sector is not yet ready to invest its own capital in the sector except for bulk BOTs, a pilot lease agreement may be more feasible in the short term. This approach, which falls short of full divestiture, gives the private partner increased responsibility for the operation of the utility. In Vietnam's situation, it may well be that private sponsors and financiers may view the investment and financial risks to be extraordinarily high and as such, there may be little inclination on their part to commit investment and finance capital without substantive political and risk coverage from the Government. In such circumstances, the Government may wish to explore leases in parallel with public financing and rehabilitation of the system as it is being presently done in the Philippines in rural towns. Under such an arrangement the system is rehabilitated with

public financing and then is turned over for commercial operation to private operators who assume the market and commercial risks associated with the business. The Government on the other hand must ensure the de-politicization of tariff and allow the private operators to run the business within specified and agreed rules of the game. This model, if successful, could then be graduated to a full concession, whereby investors would commit their own financing to the operation as greater confidence on the regulatory framework is developed. Bulk water BOT should not be pursued further unless there is a commensurate strengthening of the service level, particularly in setting tariffs that fully cover costs and in the reduction of unaccounted for water.

In the case of the Buenos Aires water concession, the private operators have a firm commitment to invest \$4 billion over the life of the 30-year contract. Average tariffs have been reduced by 17% while the Government received \$8.3 m in tax revenues in the first year of operation. After 18 months of operation, water production capacity increased by 22%, water losses had fallen by 37% and the population served under the concession had risen from 6 million to 6.6 million customers - an increase of 10%.

The Box below also highlights some of the details of the Manila Water Concession.

#### **Box 6. The Manila Water Concession**

**Background:** Before privatization, Metropolitan Waterworks and Sewerage System (MWSS) in Manila faced several operational deficiencies: as of July 1997, a month before the privatization, non-revenue water was as high as 60%, about 80% of which was estimated to be due to leakage and the remaining 20% due to metering errors and unregistered or illegal connections; due to the poor billing and collection, gross accounts receivable had remained about 6 months' sales; water supply and sewerage coverage were 65% and 7% respectively of the 11 million service population; the service was available 16 hours per day; and the system was between two to four times overstaffed.

**Concession Process:** Government objectives of the MWSS concession were threefold: (i) improved quality and coverage of the water and sanitation; (ii) increased operating efficiencies; and (iii) reduced government capital expenditure. The

transaction was done through competitive bidding for a 25-year concession in 2 service areas. The original MWSS service area was divided into East and West zones to secure (i) independent benchmarking and (ii) balanced negotiating power between concessionaires and regulator. The bidding process had two stages, and only those who passed the technical (first) bidding stage were invited to the financial (second) bidding. The companies that offered the biggest reduction in the current average water rates were to be awarded the contracts, and no one company was to be awarded concessions in both areas. Bidders are not allowed to change the structure of the tariff for the first 10 years of concession.

**Concession Structure:** The concessionaires are required to meet service targets and pay concession fees sufficient to make MWSS's debt-service payments of \$100 million per year. The required total capital investment over the concession period is estimated to be about US\$7 billion. After the privatization, what remained of MWSS was split into the MWSS Regulatory Office and the MWSS Residual Office. The MWSS Regulatory Office monitors and enforces the Concession Agreements and reviews water supply and sewage rates while the MWSS Residual Office implements remaining MWSS projects.

**Performance and Tariff Improvements:** The terms of the bid resulted in large decreases in consumer tariffs - a 74% fall in the East and 43% in the West. After the first year of operation, there has been a 5% increase in the population served and a 7% increase in water distributed.

### 3.5. Summary of Policy Recommendations

The key policy recommendations for the Water sector in Vietnam are as follows:

- Accelerate efforts to corporatize and improve efficiency and financial performance of existing state-owned WSCs;
- Move on a step-wise basis towards increasing tariffs to near cost-recovery levels. At the same time, consideration should be given to designing targeted subsidy schemes for the poorest consumers;
- Where guarantees for BOTs may be required in the short term, the Government should establish a clear and consistent policy for valuing, pricing and managing these commitments;
- In anticipation of increased private participation, efforts should begin at establishing a transparent regulatory framework for the sector; and
- The Government should begin the process of designing a competitive bid for a pilot lease in

an urban area with the possibility of transferring this to a concession contract at some point in the future.

#### 4. TELECOMMUNICATIONS

Over the past fifteen years of extensive international experience with PPI across all of infrastructure, telecommunications stands out as the sector where the involvement of the private sector in terms of management, financing and ownership has been both the easiest and the most successful in terms of global coverage.

The following figures highlight the extent of PPI in telecommunications over the period 1990-97.

- Total investment in telecom PPI (divestiture, greenfield, concession and O&M) since 1990 reached \$145 billion, of which US\$43 billion or 30% was raised in East Asia. The telecom sector attracted a little over 40% of total investment to PPI projects in developing countries.
- Over the same period, the total revenue from telecom divestiture was about US\$40 billion, of

which US\$12.6 billion or a little over 30% was raised in East Asia. Telecom sector counting for about 30% of total revenue from all infrastructure divestiture in developing countries.

There is a great deal of evidence to indicate that, where governments have disengaged from the telecommunications sector, considerable benefits through competition and increased investments flow to users by way of improved service, a wider product range and lower costs (see Box below). Governments also benefit by not having to find the large amounts of capital such industries require. Instead the privately owned telecom enterprises generally generate considerable tax revenues for the governments. Increasing private participation in the telecommunications sector has proved to be a fruitful way of achieving real and sustainable efficiencies. This is highlighted in the case of Chile summarized in the Box below.

##### **Box 7. Benefits of privatization and competition in Chile's telecommunication sector**

Chile launched one of the world's first telecommunication service privatization in late 1980's. The Telecommunication Law was passed in 1982 (with two amendments in 1989 and 1994), and during the crucial period between 1987 and 1990, the two largest telecommunication companies (one local services and the other long distance company) were sold to private investors. By 1990 the government had no participation in telecommunication companies. The telecom law does not allow exclusivity, and competition has been active in almost every service: 9 companies offer local service, 7 offer long distance service, and 4 offer mobile service. Positive results of the privatization include improvement of service both in terms of quality and quantity. For instance:

- Annual investment in telecom has been between US\$500 million and US\$1 billion every year.
- The number of lines increased from about 700,000 to 3 million between 1989 and 1998.
- The number of lines/100 person increased from 5 to 17 between 1989 and 1998.
- The waiting time decreased from years to a couple of months and waiting list decreased from 236,000 to 58,000 between 1989 and 1998.
- Productivity (lines/employee) has increased 16% annually between 1990 and 1996.
- LD tariffs have decreased by 21% (domestic) and 31% (international) since competition started. Reduction of tariff has been ostensibly stronger in long distance services, where competition is more active.
- Local service tariff increased by 16%, but it ended cross-subsidies. In addition, the installation fee once as high as US\$2,000 has been almost eliminated.

In the case of Vietnam, it is recommended that the Government gives serious consideration to more widespread reforms in the telecoms sector to take advantages of the role of the private sector in the management, financing and ownership of the sector. It is recognized that some of the broad recommendations will require considerable elaboration both in terms of policy and implementation - including the need for a transition period for many of these initiatives. However, the main policy recommendations for promoting PPI in the telecoms sector are set out below under the following broad headings:

- Market Structure Reform
- Regulatory Reform;
- Ownership Reform; and
- Summary of Key Policy Recommendations

#### **4.1.1. Re-organization of VNPT**

It is recommended that consideration be given to restructuring VNPT as a starting point for more fundamental participation by the private sector. At the present time, it is clear that VNPT is a large bureaucratic organization that is trying to fulfil multiple roles. Once restructured and separated from each other, VNPT companies will be able to have a clear focus on their core business without internal conflicts of interest.

The most common and obvious example of this type of restructuring is the separation of the postal services from the telecommunications business. This decision should be addressed as a priority matter by policy makers in the Government.

#### **Box 8. New Zealand: The Separation of Telecom and Postal Services**

The Labor government in New Zealand successfully separated telecommunication and postal services in 1987. Until that date it was an inefficient part of the Post Office, which, like VNPT, also provided telecommunications and banking services. The postal service was heavily subsidized by the more profitable telecommunications business, to the detriment of telecommunication customers, through high prices and constrained access to capital. Within a year of being separated into an autonomous company, New Zealand Post became a profitable enterprise, markedly improving its services and efficiency until today when it now wins contracts around the world to help other postal organizations to achieve the same results. Over the period it also lost all of its monopoly services, including the 'standard letter' so that it now has to compete with a number of mail and courier companies. The formula for these successes include: (i) separating the business so that it can concentrate on its core activity; (ii) providing a clear framework of rules and regulations to work in; (iii) setting commercial goals; (iv) providing commercial governance.

#### **4.1. Market Structure Reform**

This section of the Report highlights some of the core elements of market structure reform designed primarily to maximize the benefits of competition in the sector. These are discussed under the following headings:

- Re-organization of VNPT
- New Entry; and
- Cross-Ownership.

In addition, experience in other countries indicates that, if the incumbent operator is allowed to remain in a dominant position after liberalization, the ability for competitors to develop is severely constrained, even with a strong regulatory environment. It is therefore recommended that the Government also consider unbundling VNPT to create several autonomous companies, some of which would eventually end up competing against each other.

Fortunately its current structure makes this reasonably easy to achieve.

Dis-aggregation of the VNPT would be a complex undertaking and would require considerable planning. However, if well conceived and thoughtfully implemented this type of reform would have a number of benefits including: (i) focussing each business on its 'core' activity; (ii)

services allow the economic development of competing services. Some countries have opened even the local fixed line segment of the telecommunications sector to competition, as is the case in Hong Kong, for example, where the monopoly of Hong Kong Telecom on local service ended in mid 1995 when three new competitors entered the market.

#### **Box 9. Introduction of competition in long distance services in Chile and Mexico**

The Chilean government dismantled legal barrier to competition in long distance and international services in 1994 and launched multi-carrier system. This system allowed customers to choose from among eight carriers for each call they make by dialing a specific three-digit number. The cost of a phone call to the US has since plummeted from US\$1.5 per minute to less than US\$ 0.40. In Mexico, the introduction of competition in the long distance and international market is resulting in lower prices and increased investment. There, the threat of competition, even before the start of actual competition, began to produce results as Telmex, the incumbent operator, tried to strengthen its position in anticipation of competition.

eliminating hidden costs and removing cross-subsidies; (iii) removing many bureaucratic layers of management; (iv) immediately increasing competition; (iv) giving the regulator greater influence as well as market knowledge through benchmark competition; and (v) setting up a market structure which would be suitable for 'local' as well as foreign investment.

#### **4.1.2. New Entry**

If the government is serious about introducing competition into the sector, the design of the sector must ensure that no one operator is dominant. Cellular telephony, with its low fixed costs and substantial demand, is an obvious candidate for liberalization. Many countries have also introduced direct competition in the market for long distance and international services, often with dramatic effect on prices. Even the fixed domestic network need not be granted monopoly status. Recent technological developments like fixed wireless

#### **4.1.3. Cross ownership**

Looking further ahead, rules on cross ownership should be established to ensure that re-aggregation which hinders effective competition does not take place. These regulations can be set through broader anti-competitive or anti-trust laws, or through contractual arrangements. They would define the shareholding that one company may take in another in the same line of business. Ownership outside a particular service, however, should be possible.

#### **4.2. Regulatory Reform**

If the Government is to lock in the long-term efficiencies from private participation, it must ensure that the telecommunications sector is truly competitive. As such, it is recommended that the Government should confine its role primarily to that of a regulator through a department such as DGPT.

#### 4.2.1. Redefining the Role of DGPT

In drafting new laws to establish the roles of regulator, the Government has to consider several key issues. These include clear separation of policy-setting organization from the implementing organization; establishing the regulatory body outside of any government ministry; choices between industry-specific and multi-industrial regulation; and possible organizational reform of DGPT. Regardless of the approach adopted, the agencies set up to regulate telecommunications will be required to set policy and administer the following functions, some of which are now carried out by the DGPT. These are likely to include:

- spectrum management, including the issuing of licenses
- management of the numbering plan
- arbitration of interconnect issues
- tariff surveillance and setting (where there is no competition)
- performance monitoring as well as imposing sanctions for non-performance
- issuing licenses where appropriate
- ensuring adequate coverage for rural areas, when necessary, through the development of mechanisms for government subsidies
- promotion of a competitive environment

As part of the move towards establishing a competitive telecommunications market it is important to make tariffs cost-based as quickly as practicable. In time such subsidies should diminish, particularly if new approaches to the provision of services in the rural, or border, areas are taken.

The recommended emphasis is to move towards 'light-handed' regulation as more competition enters the market. For instance, licenses should only be issued where necessary and

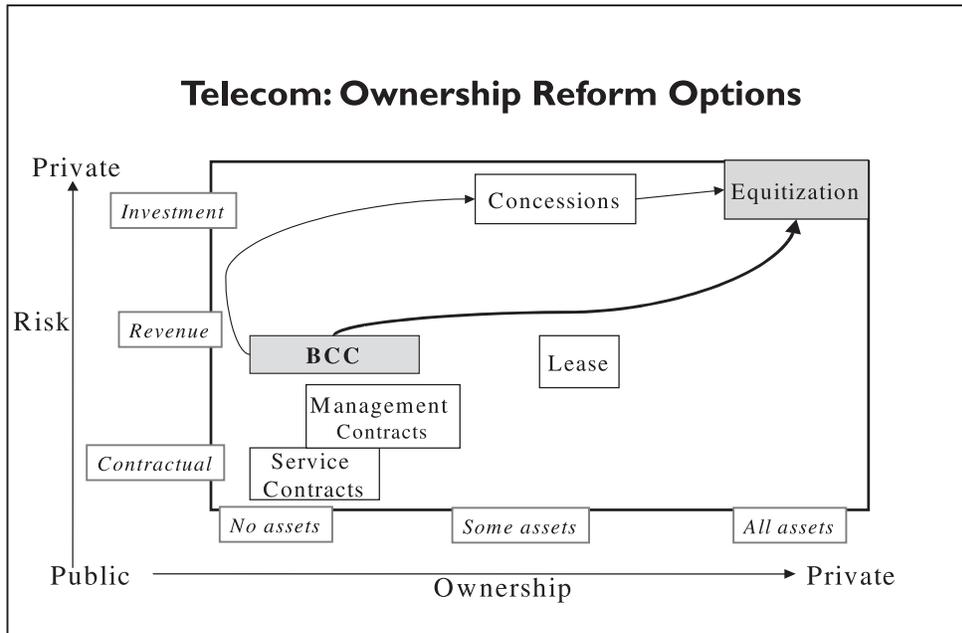
with as few conditions placed on them as practicable. However during the initial phase (say, 5-7 years) it will be necessary for each of the operating companies to be issued with detailed licenses which define, among others, the performance targets, the geographical area of operation, the tariff regime and the interconnect conditions.

#### 4.3. Ownership Reform

Along with market reform mentioned in the section above, the Government should explore different options of private participation. However, if these ownership changes are to have a lasting impact on the performance and efficiency of the sector, they need to be undertaken with a view to maximizing the benefits of competition in and for the market. The table below outlines a number of options that the Government can pursue - all of which will need to be undertaken only after careful planning.

##### 4.3.1. Concession and License Contract

While there are clearly a number of options available to Government, immediate attention should be given to reforming the BCC contracts. To ensure ongoing success it is recommended that BCCs be changed into more straightforward commercial arrangements such as joint ventures, concessions or licensed operations. Experience from other parts of the world suggest that with a transparent regulatory environment in place, there is likely to be a strong and rapid supply response from the private sector to these concession options. However, since most BCCs involve major capital expenditure, the investors will require a clearly defined environment and some certainty of returns. The rule of BCCs need to be changed so that separate legal entities can be established. There is good likelihood that the current participants



Both approaches - equitization of VNPT and transformation of BCC contracts - are not mutually exclusive. In Hungary, for example, the national company was restructured into local, long distance, international and value added services before

would welcome the change to a clearly defined concession.

#### 4.3.2. Equitization of Existing Assets

VNPT has already equitized one of its many companies and is currently planning to equitize four more peripheral companies. A more far-reaching reform might involve the equitization of some or all of VNPT's core businesses. Clearly this would require a significant amount of effort in terms of the preparation for such a major reform.

privatization. Local networks were divided into over 50 local concession areas and bid out to private investors. National and international long distance services were organized into a single company that was privatized by selling a stake to strategic investors; cellular services were unbundled into several different concessions that were awarded to separate investors.

#### Box 10. Telecommunications Reform in Poland

In 1990 the Governor of Pila, a province of Poland near the German border, decided to promote the benefits of doing business in Pila to other European countries, and further abroad. Industrialists and investors came and saw the benefits but argued that they would not invest without modern telecommunication systems. As a result, the Governor asked the state operator about their plans for Pila but was informed that it would be some years before the State sector could improve the service levels. The Governor sought and obtained a license to develop telecommunications in the area. Subsequently other areas of the country followed suit until now most of Poland has two licensed operators in each province: the incumbent state telco, TPSA, which is still struggling to provide service in the major centers; and private telcos based around smaller cities in which the local government also has a shareholding. In some areas the results have been astounding: towns that had one or two inadequate telephones now have modern telephone service with 100% penetration of all homes. The only difficulty has been underestimating the demand.

#### 4.4. Summary of Policy Recommendations

The key policy recommendations for the telecommunications sector in Vietnam are as follows:

- As soon as possible reform all existing BCC contracts into more straightforward commercial arrangements, such as joint ventures that permit private operations, concessions or licensed operations
- Initiate a project to plan and implement the reorganization of VNPT to provide greater competition within the sector
- Commence a project to define and implement the role of the DGPT, or other appropriate regulatory agency, for telecommunications
- Divest the government's interests (through VNPT) in:
  - All joint venture manufacturing operations in telecommunications
  - The two cellular companies that are not fully owned by VNPT.

## 5. AIRPORTS

### 5.1. Market Reform

As in the port sector, the government is encouraged to conduct analysis on the advantages of decentralizing control in order to ease the process of increasing PSP and to encourage regional development. Perhaps with even more vehemence than the ports sector, Vietnam's central government retains operational, financial and planning responsibility for the nation's airport system. This policy should be reevaluated given the Government's stated objectives of encouraging regional development, particularly of the central region surrounding Danang.

Canada has recently implemented a similar program of airport decentralization in order to end federal subsidization and allow its provinces and municipalities to seek efficiencies and access to investment capital through concessioning and public-private partnerships. Under the privatization program, airports were first decentralized as well as the investment burdens associated with maintaining and expanding the airports. Regional and municipal governments have been granted the authority to select the best method for increasing efficiency and many have sought private operators.

### 5.2. Ownership Reform

The government should consider the concessioning of terminal operations and/or airside services. Although a few European countries have conducted outright sales of their airports and several countries have allowed the private sector to build greenfield air facilities, allowing private operators to manage terminal and runway at publicly owned airports is a politically viable and economically sensible alternative that has been gaining popularity over the last few years. Private sector operators have been able to modernize facilities and shift costs away from airside fees by

developing landside business opportunities. A World Bank analysis demonstrates that airports owned by central governments average \$4.88 of landside revenue per passenger while private operators average \$11.14. The greater revenues from landside services allow the airport operator or authority to reduce airside charges, making the airport more competitive to carriers and cheaper for users.

## 6. RAILWAYS

### 6.1. Market Reform

In railways, the government should consider further restructuring of the sector through the unbundling of major business units. Of all of Vietnam's transport sectors, the national railroad (VR) remains the most complex, vertically integrated institution. The current market structure makes it almost impossible to judge the financial viability of rail services in the country. The first step to reforming the sector should involve the unbundling of non-integral services from core operations. These include, but are not limited to:

- Hotels;
- Rolling stock manufacturing;
- Tourism services; and
- Meal manufacturing.

Through the equitization of those business units and increased contracting for ancillary services, the VR can begin reducing costly internal subsidization practices. This could be followed by the commercialization of operating units and their separation into such businesses as rolling stock companies and infrastructure and signaling companies. By dividing accounts and commercializing freight and passenger services separately from track maintenance and investment, the Government can better determine where it needs to invest and where the private sector may be able to provide financing and operational expertise.

While restructuring the Japanese National Railroad (JNR), the JNR established a Settlement Corporation to assist with the disposal of non-core assets including excess real estate. Sale proceeds were put against outstanding liabilities of the core businesses. By 1992, the sales had finished and the residual liabilities (over proceeds) was converted to government debt so as to

allow for the corporatization and eventual privatization of core lines of operation.

In New Zealand, corporatization of the railroad preceded privatization by nearly 10 years, allowing the government to restructure the railroad, create separate accounts and balance sheets for different operating units, make those units operational and to determine the preferred method of attracting private sector participation. Through the period of commercialization (1982 to 1990), New Zealand Rail's efficiency factors improved significantly: NTK per freight staff more than doubled, cost per freight GTK decreased about 35% and NTK per rail car nearly doubled. Moreover, between 80 and 90 percent of rail users found that service quality had improved in the areas of price, reliability, transit time, inquiries and flexibility.

## 6.2. Financial Reform

Government policy toward transport, particularly passenger movements, has been motivated by social concerns about affordability. While the willingness and ability of Vietnamese to pay for transport services should remain a core concern of all transport policy, be it public or private, the dilapidated state of transport infrastructure, can, in part, be blamed upon the excessive and the unequal use of subsidizations. Without massive public financial commitments to VR, rail tariffs will need to be raised to cover current operating expenses (including infrastructure rehabilitation) and the capital costs associated with new investment and rehabilitation.

Prior to or in parallel with the liberalization of rail tariffs, relative subsidies to other modes of transport will have to be analyzed to assure that rail is competing on an approximately level playing field with roads and waterways. Per km and point-to-point passenger or unit costs for users of each of the three modes should be quantified along with the degree of direct and indirect subsidization being received by each mode. In the case that roads and highways are

being maintained or expanded from national or regional budgets (rather than direct user fees or appropriate fuel taxes) or that waterway transport receives indirect but massive subsidization from the use of military barges and transport equipment, a policy toward rail rehabilitation will have to consider the equity of these subsidizations vis-à-vis the Government's contributions to VR's debt and infrastructure costs.

## 6.3. Ownership

The government is encouraged to consider the corporatization and eventual concessioning of rolling stock operations and perhaps the separate concessioning of infrastructure services. While the process of bringing the private sector into the railroad industry in Vietnam is probably not going to be a single step, several nations have pursued the path of concessioning their rail operations in order to reduce the public fiscal burden associated with rail subsidization and to improve a deficient service. As with ports and airports, concessioning of the rolling stock operations and, perhaps separately, of the infrastructure (tracks and signaling) allows the government to retain ownership of this national asset while benefiting from the experience and access to capital of private operators.

Beginning in 1989, the new Argentinean government, seeking to alleviate the burden of its railroad which accounted for about 17% of the national deficit, entered into a privatization program for Ferrocarriles Argentinos (FA). This involved the separation of the railway into regional companies and the concessioning of each new entity. While passenger and freight traffic has grown steadily since the reform process began, over the first four years of the concession program the government was able to reduce its subsidy from \$1.3 billion to \$300 million per year. The on-going federal support was largely due to continued subsidization of commuter lines and the funding of pension obligations from redundant rail workers.

## 7. PORTS.

### 7.1. Market Reform

In the port sector, the Government is encouraged to analyze the advantages of decentralizing control in order to ease the process of increasing PSP and to encourage competition among the facilities. Currently, port policy and development is centrally controlled by Vina Marine, with decisions made in conjunction with municipal planning and transport committees. However, municipalities such as Danang and Ho Chi Minh City have pursued or are pursuing the equitization of their own principal general cargo facilities. To date, these efforts have not resulted in the successful inclusion of private operators at existing facilities although two private greenfield facilities are operational in the south of Vietnam. A clarification of the roles of Hanoi vis-a-vis the local governments, with greater freedom of the local governments to seek port operating efficiencies and facilities expansion through private sector investors and terminal operators would benefit the sector's performance. This, in turn, would result in faster turn-around times and reduced delivered freight costs.

The decentralization of national port authorities is a common first step in the process of maritime sectoral reform. In Latin America, several nations have implemented varying forms of decentralization prior to their port privatization programs in order to encourage competition and efficiency and empower local authorities to utilize their assets for maximum economic benefit. In Mexico, regional port authorities were created out of the national port agency, Puertos Mexicanos. These public authorities, known as API's, were granted the right to concession their individual terminals to domestic or international terminal operators and investors. In Colombia, the four major general cargo ports were named Regional Port Societies (SPR's) and granted independent status from the national port agency.

Eventually, the port authorities themselves were concessioned to domestic operators as joint ventures with municipal, departmental and national governments (with at least 70% of share ownership transferring to the private sector). The SPR's, in turn, have leased terminal space to private stevedoring companies who compete amongst themselves within each port authority's area.

### 7.2. Financial Reform

The government is advised to conduct a tariff review that would parallel or anticipate the initiatives of sector reform. The analysis should focus on the decentralization of port tariffs and a calculation of the effects of cabotage subsidization on the efficient use of port facilities. Currently, tariffs are maintained at equal levels for all ports across the nation except container tariffs which are levelized regionally (south, central and north). This prevents the individual ports setting tariffs to compete with each other, alleviate congestion or even calculating their ability to cover their own costs. Often in the region, domestic handling rates receive so much cross-subsidization from international shipping charges that coast-wise or inland shipping companies have no incentive to vacate berths or to move cargo through the terminals, or storage facilities. The impact of these two tariff inefficiencies on international shipping rates and over-all port congestion may be so great as to provide a net economic loss to consumers and producers even when weighed with the benefits to cabotage and the increased activity at ports that are able to charge lower than cost recovery tariffs. Moreover, unnecessary greenfield port investment is often sought when more efficient operations at existing facilities, promoted through equitable tariff structures, could have provided the needed additional capacity.

### 7.3. Ownership Reform

The government should pursue the concessioning of terminal operations for existing facilities. By concessioning terminal operations at existing ports, the Vietnamese or local governments can benefit from the expertise and access to capital of major port operators without

having to concede the ownership of waterfront property or underlying infrastructure. The concession period roughly parallels the life expectancy of major investments which are then converted back to the government for reconcessioning after the contract has been concluded.

Several ports that have concessioned their operations for 20 to 30 year periods over the last few years have already reported a marked improvement in vessel turn-around times, cargo handling times, and even a reduction in stevedoring costs. Below are figures from Colombia's four main general cargo ports (Buenaventura, Cartagena, Santa Marta and Barranquilla) taken from prior to 1993 when the port authorities were concessioned and again in 1996:

	<u>Prior to concessioning</u>	<u>After concessioning</u>
<b>Colombia:</b>		
Avg. Vessel Waiting Time	10 days	None (or in hours)
Tons per Vessel per Day*	750	1700
Containers per Vessel per Day	16	25
Lift Rates per Container	>\$600	<\$150

\* = for General Cargo

In Manila, the Philippine Ports Authority (PPA) has allowed two major stevedoring companies to take over almost all international container operations at two competing terminals. Their participation has greatly improved handling efficiencies, reduced turn-around times, has practically removed the need for public investment in those terminals, and has allowed the PPA to become a profitable organization through its lease payments from the private operators.