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Increasing Private Sector Participation and Improving Efficiency in State Enterprises

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Average 1989	=	US\$1.00 = B 25.70
Average 1988	=	US\$1.00 = B 25.29
Average 1987	=	US\$1.00 = B 25.72

ABBREVIATIONS AND ACRONYMS

AAT	Airport Authority of Thailand
ADB	Asian Development Bank
BMTA	Bangkok Mass Transit Authority
BOO	Build-Own-and-Operate
BOOT	Build-Own-Operate-Transfer
CAT	Communications Authority of Thailand
EGAT	Electricity Generating Authority of Thailand
ETO	Expressway Transportation Organization of Thailand
ERTA	Expressway and Rapid Transit Authority
GDP	Gross Domestic Product
IDF	Infrastructure Development Facility
MCOT	Mass Communication Organization of Thailand
MEA	Metropolitan Electricity Authority
MOF	Ministry of Finance
MWA	Metropolitan Water Authority
NEPO	National Energy Planning Office
NESDB	National Economic and Social Development Board
NHA	National Housing Authority
PAT	Port Authority of Thailand
PEA	Provincial Electricity Authority
PTT	Petroleum Authority of Thailand
PWA	Provincial Water Authority
RTG	Royal Thai Government
SE	State Enterprise
SED	State Enterprise Division
SEIC	State Enterprise Improvement Committee
SEID	State Enterprise Improvement Division
SRT	State Railway Authority
TOT	Telephone Organization of Thailand

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Thailand

Increasing Private Sector Participation and Improving Efficiency in State Enterprises

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Introduction

1. In April 1993, the Royal Thai Government (RTG) through the Ministry of Finance (MOF) requested the World Bank to provide an independent assessment of the privatization strategy set out in its April 1988 White Paper and on-going privatization efforts by several public utilities. The Government is committed to increasing the private-sector role in the economy and seeks increased private sector financing of infrastructure investments. This report is based on a November 1993 mission in response to the Government's request for additional analysis to support its efforts to improve the efficiency and effectiveness of state enterprises and increase private-sector participation. The report presents a strategy and recommendations for expanding private-sector participation in state-owned public utilities and a step-by-step approach to divestiture of the 15 large public utility enterprises.
2. Although the Government and the state enterprises can obtain all needed financing from commercial and official credits, and its foreign indebtedness is not critical, the Government wishes to reduce potential future government debt and guarantees. Whereas similar efforts are presently occurring in other developing countries, Thailand is substantially different. The main differences are: (a) Thailand is a highly creditworthy country, with a stable, solid economy; (b) the Thai economy has experienced one of the fastest economic and industrial growth rates in the world (7.9% a year over 1980-94); (c) foreign credit is easily available at conditions similar to those for developed countries; (d) the government enterprises are already relatively few (63) and are expected to be further reduced during the next few years; (e) Thai infrastructure state enterprises are generally efficient and profitable, and provide substantial net annual financial contribution to the Treasury (\$781 million); (f) although many of the infrastructure services have been growing at explosive annual rates (10%-12%) most state enterprises have been able to expand their facilities satisfactorily both by themselves and recently with private-sector participation. Under these favorable macroeconomic and sectoral circumstances, there is no rationale for rushing into a fire sale of state enterprises (as has happened in some countries), and in fact a major concern is that any sectoral reform ensure that existing efficiency would be at least maintained and guarantee that huge infrastructure investments by these enterprises, averaging about \$12 billion in each of the next five years, can be financed and implemented on a timely manner. The Bank report sets out ways to increase the state enterprise efficiency, substantially expand and rationalize private-sector participation in their activities, and allow for a steady and well-thought-out sale of shares in these enterprises to reduce or eliminate the need for government guarantees for financing the infrastructure required, particularly for the 15 largest enterprises.
3. Thailand's major interest in privatizing the 15 public utility enterprises is a recognition that rapid rises in state enterprise investment — which tripled over 1989-93 — must continue, or even accelerate, to meet the infrastructure and services needs of one of the world's fastest growing economies. Converting these enterprises to well-run fully or partially privately owned firms will require obtaining financing in domestic or international capital markets without government loans or guarantees. The Government also wants to improve the existing performance evaluation system (Chapter 3), and expects that improving efficiency and flexibility will be achieved by privatized firms under adequate competition or regulation.
4. Thai public enterprises, unlike parastatal firms in many developing countries, are generally efficient and well run, and make a positive contribution of about 5% of government revenues. Excluding the Bank of Thailand, the 55 state enterprises for which data were readily

available had total assets at the end of 1993 amount to \$66 billion, equivalent to 53% of GDP. In 1993 they had revenues of \$20 billion, of which \$1.2 billion was remitted to the Government. The 15 public utilities on which this report focuses, include four energy sector enterprises, six transport utilities, two water supply enterprises, and three telecommunications firms. These utilities represented 42% of state enterprise assets, 67% of the sector's employees, and transferred \$781 million to the Government — 68% of total parastatal remittances — in 1993.

5. The Bank's recommendations are set out in six chapters. Chapter 1 describes the overall role and impact of the parastatal sector in Thailand's economy. Chapter 2 focuses on increasing private-sector participation in state enterprises. Chapter 3 provides recommendations to improve the efficiency of the state enterprises and recommends establishing a new performance evaluation system. Chapter 4 sets out the steps needed to prepare for privatization, including legal considerations, corporatization, capital markets, labor, pension funds, and an Infrastructure Development Facility. Chapter 5 provide recommendations for the regulatory systems needed before divesting monopolistic enterprises, and Chapter 6 describes the divestiture experience of other countries.

6. The basic thrust of the study is that privatization of the 15 relatively large public utility state enterprises should proceed gradually, with the Government undertaking restructuring exercises in the context of a new performance evaluation system and putting regulatory systems into place before selling off the firms.

Chapter 1. Overview of Thailand's State Enterprises

(A) Economic Importance of State Enterprises

1.1 Thailand's economic growth and development have been impressive over the past decade despite adverse domestic and international events. GDP grew at an average annual rate of 7.9% over 1980-93, and growth is expected to continue at 6% to 8% p.a. over the next ten years.

1.2 State enterprises^{1/} play an important role in the Thai economy and by end 1993, their total assets (excluding the Bank of Thailand) amounted to B1,656 billion (\$66 billion), about 53% of GDP^{2/}. Their revenue in 1993 was 16% of GDP, (B509 billion or \$20 billion) and total capital expenditures were 9% of GDP (B285 billion or \$11 billion). State enterprise remittances to the Government increased B15 billion over 1989-93, but about two-thirds of their remittances of B28.9 billion came from only 15 firms. Remittances and dividends increased from about 3% of government revenues in 1989/90 to about 5% in 1991/92. Although all enterprises increased their assets and capital expenditures exponentially over 1989-93, their employment only increased 6% — to 300,000 — during this period, and represents less than 1% of Thai employment. Detailed financial data and indicators are presented in Table 1.1 and Annexes 9 and 10.

(B) Profile of the State Enterprises

1.3 **Growth.** The state enterprise sector has grown significantly over the past five years. Total assets rose from B902.0 billion in 1989 to B1,655.7 billion in 1993, an increase of 83.6%. Total equity more than doubled, rising from B179.6 billion in 1989 to B398.9 billion in 1993. During this period, revenues increased from B321.5 billion to B509.2 billion, and profits before taxes from B46.2 billion to B66.2 billion, representing increases of 58.4% and 43.3%, respectively.

1.4 **Classification of state enterprises.** Although the State Enterprise Division of the Ministry of Finance categorizes enterprises into five groups, mainly according to their legal status, this analysis groups them by function: the **55 state enterprises** (of a total of 63) for which data are readily available are divided into five main groups based on their primary activities. There are **24 commercial state enterprises** (mainly commercial or manufacturing firms), including the Playing Cards Factory, Bangkok Dock etc.), **6 financial enterprises** (banks and insurance companies), **15 public utilities** that have been shortlisted for private-sector participation, **3 other public enterprises** (National Housing Authority, Aeronautical Radio of Thailand, and Industrial Authority of Thailand) and **7 other state enterprises** engaged in promotional and non-commercial activities (such as the Tourism Authority of Thailand and the Sports Organization of Thailand).

^{1/} The World Bank was provided data for only 55 state enterprises and hence all statistics are based on this data set. Data was not available for Bangchak Petroleum, PTTEP, Preserved Food Organization, the United Hotel Tourist Company, Ltd. and three other small provincial organizations.

^{2/} Based on preliminary GDP figures for 1993 estimated by the Bank of Thailand.

Table 1.1 - Financial Profile of the State Enterprise Sector (Billions of Baht)										
Year	Assets	Liabilities	Equity	Revenues	Costs	Profit Bef. Tax	Capital Expend.	Remit. to RTG	Subsidy	Employees
15 PUBLIC UTILITIES										
1989	366.8	249.9	117.0	189.8	160.2	29.6	50.7	6.6	3.0	203355
1990	434.0	288.9	145.1	230.3	190.5	39.7	64.5	9.3	4.5	211773
1991	512.4	312.7	190.7	277.3	226.5	50.8	111.9	11.7	5.6	200803
1992	580.4	355.3	225.1	297.5	243.4	54.1	114.7	17.3	6.0	205924
1993	695.4	413.9	281.5	296.9	248.9	48.0	243.2	19.5	11.2	200242
COMMERCIAL SEs										
1989	93.6	63.3	30.3	77.9	66.5	11.4	5.8	3.9	0.5	42899
1990	106.2	71.3	34.9	89.6	78.5	11.1	15.2	3.1	0.9	44519
1991	115.6	76.4	39.1	98.6	88.4	10.3	25.3	3.6	0.7	48228
1992	144.8	97.4	47.4	99.9	90.8	9.1	33.7	4.8	0.0	47007
1993	152.5	99.5	53.0	106.5	94.3	122.2	24.7	4.6	2.1	49646
FINANCIAL SEs										
1989	422.8	397.9	24.8	38.8	35.5	3.3	9.4	0.7	0.0	28917
1990	493.0	462.8	30.2	52.0	48.1	3.9	0.5	0.9	0.0	31894
1991	597.7	563.0	34.7	66.7	62.3	4.4	0.0	0.1	0.0	33994
1992	657.9	614.2	43.8	70.1	61.7	8.4	2.1	0.4	0.0	36878
1993	760.9	707.8	53.1	84.0	78.1	5.9	1.6	0.5	0.0	38918
OTHER SEs										
1989	7.2	1.8	5.4	13.2	11.8	1.3	0.4	2.7	1.0	5374
1990	7.1	1.8	5.3	11.8	12.3	-0.5	0.5	2.7	1.6	5545
1991	7.6	2.1	5.5	13.7	13.8	-0.1	1.1	3.3	2.0	4986
1992	8.1	2.2	5.9	16.9	16.9	-0.0	0.8	4.2	2.4	5984
1993	7.8	2.2	5.6	17.9	18.2	-0.3	2.7	4.1	3.8	6412
OTHER PUBLIC ENTERPRISES										
1989	11.6	9.5	2.0	1.8	1.2	0.6	1.7	0.0	0.4	3381
1990	14.6	11.5	3.1	2.1	1.5	0.6	5.7	0.0	0.7	3716
1991	23.2	19.1	4.1	2.4	1.8	0.6	8.2	0.1	0.6	3796
1992	29.3	23.9	5.3	2.9	2.4	0.5	7.1	0.1	0.8	4455
1993	39.1	33.4	5.8	3.8	3.4	0.4	12.9	0.1	4.7	4671
TOTAL ALL SEs										
1989	902.0	722.5	179.6	321.5	275.3	46.2	68.0	13.9	4.9	283926
1990	1054.9	836.3	218.6	385.7	330.9	54.8	86.3	16.0	7.8	297447
1991	1256.5	982.3	274.2	458.7	392.7	65.9	146.6	18.8	8.8	291807
1992	1420.5	1093.0	327.5	487.3	415.2	72.1	158.4	26.8	9.2	300248
1993	1655.7	1256.8	398.9	509.2	443.0	66.2	285.2	28.9	21.8	299889

1.5 **Commercial enterprises.** The 24 state enterprises in this group are good candidates for privatization. They are engaged in commercial or manufacturing activities in areas such as the manufacturing of playing cards and shoes which do not warrant continued Government involvement. Moreover, they represent a small part of the overall state sector. In 1993, these enterprises accounted for 9.2% of state enterprise assets (฿152.5 billion), 13.3% of equity (฿53.0 billion), and 17% of sector employment (49,646). The macroeconomic impact of privatization in terms of unemployment and the ability of the private sector to purchase these enterprises would be marginal. A major portion of the group's assets and equity lies with Thai Airlines (62% of equity). The privatization of Thai Airlines began in 1990, and additional equity sales will likely proceed as its financial performance improves. The commercial efficiency and profitability of the commercial enterprises have declined since 1988, adding further support to the argument that there is no longer economic justification for continuing public ownership; it is recommended that the Government sell these firms to the private sector as soon as possible.

1.6 **Public utilities.** Although this group includes 18 state enterprises, the Government's primary focus — and this report — is on the 15 public utilities detailed in Table 1.2. These public utilities form the backbone of infrastructure in Thailand, and dominate the energy, transport, water and telecommunications sectors. Not surprisingly, they comprise a predominant share of the state enterprise sector. In 1993, the public utilities accounted for 42% of state enterprise assets (฿695.4 billion), 71% of equity (฿281.5 billion), 73% of profits (฿48.0 billion), and 85% of capital expenditures (฿243.2 billion). The 15 enterprises employed two-thirds of all workers in the sector. The public utilities are dominated by a few firms. In 1993, six of these firms (EGAT, PTT, PEA, CAT, TOT and MEA) accounted for 85% of public utility profits, 80% of equity, 77% of assets, and 60% of capital expenditures. In terms of size, EGAT is the largest when measured in terms of assets (฿212.8 billion) and equity (฿81.2 billion). At the other extreme are ETO and BMTA, with negative equity and profits.

1.7 The 15 enterprises are comparatively efficient (para. 1.17) and perform well financially. The firms generated ฿296.9 billion of revenue in 1993, with pre-tax income of ฿48.0 billion. In 1993, EGAT was largest in terms of pre-tax profit (฿9.3 billion), but PTT generated the most income (฿89.5 billion). Some of the public utilities are not profitable, including SRT, BMTA, and ETO, which must maintain low tariffs as a matter of social policy. Most of the others do not receive substantial budgetary transfers (although the Government does guarantee their loans), and although taxed at rates less than the 35% tax rate for private industries, they are a considerable source of cash transfers to the Government — about ฿19.5 billion in 1993.

1.8 **Financial enterprises.** This group includes four government banks, one insurance company and the Office of the Public Pawnshop. These enterprises are used to mobilize savings and promote agriculture and housing construction and ownership. In 1993 they accounted for 46.0% of state enterprise assets (฿760.9 billion), 13.3% of equity (฿53.1 billion), and 13.0% of employment (38,918). Although the financial enterprises receive no government subsidy, they provided just ฿0.5 billion in remittances to the Government (1.8% of total remittances). The group has lower rates of return than private-sector institutions, partially because of their developmental roles.

Table 1.2 - The 15 Public Utilities, 1993
(Billions of Baht)

Acronym	Public Utility	Assets	Equity	Revenue	Profit pre-tax	Capex	Remit- tances	Subsidy	Employees
Energy Sector									
EGAT	Electricity Generating Authority of Thailand	212.8	81.2	55.8	9.3	54.2	2.5	0.2	34,505
PTT	Petroleum Authority of Thailand	64.0	28.6	89.5	7.4	18.5	2.2	0.0	3,900
MEA	Metropolitan Electricity Authority	40.0	13.5	39.6	2.9	11.0	0.5	0.0	13,625
PEA	Provincial Electricity Authority	80.3	40.7	45.8	9.0	17.0	1.7	0.4	30,847
Transport Sector									
AAT	Airport Authority of Thailand	14.8	8.0	5.0	2.7	5.5	1.3	0.0	2,365
ETO	Express Transportation Organization	0.4	-0.6	1.8	-0.1	0.0	0.0	0.0	2,973
SRT	State Railway of Thailand	27.8	8.2	4.7	-0.9	10.9	0.0	3.0	21,004
PAT	Port Authority of Thailand	13.6	9.9	5.6	2.5	6.0	1.5	0.1	6,796
ERTA	Expressway & Rapid Transport Authority	82.3	12.6	1.8	0.6	58.5	0.4	5.9	3,359
BMTA	Bangkok Mass Transit Authority	8.2	-3.8	6.4	-0.6	4.1	0.0	0.2	23,506
Water Supply Sector									
MWA	Metropolitan Water Authority	26.7	12.5	6.4	2.3	6.3	0.3	0.0	5,638
PWA	Provincial Water Authority	11.4	8.4	3.4	0.1	8.3	0.0	1.4	7,137
Telecommunications Sector									
CAT	Communications Authority of Thailand	22.6	19.6	15.2	4.2	11.4	3.3	0.0	24,456
MCOT	Metropolitan Communications Organization of Thailand	2.8	2.8	1.0	0.6	1.0	0.2	0.0	980
TOT	Telephone Organization of Thailand	87.6	39.9	15.0	8.0	30.3	5.8	0.0	19,151
Total 15 Public Utilities									
		695.4	281.5	296.9	48.0	243.2	19.5	11.2	200,242

1.9 **Other enterprises.** Seven enterprises for which the Bank was provided data are promotional and non-commercial entities. This includes non-profit organizations such as the Tourism Authority, various science and technology organizations, the Sports Organization, and the lottery. In 1993, they accounted for 0.5% of state enterprise assets (฿7.8 billion), 1.4% of their equity (฿5.6 billion), and 2.1% of employment (6,412). These enterprises absorbed 17.5% of state enterprise subsidies in 1993 (฿3.8 billion). However, the Government Lottery Bureau remitted ฿4.1 billion in 1993 (14.3% of enterprise remittances). In addition, while these enterprises are legally classified as state enterprises, they have been substantially privatized or are provincial enterprises.

1.10 **Other public enterprises.** This group comprises the Aeronautical Radio of Thailand, the National Housing Authority, and the Industrial Estate Authority of Thailand. In 1993, these firms accounted for 2.4% of state enterprise assets (฿39.1 billion), 1.4% of equity (฿5.8 billion), and 1.6% of employment (4,671). The group required subsidies of ฿4.7 billion in 1993, while remitting only ฿0.1 billion.

1.11 **Capital expenditures.** The pace of Thai industrialization has been rapid and there has been a growing need to invest in infrastructure to provide the services demanded by a growing population with rising personal incomes. As a result, capital expenditures by the state enterprise sector have risen dramatically, climbing four-fold over 1989-93 from ฿68.0 billion to ฿285.2 billion, although this includes large private investments through Build-Operate-Transfer (BOT) contracts for telephones and the rapid transit system. Thailand's ability to continue undertaking such huge investments, or even to maintain comparatively sized BOTs, is critical to maintaining rapid economic growth. Private-sector participation will have to be increased, and innovative ways found to ensure private-sector participation and additional external financing for most state enterprises.

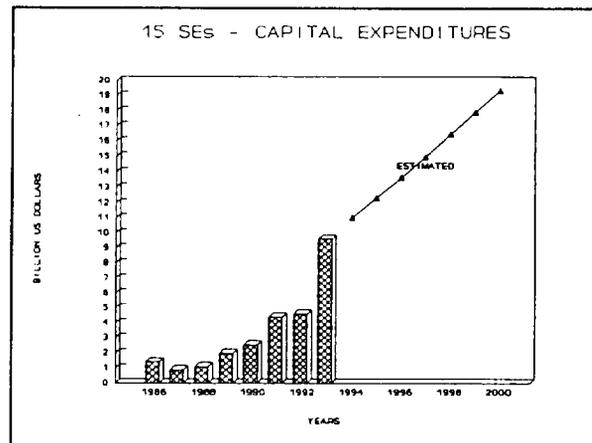


Figure 1.1

1.12 Sources of capital expenditure funding will be especially critical for the 15 public utilities, which require heavy capital investments. In 1989, their spending on capital expenditures represented 85.3% of state enterprise capital expenditures. Their capital expenditures also increased sharply, rising from ฿50.7 billion in 1989 to ฿243.2, nearly a five-fold increase. With continued growth, capital expenditures are expected to reach ฿417 billion by the end of the decade (Figure 1.1). Capital investments are heavily concentrated in a few of the 15 enterprises. In 1993, spending on capital expenditures was led by ERTA (24.1%), followed by EGAT (22.3%), TOT (12.5%), PTT (7.6%), and PEA (7.0%). These huge capital needs in large part provided the impetus for the Government's privatization thrust, as it believes that converting the 15 public utility enterprises into healthy private firms will enable them to meet their investment needs on the domestic and international capital markets. Commercial enterprises, which are prime candidates for privatization, increased their investment to ฿24.7 billion in 1993, a four-fold increase from 1989. Detailed data on capital expenditures by the 15 public utilities is presented in Annex 9.

1.13 On an aggregate level, some key indicators for the 55 state enterprises, although still quite satisfactory, declined somewhat between 1989-1993:

- Returns on assets, (ROA, defined as net profit on total assets) declined from 5.1% to 4.0%, mainly due to the substantial increase in new assets during recent years.
- Returns on equity (ROE, defined as net profit on equity) continues to be high, although it declined from 25.7% to 16.6%.
- Returns on sales (ROS, defined as net profit on total revenues) experienced a net decline from 14.4% in 1989 to 13.0% in 1993.

1.14 The operating ratio, computed as total costs to total revenues, has been stable at about 86% over fiscal years 1989-93, but this resulted from improvements in the 15 public utilities and the increase from 68% to 90% in the operating ratio of the other public utilities.

1.15 Particularly significant is the increase in profits before taxes and productivity per employee, which increased from B0.20 million (\$8,000) in 1989 to B0.22 million (\$8,800) in 1993. There are, however, substantial differences among enterprises; while as a group the 15 public utilities provided revenues of B0.24 million (about \$9,600) per employee, the other firms showed losses of B0.03 million (\$1,200) per employee.

(C) State Enterprise Performance

1.16 State enterprises in Thailand have performed satisfactorily in terms of efficiency, service quality and coverage, financial performance, and management. The 15 public utilities are generally profitable and remit a share of their profits to the Government. SRT and BMTA incur losses due to a social mandate requiring low tariffs. Although labor costs, as a percentage of operational expenses, are relatively low, there are indications of overstaffing of 5% to 20%. This indicates a need to provide incentives to increase state enterprise efficiency further; fortunately, given the explosive increase in the demand for services, staff redeployment and full utilization should be relatively simple.

1.17 International comparisons have to be interpreted with care, because extreme targets of low or high efficiency may not be reasonable, and because there are considerable differences in the organization of state enterprises across countries. Korea's power and communications utilities, for example, are single companies with substantial economies of scale, while in Thailand power service is divided among three firms, and communications between two. A 1989 Bank review of Thai state enterprises^{3/} concluded that these power entities were relatively efficient; this was supported by key performance indicators: electricity system losses in several developed countries average about 7.5%, while EGAT-MEA's transmission, generation and distribution (excluding in-plant use) losses were 9%, which is satisfactory compared with an average of about 18% for Bank-financed projects. Similarly, the accounts receivable of MEA/PEA average less than two months of revenues, which is higher than the one month achieved in Korea or China, but is much lower than the 3-4 months in other similar utilities. In the water sector, MWA/PWA's losses of about 27% are much lower than in Seoul, Manila, Madras or Kuala Lumpur.

^{3/} "Issues of State Enterprise Efficiency": The World Bank, Washington, D.C., June 1989.

1.18 Other indicators of productivity are also satisfactory, although they could be improved. In the water sector, the number of employees per 1,000 connections has been halved and averages about 6, which is better than the 8-9 averaged by water utilities in developing countries other than Korea and Chile, which have record lows of about 4. While there is no recent data, the performance of communications enterprises in 1987 was less adequate (a failure of 14% to 40% in local calls and 30% in long-distance calls compared with 2% and 13% in Korea). Although improvements have been notable in past years, the situation in the sector justified a substantial private-sector intervention to provide about 3 million lines and double the telephone capacity. Improvements are also feasible for SRT, where net ton-km per employee and passenger-km per employee are about 35% and 62% of Korean levels, respectively; nevertheless, these productivity indicators are still better than those of Japan or the UK.

Chapter 2. Increasing Private Sector Participation

(A) Introduction

2.1 The infrastructure sectors share common characteristics. They are essential for industrial and economic development and the well-being of the population, they are more stable and less financially risky than other sectors, they often require large financial commitments, and there is strong public interest in their development and cost of service. Because most are quasi- or completely monopolistic they need regulation and are closely watched by consumers. At the same time the potential for competition, the ability to obtain financing, and the preferred modes of private-sector participation are quite different across sectors, so that each requires a long-term strategy that includes mechanisms for private-sector participation. Privatization in the four public utility sectors — energy, water supply, transport, and telecommunications — is examined below. Detailed studies on privatization of some state enterprises have been undertaken or completed (Annex 7), and their conclusions are generally consistent with the recommendations in this report.

2.2 The Government, and this report, use **privatization** to describe all measures to improve and expand state enterprise services by increasing private-sector participation in their operations. This includes partial or full transfer of ownership, concessions and joint ventures, contracting of services, and deregulation to increase competition between the public and private sectors.^{4/} Privatization is seen as a gradual approach to achieving greater private-sector involvement in state enterprise services and activities, including the gradual sale of enterprises to the private sector. **Divestiture** (Chapter 6) refers exclusively to the sale of assets to the private sector.

(B) Private Sector Participation in State Enterprises

2.3 Private-sector participation in economic activities has increased dramatically worldwide in recent years. Most commercial and profit-oriented activities are carried out by the private sector. Recent policies in most developing countries (including the previous socialist economies) highlight the importance of private-sector participation in commercial and financial activities — and in providing basic infrastructure services that remain state monopolies. However, private-sector participation is not a panacea, and its success is associated with careful selection of the areas that can be better served by profit-oriented companies, reasonable distribution of risks between the Government and the private sectors, and careful design of bidding and contracting systems.

2.4 Unless government funds are seriously rationed due to insufficient tax collection, government budgetary procedures, or the size of the national debt, private capital costs for infrastructure investment are higher than government costs because of the additional risk incurred by the private sector and the available returns on competing investments. Therefore, efficiency improvements by the private sector are needed to compensate for this higher cost, or privatized services will be more expensive. Private-sector participation may result in the Government and the private sector competing for the same sources of funds from domestic capital markets — and crowding out each other's quest for limited resources — or from international capital markets, where private borrowing increases national debt and makes claims on future foreign exchange earnings to

^{4/} Privatization White Paper, para. 2.1 (April 1988)

service it. Private-sector participation must also be carefully designed for each sector because private investment channels resources to areas providing the best financial return rather than those maximizing economic returns to the country.

2.5 A key constraint on private infrastructure investment results from long gestation periods for most transport, water, and energy investments^{5/}. Given the dynamic nature of transportation, it is particularly difficult to formulate agreements beneficial to all parties for such long periods. This is particularly true for passenger transportation, where government and private operators face political pressures to restrict tariff increases and operate in a manner that does not maximize revenue, and externalities such as pollution may justify low fares for public transportation. There are, however, several examples of successful long-term transport investment agreements between governments and the private sector, including the 99-year lease on container terminals in Hong Kong and the recently expired 25-year agreement for the first toll road in the Philippines, the rail networks of North America, and small and medium private airports throughout the world. These agreements usually allow for a continuing role of government in overseeing the use of assets.

2.6 Private-sector participation in infrastructure services in Thailand is already widespread and includes investments of about \$5 billion in transportation and \$6 billion in communications. Many management activities have also been delegated to the private sector, as discussed in this chapter and the analysis of each of the 15 state enterprises detailed in Annex 1, which includes further recommendations for increasing private participation in each state enterprise.

2.7 **Benefits of private-sector participation.** Increasing the private sector role in infrastructure and services can provide important benefits without affecting sector ownership, which may require complex legislative processes. These benefits include: (a) additional financing; (b) reducing costs through competition; (c) improved technologies; (d) improved labor and asset utilization; (e) accelerated and timely provision of additional capacity and services; (f) reduced political interference in investment and operating decisions, and (g) reducing the size of government and its role in commercial activities.

2.8 Many of the statutes governing the activities of state enterprises in Thailand restrict private-sector involvement, and it is recommended that Thailand enact a general law to provide that such restrictions are inconsistent with the objectives of the privatization program; improved legislation is also needed to repeal restrictions on private-sector participation and eliminate the monopolistic rights of some state enterprises.

2.9 Private-sector participation includes numerous modalities, moving from simple and turn-key contracts to management contracts to rehabilitate operate and lease government assets. Particularly important for large investments is participation through Build-Own-Operate-Transfer (BOOT), Build-Transfer-Operate (BTO), and Build-Own-Operate (BOO) contracts^{6/}; for example, in the Philippines about 15 power plants, ranging from 100 to 1,000 MW have been contracted to

^{5/} This allows private investors to recover their investments from the surplus earned after the debt service in a relatively short period.

^{6/} In Build-Own-Transfer (BOT) schemes private firms bid for the right to design, finance, and build projects. The project is then operated by the contractor for a period (normally ten years to the full useful life of the assets) and turn over to the parastatal thereafter. In Build-Own-Operate-Transfer (BTO) the project financing is obtained by the private contractor and both assets and liabilities are transferred to the parastatal after construction, with the contractor operating the project for a specified number of years at set rates. Contract payments often include a fix monthly amount related to capacity and a variable rate related to output. These rates may be in local or foreign currencies and (particularly the output-related rates) are normally indexed.

independent power contractors under BOT/BTO agreements. The March 1992 Royal Act on Private Participation in State Affairs (Annex 14) facilitates private-sector participation through BOOT/BTOs in state enterprises for investment projects costing more than B1 billion — and for lesser amounts with special Cabinet approval. The process appears satisfactory, but it is important to ensure that bureaucratic delays do not interfere with, or negate, the purpose of the law. Under the law, privatization can only be initiated by state enterprises themselves; given the opposing views of some enterprises, this may never materialize. Therefore, it is recommended that a list of proposed projects for BOO/BOOT be presented by each state enterprise or sector ministry to the Cabinet and updated annually. We also recommend that enterprises submitting projects for National Economic and Social Development Board (NESDB) approval be required to involve the private sector — or justify why private-sector involvement by joint venture, concessions, or other means is not appropriate. To maintain successful private-sector participation in infrastructure services through BOOT\BOO contracts, it is recommended that tender invitations be standardized for each sector. This would simplify contract review and award and avoid or eliminate negotiations.

(C) Energy Sector

2.10 The potential for private-sector participation is greatest in power generation, both because of the magnitude of the investments and the potential for increased efficiency through competition. The Government's goal of combining privatization with competition will require establishing a regulatory commission (Chapter 5) to ensure fair and open competition. Given the sector's present structure, the commission will have to regulate the Electricity Generating Authority of Thailand (EGAT), which is responsible for all generation and transmission as a buyer as well as a seller.

2.11 The Government's strategy for private-sector participation and privatization in the energy sector is adequate and includes a gradual, staged approach. The first stage included the establishment of EGCO, as an EGAT's subsidiary generating company with an initial capacity of 600 MW that will be privatized by at least 49% in 1994 and will then compete for building new generation capacity.^{7/} The following stages would take place gradually over the next five years, including the corporatization of all sector enterprises (starting with EGAT and PTT), followed by MEA and PEA. EGAT will then identify and bid out generation projects to independent power producers as BOO or BOOT contracts. Finally, shares of EGAT, PEA, MEA will be gradually offered to domestic and foreign investors.

2.12 **Power sector recommendations.** The Government recognizes that privatization alone, without substantial competition, may not produce significant benefits. We recommend that the Government consider additional short-term (para. 2.71) and long-term (para. 2.72) structural changes to improve the sector efficiency, ensure successful competition and promote the sector's gradual privatization.

(D) Transportation

2.13 **Government role in the sector.** The role of the private sector in Thailand's transport sector is diverse and extensive. To optimize its participation it is important to identify current issues in transportation and the Government's role in addressing these problems. The Government provides

^{7/} In 1994, it is expected that 51% of the shares of EGCO, a generation company affiliated with EGAT, will be offered to the public.

infrastructure, and services, and regulates services. Basic transport infrastructure is provided by several government agencies. The State Railway Authority (SRT) provides the rail network. The Airport Authority of Thailand (AAT) owns and operates the airports. The Ministry of Transport owns the major ports and the Port Authority (PAT) operates some port facilities. The Ministries of Transport and Communications and Interior provide and maintain the national roads, while provincial and local governments have responsibility for local roads. Within the Bangkok metropolitan area, the Expressway Transportation Organization of Thailand (ETO) owns the urban expressways and the Bangkok Metropolitan Organization is responsible for city streets. The SRT, Bangkok Mass Transit Authority (BMTA) and the Metropolitan Rapid Transit Authority will own the rapid transit networks being developed by the private sector in Bangkok.

2.14 The transport systems operating on this infrastructure include public and private freight and passenger transport. Public freight transport companies operate truck, rail and water transport. Public companies for passenger services operate intercity and metropolitan bus, intercity and commuter train, and rapid transit services. Many of these provide competing services, which improves service, but leads to uncoordinated investments that result in excess capacity on some modes and routes, and shortages on others.

2.15 **Planning and design.** The major reason for poor coordination in the transport sector is the lack of a centralized decision-making entity. Responsibilities for transport services and infrastructure are spread over three ministries, Transport and Communications, Interior, and Finance, but most investment and pricing decisions require Cabinet approval (see Chart 2.1 on following page). The coordination of government transport activities is sometimes attempted through inter-ministerial committees or other mechanisms for reaching consensus. Unfortunately, these mechanisms are usually brought into play at the implementation, rather than planning, stage. The introduction of the private sector into transport, especially in large-scale infrastructure projects, has reduced the level of coordination and may have allowed projects to proceed with less government scrutiny than would have otherwise been the case.

2.16 **Current and expected role of the private sector.** The private sector provides extensive transportation infrastructure and services in Thailand, as shown in Tables 2.1 and 2.2. Road and rail infrastructure is primarily built and maintained by the private sector, usually through services contracted by the responsible government agencies. The private sector's role in providing urban expressways has increased dramatically through the introduction of BOOT arrangements, though this has led to increased planning and coordination problems (para. 2.39). The Government continues to maintain and upgrade the inland waterways and access to ports.

2.17 Transport network terminal operations remain under the control of the Government, but the private sector is performing an increasing proportion of these operations through capital leases or management contracts. Nearly all operations in the major airports and a rapidly increasing proportion of activities in the seaports are performed by users or third-party operators. Also an increasing number of private ports are being developed to service industrial users and shipping lines. Although rail terminal operations continue to be controlled by the railway authority, inland container depot operations have not yet been transferred to the private sector.

2.18 Private-sector operators provide most trucking, intercity buses, ocean and coastal shipping. They have a smaller role in providing urban buses, but compete actively with the public sector where permitted. The private sector provides a large amount of the rolling stock and prepares wagons and trains for railroad transportation, which are operated by SRT. Although commuter and intercity train operations remain under the control of the Government, SRT contracts many peripheral services to the private sector. Most commercial aircraft operations are under the control of the Government, but Thai Airways is slowly being transferred to the private sector through the sale of shares.

Ministerial Responsibility for Transport Planning and Regulation

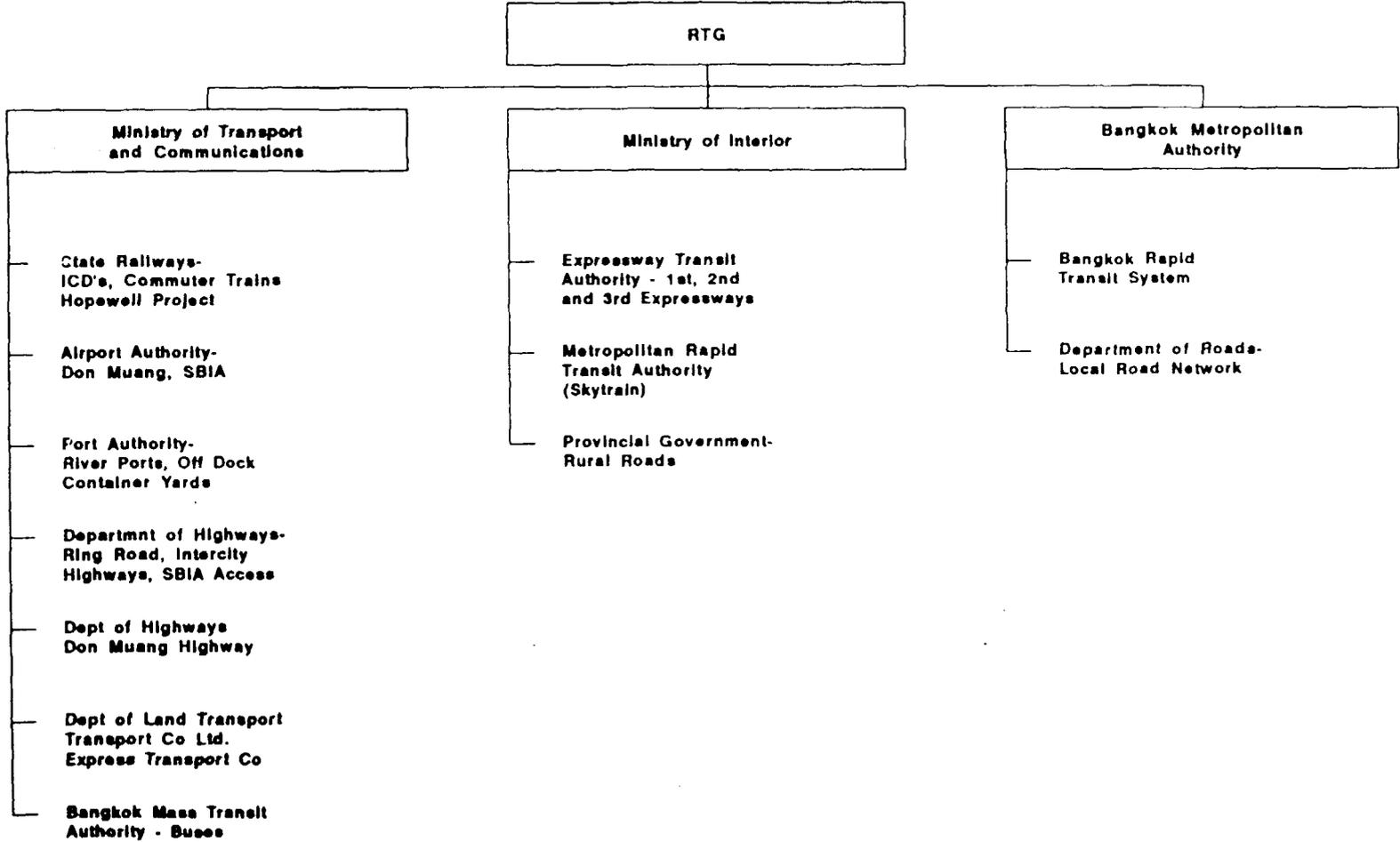


Chart 2.1

2.19 In Thailand, the private sector has provided financing and assumed commercial risk for investments in public transport facilities and equipment where it has been allowed to compete. This includes the BOOT schemes for mass rapid transit systems and the urban expressways in Bangkok, and purchases of railroad rolling stock. Although there is considerable impetus for increasing this participation, practical and political limitations are likely to limit its expansion.

2.20 **Constraints on private-sector participation in transportation.** The diversity of origins and destinations, the complexity of the network, and Thailand's many transport modes and services, especially in urban areas, make it difficult to evaluate proposals for improvements without complex analysis.^{8/} In addition, most decisions regarding changes in the capacity of the network are made independently of decisions affecting its use. The separation of the providers and users of the network is most dramatic for road and water transport, and applies to a lesser extent in rail and air transport.

2.21 The transport network is designed to meet demand for goods and services at different locations. System modifications change demand in four ways. They can divert traffic from one route to another, generate additional demand by lowering transportation costs, and alter the distribution and rate of growth of future demand. Improvements in the network can also result in taking land from commercial activities, and users changing their origins or destinations.

2.22 The competition between modes on specific routes and between alternative routes within a mode affects the distribution of demand. Mode and route choices are based on a variety of considerations. For freight transport, the relevant parameters include out-of-pocket costs, door-to-door travel times, number of transfers and safety. For passenger transport, these factors are important, as are comfort and convenience.

2.23 The services provided on the network are characterized not only by their modes and technologies, but also by the way they are operated and their integration with the rest of the network. For most transport systems, there is a direct trade-off between operating speed and cost, and between the frequency and convenience of a service and its utilization and cost. For freight traffic, the most important trade-off is between service charges and total travel time. For passenger traffic, total travel time is important but there is a clear distinction between travel time and waiting time. The latter increases, together with uncertainty and inconvenience, with the number of transfers during a trip. This leads to a trade-off between direct, but more costly door-to-door services, and lower-cost combinations of line haul and collection/distribution services. Operating decisions with respect to these trade-offs will depend on the objectives of the transport service and the nature of its markets. Since the fundamental goals of the public sector differ from those of the private sector, they can be expected to make different choices.

^{8/} This complexity is increased in the urban network in Bangkok, which operates near or above capacity, and for which each change has an immediate downstream impact on the use of the network links serving different modes.

Table 2.1 - Private-sector Participation in Transport Services in Thailand

Mode	Company	Source of		Ownership of		Operat.	Main.	Regulation	
		Finance	Vehicles	Terminals	Right-of-Way			Setting tariff	Level of Service
Bus	BMTA	Bonds, Subs.	SE	SE	Gov	SE	*	Gov	Gov
	Microbus	Priv. Eq, Loans	SE, *		Gov	SE, *	*	Gov	Gov
	Green Line	Priv. Eq, Loans	*		Gov	*		Gov	Gov
	TCL	RE	SE	SE	Gov	SE		Gov	Gov
	Intercity	Priv. Eq, Loans	*	SE	Gov	*	*	Gov	Gov
Truck	ETO	Subs., RE	SE		Gov	SE	SE	Gov	SE
Railroad	SRT	Subs., RE	SE, *		SE	SE, *	SE	Gov	SE, Gov
Mass Transit	MRTA	Priv. Eq, Loans	*	*	SE	*	*	Gov	*
	BMA	Priv. Eq, Loans	*	*	SE	*	*	Gov	*
	SRT	Priv. Eq, Loans	*	*	SE	*	*	Gov	*
Maritime	TMN	Subs., RE				SE		SE	SE
Aviation	TG	RE, Loans, Shares	SE, *			SE		SE	SE

Table 2.2 - Private-sector Participation in Transport Infrastructure in Thailand

Agency	Facility	Source of Finance	Design	Construction	Maintenance	Ownership Transport Link	Collect User Fees
ETA	2nd Ex	Priv Eq, Bonds, Loans	*	*	*	SE	Gov
	Don Muang	Priv Eq, Loans	*	*	*	SE	Gov
PAT	Bangkok Port	Bi-Lateral, RE	*	*	SE, *	SE	Gov
	Laem Chabang	Tax. RE	*	*	*	SE	Gov
MOF	Songkla	Bi-Lateral	*	*	*	MOF	*
	Phuket	Bi-Lateral	*	*	*	MOF	*
AAT	Bangkok-1	Tax. RE	*	*	*, AeroThai	SE	Gov
	Chiang Mai	Tax. RE	*	*	*, AeroThai	SE	Gov
	Phuket	Tax. RE	*	*	*, AeroThai	SE	Gov
	Hat Yai	Tax. RE	*	*	*, AeroThai	SE	Gov

Abbreviations

*	Private Sector	RE	Retained Earnings
Bi-Lateral	Bilateral, Multilateral	SE	State Enterprise
Bonds	Government Secured Bonds	Shares	Shares Offering
Gov.	Government	Subs.	Subsidies from Government
Loans	Commercial Loans	Tax	Tax Revenues
Priv.Eq.	Private Equity		

2.24 Most transport services, particularly passenger services, must be designed to meet public service objectives, including minimum access and service levels. Public mass transit and service objectives include promoting development of areas or regions, reducing air and noise pollution, relieving congestion on competing modes or routes, and lowering population densities and economic activity in overdeveloped areas. Services needed to ensure minimum acceptable transportation to various sectors of the population are categorized as public service obligations. In Thailand, increasing attention has been given to the public service function of railroads as the least-cost carrier of passengers and bulk commodities. Urban bus and feeder air transport services provide a similar service for urban and remote areas. Government subsidies are needed because pricing based on full cost recovery would substantially reduce service utilization and benefits. The participation of the private sector in public service functions is limited, as these services are often not financially viable. In these cases, the private sector can provide managerial expertise or act as an investor, but cannot assume the commercial risk.

2.25 **Private-sector participation in transportation.** While a number of strategies are available for increasing the private-sector role in providing transport services, these strategies must be balanced against three critical factors:

- (a) the need to provide common access to transport infrastructure, and develop an integrated transport network and complementary transport services;
- (b) the need to pursue public service objectives; and
- (c) the extensive role already played by the private sector in transport infrastructure and services.

2.26 The scope for private-sector participation in transport infrastructure is clearer than for transport services, as its participation is better defined. The need to provide common access to this infrastructure and to integrate the links of the system will limit the ability of private operators to collect user fees. Thailand has begun using Build-Operate-Transfer contracts to finance, operate, and maintain part of its transport infrastructure, and experience with these contracts should be reviewed to ensure that they do not unduly restrict transport access by setting user fees too high, or by allocating sections of the network to specific users, unless the Government ensures that comparable infrastructure is available without these limitations. Where the private investor assumes the commercial risk for the use of the infrastructure, it will require a reasonable return, including a risk premium. Under these conditions, it is likely that the Government will lose its ability to optimize the use of the infrastructure within the general transport network. Alternative mechanisms for financing investment can be used to reduce commercial risks to the investor and offer the Government greater control. These include Build-Lease-Transfer and joint venture agreements, and the issuance of revenue or general obligation bonds by implementing agencies.

2.27 While the benefits of involving the private sector in building, operating, and maintaining transport nodes are widely recognized, there are also examples of efficient operation by the public sector, which has been most effective when acting through autonomous or semi-autonomous authorities. Where efficient public sector agencies are responsible for transport infrastructure they tend to rely heavily on the private sector by contracting construction and maintenance. The use of such contracts is rapidly replacing force account work throughout the world.

2.28 For complex facilities such as airports and seaports, governments have increasingly relied on specialist architectural and engineering firms and private contractors to provide maintenance services and operational support. Governments maintain responsibility for air and sea navigation control, communications, train signalization, customs, and security. They also maintain oversight responsibility for aircraft slot assignments, marine pilotage, berth allocation, and train scheduling. Otherwise, the Government role is generally evolving towards that of a landlord contracting out construction and maintenance and leasing out facilities for operation by users or third parties.

2.29 It is relatively easy to ensure competition in transport services; unregulated transport services tend to be among the most competitive activities in an economy. In intercity freight and passenger transport, there will be considerable competition within and between modes. Trucks, buses and inland water transport are the most competitive because of the relatively small investments required for entry. Similarly, airlines and coastal shipping allow for considerable competition but have much higher initial investment costs. Railroads tend to be the least competitive because services and infrastructure are provided by the same entity and the cost of entry is extremely high. However, where arrangements have been made to allow common use of trackage, competition increases significantly. Unfortunately, this competition is also characterized by relatively long periods where prices are set equal to marginal cost, followed by shorter periods where scarcity prices encourage large-scale investment.

2.30 **Private-sector participation strategy.** Private-sector participation differs across transport sectors and state enterprises (Tables 2.1 and 2.2); details on each transport enterprise are provided in Annex 1. Nevertheless, there are some general strategies that can be assigned to the three separate areas of the transport system; the nodes, the links, and the services operating on these links. The strategy for the **nodes**, including airports and seaports, is to corporatize and decentralize the entities responsible for these terminals. Thus the airport and port authorities would be corporatized and the major airports and seaports spun off into separate autonomous authorities acting as landlords and contracting operation and maintenance of the assets. Construction of new facilities would continue to be financed by the authorities by tapping private capital markets through bonds or other debt instruments, or through earmarked tax revenues.

2.31 The strategy for the **links** would be to contract out construction and maintenance to the private sector. However, unless individual BOT/BTO contracts, particularly for urban transport can be made part of an integrated and coordinated transport system, it may be necessary to maintain government financing and operate the links through semi-autonomous authorities. Where it was necessary to have the private sector tap the capital markets, the Government would repay investments and amortize them over the life of investments. Build-Lease-Transfer agreements would then used to recover costs and optimize operations, while ensuring that the transport systems would be properly integrated and rationalized.

2.32 For **transport services**, the principal strategy would be to unbundle the activities of those state enterprises involved in providing these services. This requires dividing the services into profit-making activities and public service obligations. It could also involve dividing the services by function, e.g., passenger versus freight, line haul versus collection/distribution, high density versus low density. The basic strategy for promoting private participation in these services is to deregulate their activities. This means ending government control over franchising, licensing, tariffs, and service levels. The state enterprises could either sell their productive assets to the private sector or enter into joint ventures with private operators to compete with other operators (this would require

adequate prequalification and bidding, and awards based on the least cost of the lowest present value of the payments proposed).

2.33 Private-sector involvement in investments in transport infrastructure requires careful evaluation. Investments in the transport sector are generally justified in terms of the economic activity resulting from them. The primary benefits include savings in transportation costs and increased accessibility. However, rarely do transportation users fully pay for these benefits. Instead, part of the cost is covered through general revenues or ear-marked taxes (such as fuel taxes). For the private sector to invest in transport infrastructure, it must have a high probability of earning an acceptable rate of return. This limits the types of investments that can be made, and creates distortions because investments will be made to optimize financial returns to investors rather than benefits to the country.

2.34 Private-sector participation in the form of contracting for specific services, such as construction and maintenance of infrastructure, has been more successful than direct investment. In this situation, the Government provides financing and promotes and regulates the use of the infrastructure. Other successful arrangements have been joint ventures with the private sector to finance infrastructure construction, with the Government providing land and other resources as equity and setting policies for the use of the investment. These relationships are successful because they allow continuous adjustment in the terms and conditions to meet public and private requirements.

(E) Rapid Transit Systems

2.35 A major private-sector participation effort is ongoing and planned to solve serious urban transport problems in the Bangkok Metropolitan Area. Since these are the largest private transport undertakings in any developing country and pose special issues for developing an optimal transportation system, the three rapid transit systems in Bangkok will be analyzed in more detail. These include:

- (a) a 20-kilometer light-rail system between Hua Lamphong and Bang Su with a planned capacity in each direction of 40,000 passengers/hour, which is a derivative of the earlier skytrain proposal, to be developed by the MRTA as either an elevated or below-ground system.
- (b) a two-line elevated light-rail system of 19 kilometers and a planned capacity of 25,000 passengers/hour in each direction to be developed for the BMA by the Tanayong group.
- (c) a 60-kilometer light-rail system with a capacity of 60,000 passengers/hour in each direction to be built for the SRT by Hopewell along the existing railroad right-of-way on a structure including an urban expressway and the rail tracks.

2.36 Although the three systems are completing BOOT contract negotiations or starting construction, their completion will require several years and their financing is not assured. The role of the Government has been limited to planning the systems and securing the right-of-way; however this was done independently by the three agencies involved. The private sector will own, finance (using on- and off-shore financing), operate, and maintain these systems for periods of 20 years or more. Although an alternative for increasing private participation would be to jointly corporatize the divisions responsible for these projects in SRT, BMA and MRTA with these ventures, this would be too complicated and would provide little benefit. It is more important to analyze what level of

private-sector participation is appropriate and which forms of participation will lead to an economically optimal transit system.

2.37 The objective of these systems is to improve access to core areas and reduce congestion on city streets that results in losses due to delays of more than \$40 million a year. However, the success of these systems depends on their ability to attract passengers now using automobiles. Given horrendous traffic delays, most automobile commuters would use the rapid transit systems if savings in travel time are more valuable than the convenience of having a car during the day. These commuters would be willing to pay higher fares than present users of public transit, but also require greater convenience and comfort, suggesting lower levels of capacity utilization during peak hours. While issues of fare, comfort and convenience, especially during the peak hours, will affect commuter decisions, the dominant factor will be door-to-door travel time. Therefore, the availability of collection and distribution systems will affect both the level and source of this ridership.

2.38 Experience in other countries indicates that the major market for transit systems is commuters diverted from other transport forms. The amount of diversion depends on the accessibility of stations to user origins and destinations, fare levels, and the availability of alternative bus services. Passengers compare the benefits derived from savings in door-to-door travel time with the amount of the fare and the need to make at least one internodal transfer. Under the proposed system, traffic diverted to the transit system will be limited because the tariffs will be well in excess of those for buses. Moreover, as explained below, the key problems facing these systems are a lack of a coordinated planning, and inappropriate allocation of risk for private-sector participation.

2.39 **Planning problems.** The proposed rapid transit systems are not integrated with each other or existing transport systems, largely because they were planned without adequate studies of origin-destination patterns and the impact of the combined system on these patterns. Although the original study for these systems has been updated, route planning for each system was dictated by the availability of right-of-way for the elevated systems and, since the routes were planned separately, trip patterns using integrated internodal systems were not considered. The integration of the MRTA and BMA systems is now being addressed by designing passenger interchanges at crossover points. There are opportunities for integrated scheduling of trains and combined ticketing systems allowing a single ticket for both systems, but this will depend on agreement between the two BOOT contractors. Integration with the Hopewell project — which uses different technologies and a three-tier rail, bus, and elevated train structure — will be more difficult.

2.40 Planning for the three rapid transit systems did not provide adequately for interaction with the existing urban transport system. The provision of multi-storied parking structures, bus shelters, kiss-and-ride facilities, and other mechanisms for efficient passenger transfer was considered for only a few major stations. BMTA has yet to plan minibus routes to collect or distribute transit passengers. In addition, the Government has yet to take full advantage of complementary policy measures to reduce traffic congestion, such as: (a) taxing vehicles, fuel and parking; (b) stricter enforcement of traffic laws; and (c) restricting traffic movement on major arteries or in the central business district to encourage diversion from automobiles to mass transit. Procedures have also not been developed for issuing transfers or allocating transfer revenues.

2.41 The preferred approach for rapid transit projects is for the Government to specify (as done in Thailand) performance characteristics, quality of service and capacity of the right-of-way, but allow bidders to propose the technology used. The Government would then evaluate compliance with these specifications, leaving the risk of meeting these criteria to the contractor. However, the

aesthetic and environmental impacts of the system on their immediate surroundings were not considered, which would have affected the choice of technology^{9/}. More importantly, the Government failed to set criteria to facilitate the integration and expansion of the three systems — such as common interfaces and ticketing. Economies of scale could have been achieved by specifying common requirements for the: (a) form of power (voltage, method of pickup, AC/DC); (b) track interconnections to allow for common yards; (c) vehicle dimensions (gauge, length, height) to allow combining orders for expansion or capacity replacement and reduce unit costs; (d) track technology to permit a unified track maintenance capability and larger orders for maintenance material; (e) vehicle systems such as motors, braking systems, and air conditioning units to reduce their unit cost by increasing the order size, and (f) communications systems and system control equipment to allow for better coordination of train movements. These shortcomings are likely to result in systems costly to construct and operate, and limit opportunities for expansion.

2.42 The isolated planning and private BOOT financing of rapid transit under three separate schemes is unlikely to optimize benefits, reduce costs, maximize economies of scale, or improve the financial viability of the total system. It will also hinder system integration, and the use of economic objectives for setting tariffs and levels of service. To improve planning, the Bank recommends formally integrating the government agencies involved in developing these systems and undertaking a new analysis covering all three systems to ascertain the levels and forms of private participation that will produce an economically optimal transit system.

2.43 **Inadequate allocation of risk.** Key risks for developing major transit systems include the technologies employed, rights-of-way, project completion and, most importantly, the commercial risk (including country and foreign exchange risks for foreign investors). The assignment of risks under BOOT arrangements has led to a less than optimal system. For most systems, the Government should bear the risk for acquiring rights-of-way, as only it can invoke public domain to acquire land for public interest. Nevertheless, land acquisition is likely to suffer delays, or may not even be possible, which would affect completion of the transit system; given the large investment required, this would have serious implications for its financial viability and may force system redesign.^{10/} It is therefore necessary for the Government either to obtain the entire right-of-way for the project from the beginning (which would be very expensive) or provide compensation to the contractors for delays in acquiring the land. Since in the Hopewell project the Government has obtained the right-of-way, the completion risk should be assigned to the contractor and a turnkey project can be considered. In other systems following existing roadways, completion risk could also be assigned to the contractor, but the Government may wish to retain this risk to minimize disruption to traffic.

2.44 Commercial risks for the rapid transit systems have been allocated to the contractors through BOOT agreements. However, worldwide experience suggests that very few, if any, rapid systems obtain revenues covering their operating costs and provide acceptable returns on capital; many systems do not even cover their operating costs. It is not clear if the combination of revenues from farebox and land and air rights along the right of way will provide financial viability. The use of land development to subsidize the development of mass rapid transit systems and transferring the risks associated with this development to the private sector has both advantages and disadvantages. Most of the bidders were consortia that included land development companies. Their ability to

^{9/} The dialogue concerning whether the MRTA system should be elevated or below ground have been brought about by public concern and arose only after the initial proposals were submitted.

^{10/} The problem of assigning completion risk is more of an issue with the expressways than with the rapid transit systems.

exploit the value of the rights-of-way will produce returns greater than what the Government could realize if it were to develop the land on its own. Unfortunately, this leads to a system design that maximizes the return on land to the possible detriment of objectives related to quality of service or impact on the environment. Also, given the high degree of risk associated with the land development schemes, the contractor's risk-adjusted cost of capital will be relatively high. Nevertheless, in the absence of alternative sources of government finance (e.g., earmarked revenues from fuel taxes or general revenues) the exchange of land for a transit arrangement is acceptable, and is a common practice in other countries.

2.45 By transferring the commercial risk to the private sector, the Government avoids subsidizing operation of the transit systems. However, the BOOT arrangements replaced public service with commercial objectives, and the Government lost the right to adjust service levels and therefore achieve greater efficiency in the total transport network. Although the Government retains some regulatory control, limiting the ability of the private sector to introduce commercial tariffs, it has no scope to adjust tariffs to increase total economic benefits. A better relationship would be a management contract with the private sector to operate the system, allowing better cost control and efficient use of resources. The Government would then assume most of the commercial risk and set performance requirements regarding price, peak loading, headways, etc.

2.46 **Recommendations for private sector participation.** Private-sector participation in transportation is already extensive. Expansion of this participation should take into consideration three key needs: (a) creating an integrated transport network with complementary transport services, rather than isolated links; (b) optimizing infrastructure use within the general transport network, and (c) pursuing public service objectives.

2.47 There is considerable scope for increasing reliance on the private sector for construction and maintenance. For complex facilities, such as airports and seaports, the Government can maintain oversight responsibility (aircraft slot assignments, marine pilotage, berth allocation, and train scheduling, etc.) while further evolving its present role as a landlord and contractor for construction and maintenance and leasing out facilities in the respective facilities.

2.48 The private-sector participation strategy for **the nodes**, including airports and seaports, is to corporatize and decentralize them, with their state enterprise owners acting as landlords and contracting the operation and maintenance of the assets. The strategy for **the links** should be to contract construction and maintenance to the private sector. However, unless individual BOT/BTO contracts, particularly for urban transport can be made part of an integrated and coordinated transport system, it may be necessary to maintain government financing and operate the links through semi-autonomous authorities; in this case it would be best to use Build-Lease-Transfer agreements, or maintain government financing and operate them through semi-autonomous authorities. For **transport services**, the strategy is to deregulate their activities after unbundling the profit-making activities and public service obligations, and separating services by function, e.g., passenger versus freight, line haul versus collection/distribution, high-density versus low. This would mean ending government control over franchising, licensing, tariffs, and service levels. The state enterprises could either sell their assets or enter into joint ventures with private operators

2.49 For **rapid transit systems**, it is important to analyze the level of private-sector participation that would result in an economically optimal transit system. Their success depends on their ability to attract passengers now using automobiles. The proposed systems are not integrated with each other or other transport systems, and their routes were planned separately without

considering trip patterns using integrated internodal systems or common interfaces and ticketing. This independent planning also affects potentially large economies of scale in vehicle, track, spare parts, communications, etc. It is, thus, important to formally integrate the entities involved in developing these systems and undertaking an analysis to ascertain the levels and forms of private participation that will produce an economically optimal transit system.

2.50 Commercial risks for the rapid transit systems have been allocated to the BOOT contractors. However, it is not clear if the combination of revenues from farebox and land and air rights along the right of way will provide financial viability. The transfer of land development to the BOOT contractor to subsidize development of rapid transit systems is reasonable and provides better returns than the Government could realize but could result in maximizing returns in the land development rather than improving the service quality or the environmental impact, and increasing the risk-adjusted cost of capital.

2.51 The BOOT contracts for rapid transit replaced public service with commercial objectives, and the Government lost its capacity to adjust tariffs and service levels to achieve greater efficiency in the total network. A better relationship would be based on contracting management of the system to the private sector, with the Government assuming most of the commercial risk and setting performance requirements for price, peak loading, headways, etc.

(F) Water Supply

2.52 There are important differences between urban water supply systems in developed and less developed countries (Table 2.3); these pose additional challenges to private-sector participation in developing countries, but privatization can bring important benefits in insuring that systems are expanded and provide good quality water.

2.53 Most community water supply systems in Thailand are managed by two state enterprises, the Metropolitan Water Authority (MWA) covering the Bangkok Metropolitan Area and the rapidly urbanizing adjacent provinces of Samutprakarn and Nonthaburi, and the Provincial Water Authority (PWA) responsible for the remaining urban and rural systems.

2.54 Over the past decade, MWA and PWA have made substantial strides in improving their overall efficiency and performance (billing and collections, unaccounted-for-water and planning). However, water and sewerage services, and pollution control remain deficient. In the PWA service area demand will require a dramatic expansion of about 20% a year, compared with past growth of about 12%. PWA's major problem is a lack of experienced technical staff due to low salary levels; those in the private sector are two to three times higher. Sector investment needs of about B15 billion a year will require substantial external or private-sector financing.

2.55 **Private-sector participation.** Water is scarce in many provinces in Thailand, and comprehensive master plans for water utilization, not yet drawn up for most river basins, should give priority to domestic water supply. A first BOOT project (Bang Phli, 10,000 cmd) was a pilot for private-sector participation in water treatment projects; however, raw water shortages in the Chao Phraya River resulted in serious financing difficulties for the project. MWA is contracting technical assistance to explore other privatization opportunities, particularly for the Mahasawad water system.

2.56 A critical and innovative approach toward private-sector participation was the establishment of the East Water Company (EW) in 1992 to provide water services to the Eastern

Table 2.3 - Key Factors in Water Systems

Developed Countries	Developing Countries Systems
Pollution of water sources controlled. Clear water rights.	Little if any control. Confused, unplanned water source rights.
Well operated filtration plant, reliable effluent chlorination and corrosion control (lime).	Poor O&M of the plant and inadequate chlorination and corrosion control.
Well operated and maintained distribution systems, good quality pipes, pressure maintained 24 hours and rechlorination to ensure residual chlorine.	Inadequate O&M, widely fluctuating pressures, cheap pipes and no residual chlorine.
No proximity problems or sewage infiltration into water lines.	Poor excreta management. Contamination likely when no pressure available in water lines.
Continued monitoring of water quality (chlorine and coliform) at tap level.	Limited or no monitoring beyond the treatment plant.
House connections are almost universal.	Substantial population cannot afford water connections and depend on often poorly planned standpipes.
Performance evaluation includes financial as well as service results (quantity, quality, complains). Adequate records available.	Performance evaluation limited to financial criteria. Limited information.
Continuous delivery of adequate, non-corrosive, safe, clear and good quality water.	Unreliable supply, unsafe water (low chlorine, sewage infiltration due to pipe leakages), low quality water.

Seaboard area. EW is substantially free of the legal constraints applicable to state enterprises, and its stock will be sold to the private sector in the future, with PWA retaining a minority stake. EW requires engineering and financial technical assistance to ensure its success and allow its expansion to other areas in the Eastern Seaboard (Chachoengsao and Prachinburi), where EW's flexibility to develop area wide systems is desirable.

2.57 Following the experience of the Bang Phli project, some key new projects could be designated for BOOT. Private-sector participation could introduce new technologies and facilitate the solution to serious land-acquisition problems for treatment plants. This requires preparing improved standard specifications and bidding documents for BOOT projects to reduce prices, and provide adequate water quality and competent operations and maintenance. The proposed Mahasawad project could be a pilot for these efforts by ensuring transparency in bidding and avoiding prolonged negotiations.

2.58 The situation is more critical for sewerage systems, which are the responsibility of local governments; given their limited resources little has been accomplished. Since enactment of the 1992 Environmental Quality Protection Act and the establishment of a Pollution Control Department within the new Ministry of Science, Technology and Environment this is changing rapidly. The Pollution Control Department has the authority to undertake pollution control in areas designated special

Pollution Control Zones and is undertaking studies for five key urban centers (Pattaya, Phuket, Hat Yai, Songkhla and Samutprakarn Province and is sponsoring regional (sub-river basin) water pollution control planning in several basins.

2.59 **Private sector participation recommendations.** Since water supply is the most monopolistic infrastructure service, it is still a state enterprise activity in most countries (although it is private in France and partially private in the United States). Recent efforts in other countries are giving preference to privatizing new water systems and the management of water (Buenos Aires and a couple of cities in Africa) or sewage treatment plants (Malaysia). Since proper water supply is considered a human right by many people and has considerable externalities, it is very difficult to eliminate social considerations and cross subsidies for water supply. The following is recommended:

- (a) Private-sector participation may have a large impact in solving water supply, sewerage and pollution control problems. This would require revising the Ministry of Industry's procedures, which are very restrictive except for joint ventures with PWA, to enable the private sector to own/operate these systems.
- (b) To evaluate the potential for privatizing the operation and management of water supply, while maintaining government ownership of assets.
- (c) The East Water Company and the Ban Phli privatized systems could be expanded to other new systems. EW deserves government support to ensure the success of its stock sale. This will require to produce revised and improved bidding documents, which could be prepared for the Mahasawad BOOT project as a model to ensure transparency in bidding and avoid prolonged negotiations. Although the operation of the system is targeted for only two years, the BOOT should be a long-term contract, which would guarantee the price, quality, maintenance and reliability of the equipment for 20 or more years.
- (d) The Government is evaluating the feasibility of establishing a new Lower Chao Phraya Water Pollution Control Agency (with World Bank technical assistance). This regional approach has been found successful in UK, and could provide a better solution for pollution improvements.
- (e) MWA and PWA should review contracting to the private-sector services such as security, billing and house connections.
- (f) PWA's planning for increased private-sector participation is commendable and should be detailed in an ongoing privatization study. This would call for BOOT proposals for five water supply systems (Pathum Thani-Rangsit, Omn Noi, Omn Yai, Bang Pakong and Chachoeggao costing about B14,000. Projects with long gestation periods, such as like reservoirs or long transmission lines, are less suitable for the private sector.
- (g) MWA and PWA should establish units responsible for promoting private-sector participation.

(G) Telecommunications Sector

2.60 **Industry structure and performance.** Thailand's telecommunications industry is divided into two state enterprises along somewhat unusual business lines. The Communication Authority of Thailand's (CAT) franchise from the Ministry of Transport and Communications includes post, telegraph, international telephone (except to neighboring Malaysia and Laos), data services and value-added domestic mobile and paging services. The remaining telecom services are franchised to the Telephone Organization of Thailand (TOT), including domestic local and long-distance services, public telephones, and international service to Malaysia and Laos.

2.61 As in most developing countries, telecommunication services in Thailand have been scarce and unreliable. Telephone penetration averaged 3 lines per 100 inhabitants in 1992, but is very uneven, reaching 14 in Bangkok and only 1.9 in other areas, with a waiting list exceeding 900,000. The demand for telecommunications services has exploded with the rapid growth of the economy. Due to the Government's inability to achieve line growth targets in set previous plans, the Seventh Plan (1992-96) encouraged the entry of private suppliers as BOOT contractors for telecommunications services, which has resulted in contracts (see Table 2.4) and investments totalling about \$6 billion.

2.62 **Private-sector participation.** Telecommunications is the sector with the largest and fastest growing private-sector involvement in Thailand (Table 2.4). The BOOT policy has been successful in bringing private companies into both basic and value added services, particularly wireless (mobile and paging) services, which are suitable for private supply, given their limited scale economies, short construction schedules, and relatively small investments. Consumer value is extremely high, particularly in markets with unsatisfied demand for fixed telephone connections. Because many of the value-added and wireless services rely on modern technology, foreign participation has proved necessary and an opportunity for technology transfer. The performance of private value-added services has been satisfactory. Cellular subscribers rose from 20,000 in 1987 to over 145,000 in 1991, and paging service membership reached 350,000 at the end of 1993. Data services are also expanding. Thaipac, a packet switched data communication network had some 560 clients at the end of 1991; DataNet serves some 1,640 subscribers. The only concession with some problems is Phonepoint, a cordless telephone provider that has had problem competing with cellular mobile services.

2.63 In mid-1992 TOT granted very large BOOT concessions for the addition of 2 million lines in Bangkok and 1 million lines in provincial areas. Both projects are being implemented by local firms in joint ventures with foreign strategic partners. The BOOT contracts involve revenue-sharing arrangement with TOT (43% of TOT revenue from these lines for the provincial contract and 16% for the Bangkok contract). TOT is responsible for fixing tariffs and setting technical standards. These are unusual BOOT contracts, because the assets are transferred to TOT as soon as they are operational but the contractors have been willing to retain the respective liabilities. The contractors are installing about a 1,000 lines a day. In Bangkok, the private supplier has established three central offices to interconnect with TOT's network. A fiber optic backbone system is being laid to provide multimedia coverage.

2.64 The direction of telecommunications development has been generally correct, although structural changes have occurred in piecemeal fashion. Under this system, TOT and CAT are expanding into new markets through private concessions, acting simultaneously as operators and regulators. This dual role creates conflicts of interest for TOT; as an operator TOT may wish to

Table 2.4 Telecommunication Concessions

Company	Concession	Granted Period	
Telephone Organization of Thailand (TOT)			
GT&E	Print telephone directories & yellow pages	1967	Annual
AT&T	Print telephone directories & yellow pages	1985	Annual
Shinawatra	Operate 'Phonelink' Digital paging service	1990	15 yrs
Hutchison	Operate 'PagePhone' Digital paging service	1990	15 yrs
Data Net	Provide voice & data transmissions at the same time over one telephone circuit	1989	20 yrs
Advance Info	Provide NMT 900 mobile telephone service	1987	20 yrs
Fonepoint	Provide cordless telephone (CT2) service	1990	10 yrs
Comlink	Install an optical fiber cable network along rail tracks in Thailand	1990	25 yrs
Line Technology	Provide videotext service	1991	15 yrs
Communications Authority of Thailand (CAT)			
Pacific Telesis	Operate 'Paclink' digital paging service	1987	15 yrs
Total Access	Provide '800 B Band' mobile telephone Communications	1991	15 yrs
Ministry of Transport and Communications			
Shinawatra	Launch Thailand's first commercial Computers & communications satellite Communications	1991	30 yrs
Post and Telegraph Department			
Compunet Corp.	Provide voice and data transmission service through Asiasat satellite	1988	15 yrs
Samart Telecoms	Manage the flow of information through on-line computer terminals Palapa satellite	1989	15 yrs

maximize revenues, while as a regulator it may seek faster network expansion. Moreover, if TOT is privatized it would be a competitor to its BOOT contractors — while still regulating their activities. It is, therefore, recommended to establish a comprehensive strategy and general sector policies, which would better define the roles of TOT, CAT, and the private-sector roles and separate regulatory from operational functions.

2.65 **The need for sectoral reform.** The Thai telecommunications sector has grown and diversified considerably during an extended period of very high economic growth. During this time sectoral developments have occurred incrementally, responding to current pressures and needs, without an overall strategy or framework for longer-term planning. The telecoms sector is of particular importance to Thailand's economic development because of the rapid pace of technological change in the sector worldwide, the externalities of telecoms for the national economy domestically and its links to exports, and the opportunity to achieve large and continuing productivity increases

within the sector itself. The two state enterprises have relatively limited institutional, financial, and managerial resources to expand basic telephone service at the rates necessary to keep up with the pace of economic growth and compensate for previous deficiencies. The BOOT concessions allow for a faster investment pace, but it would be preferable not to limit direct competition, as now included in these contracts. Rather, TOT acts as both a supplier of bottleneck resources and a regulator of firms operating under concession contracts, which, together with the exclusive five-year private concessions gives limited incentives to increase efficiency. Thailand will face growing pressures from global technological advances in telecommunications and from trading partners seeking greater entry into domestic markets, and within the next ten years, the GATT agreements will open local markets to direct foreign investment.

2.66 Basic structural reforms based on coherent and effective policies are necessary to address these problems. The fundamental strategic objective recommended is to establish open telecommunications markets and direct competition. This would require establishing an independent regulatory body (Chapter 5) with broad authority over all telecoms markets and suppliers and responsible for basic decisions about sectoral development policy. It would, also, require corporatization and privatization of the telecoms enterprises.

2.67 **Telecoms structure and objectives for private-sector participation.** Several factors should be taken into account in designing an optimal strategy and structure for regulated private participation in telecoms: (a) existing laws limit private participation (except for BOOTs); (b) present services are financially viable and represent a considerable source of fiscal revenues; (c) services are a matter of national security; (d) as public services, telecommunications contribute to society's welfare, and social objectives will affect pricing decisions; and (e) monopoly protection has left the present state enterprises ill-equipped for immediate liberalization.

2.68 The Government needs to formulate telecommunications policies and strategic objectives linked to Thailand's social and economic development objectives. This will require (i) attracting additional resources into the sector; (ii) opening markets to entry and direct competition; (iii) increasing resource allocations, productivity, and efficiency; (iv) promoting growth and making services widely available; (v) raising service quality; (vi) de-politicizing decision making; and (vii) setting and monitoring performance standards for licensees. Detailed recommendations for TOT and CAT are presented in Annex 1.

(H) Main Recommendations for Increasing Private-Sector Participation

2.69 Cross-Sectoral Recommendations:

- (a) Enact legislation removing restrictions on private-sector participation in state enterprises (para. 2.8). Prepare an annual list of projects proposed private and require a justification of why large infrastructure projects could not be undertaken by the private sector (para. 2.9).
- (b) Standardize BOOT/BOO bidding documents. To ensure successful private-sector participation in infrastructure services, tender invitations should be standardized for each sector. This would simplify the review award of contracts and help eliminate negotiations (para. 2.9).

- (c) Ease restrictions on private-sector participation by enacting a general law that repeals existing restrictions and eliminates the monopolistic rights of some state enterprises. Its implementation should be monitored by the regulator (para. 2.66).

2.70 **Energy Sector.** We recommend that the Government consider the additional short-term (para. 2.71) and long-term (para. 2.72) structural changes to improve the sector efficiency, ensure successful competition and promote the sector's gradual privatization.

2.71 In the **near term** it is recommended that:

- (a) Implement structural changes to ensure satisfactory competition, including the privatization of EGCO from EGAT and targeting an increasing percentage of new plants for private sector competition.
- (b) Although the Petroleum Authority of Thailand (PTT) is an efficient, well-run enterprise, its benefit to the country will be enhanced when PTT moves towards greater commercialization and corporatization and converts its oil and gas units into independent subsidiaries as envisaged in its corporate plan. The relationship between PTT and the Government also needs to be clearly defined to separate policy making and monitoring from PTT operations.
- (c) The Government should consider diluting and divesting PTT's shares in its 13 subsidiary companies, particularly those which are not in its core areas of operations (such as fertilizer and chemical companies) over a period of time.
- (d) Study the rationalization of 115 kV lines between EGAT and the distribution companies to avoid redundancies.
- (e) Divide PEA into four regional companies to increase competition (and performance comparison) and avoid excessive size (a division of MEA into two companies could also be considered). However, this would depend on the compensation of existing subsidies to the north by budgetary transfers.
- (f) The Government establish a timetable to eliminate PEA's cross-subsidy tariffs. To maintain government targets for rural service and income distribution, the tariffs should be replaced by specified budgetary subsidies to the distribution companies.
- (g) The distribution companies should design tariff structures separating the energy and the "wires" components to encourage cogeneration and their supply to other consumers.

2.72 In the **longer term**, depending of the progress achieved on the measures above and using the experience available at that time from countries that have recently implemented similar reforms (UK, Chile, Argentine, Norway), we recommend that:

- (a) EGAT's generating plants be distributed among three or four generation companies, and that these plants be privatized by gradually selling their shares.

- (b) EGAT become a transmission and power pool only company, responsible for transmission and dispatching. Initially this company would remain a state enterprise, but it could eventually be privatized through share offerings to the public.
- (c) Distribution companies be allowed to purchase directly from any generating company or independent power producer. EGAT's role as a central procurement agency should be gradually phased out.
- (d) The next step would be to allow large industrial and commercial customers (more than 5 MW) to buy directly from all generators. This would require defining wheeling charges for transmission and distribution, and redefining distribution company obligations to supply — and industrial and commercial customer obligations to buy — in a franchise area.

2.73 **Transport Sector:**

- (a) Improve transport planning and coordination to develop an integrated transport network that pays due attention to public service requirements (para. 2.25).
- (b) Improve the use of waterways, which could provide cost-effective transportation in Bangkok.
- (c) The Government should act as a landlord, maintaining overall control and planning responsibilities and contracting out construction and maintenance and leasing out facilities for operation by users or third parties (para. 2.28).
- (d) Corporatize and decentralize the entities responsible for transport nodes; contract out construction and maintenance for links to the private sector. However, unless individual BOT/BTO contracts, particularly for urban transport can be made part of an integrated and coordinated transport system, it may be necessary to maintain government financing and operate the links through semi-autonomous authorities. Unbundle transport service activities, divide them into profit-making activities and public service obligations and deregulate their activities (paras. 2.30 to 2.32).
- (e) Specify common requirements for rapid transit systems (para. 2.41).
- (f) Restudy the allocation of risks between the Government and contractors for large transport systems (para. 2.50), and draw new BOOT contracts for rapid transit so that they maintain government capacity to adjust tariffs and service levels to achieve greater efficiency across the total network (para. 2.51).

2.74 Water Supply Sector

- (a) Revise laws to allow the private sector to own and operate water supply, sewerage, and pollution control facilities and systems; evaluate potential for management contracts (para. 2.59).
- (b) Improve bidding documents by preparing prototypes for MWA's Mahasawad BOOT project and using them for other systems proposed by PWA.
- (c) Adopt a regional approach to pollution control, as proposed for the lower Chao Phraya River.
- (d) MWA and PWA should establish units responsible for promoting private-sector participation.

2.75 Telecommunications Sector

- (a) Draw up a comprehensive strategy and general sector policies to better define TOT, CAT and private sector roles and separate regulatory from operational functions (para. 2.64).
- (b) Establish an open telecommunications markets and direct competition, which would require corporatization and privatization of the telecoms enterprises (para. 2.66).
- (c) Corporatize CAT and TOT and give priority to their privatization (para. 2.66).

Chapter 3. Improving the Efficiency of State Enterprises

(A) Introduction

3.1 One of the Government's central concerns has been to ensure that state enterprises meet Thailand's economic and social needs. The Government must also ensure that during the process of privatization, and after divestiture, there is no curtailment or reduction in infrastructure investments, which could severely affect Thailand's growth prospects. This chapter provides recommendations for improving the existing system for evaluating and monitoring state enterprise performance.

3.2 Improving the performance of state enterprises is critical to results adequate performance while government-owned, and to increase the price paid for their shares at divestiture. In January 1993 the Government established a State Enterprise Improvement Committee (SEIC), chaired by the Prime Minister (Annex 12), with a secretariat provided by the Ministry of Finance's State Enterprises Division. The committee's objectives are to increase the transparency of state enterprise operations, monitor management and performance, reduce subsidies, loans, and guarantees, increase competition and efficiency, improve accountability, and delegate projects that can be constructed or operated more efficiently by the private sector.

(B) Improving the Framework for Assessing State Enterprise Performance

3.3 The committee's policies for achieving these objectives^{11/} include: (a) limiting the number of state enterprise board members and including private-sector representatives; (b) performance reviews every two years by the board of the management and by Cabinet of the board of directors; (c) allocating 6% of each enterprise's net profit for technological improvement and staff training; (d) requiring cost accounting; (e) conducting annual performance audits and establishing criteria for ranking enterprises as "Class A Enterprises" (para. 3.13), which, inter alia, allows them to set their staff salaries; (f) limiting Cabinet review to projects that cost over B500 million; (g) requiring all enterprises (except promotional ones) to pay at least 30% taxes; (h) mandating enterprises to seek private-sector cooperation and provide opportunities for the private sector to participate in providing services; and (i) confirming that the Government should partially or totally divest enterprises it no longer needs to operate or own.

3.4 These policies are satisfactory, and, if properly implemented would result in considerable improvement in the state enterprises. It is recommended that the framework for performance evaluation be improved (para. 3.11), which should improve enterprise efficiency and effectiveness, and increase their autonomy and accountability, particularly at the managerial level. The establishment of performance evaluation systems has been crucial to improving state enterprises in other countries, including Korea, Pakistan, Canada, Chile, France, New Zealand, Mexico and the Philippines.

^{11/} Public Enterprise Operating Policies, 1993 (Annex 12)

(C) Recommendations For Improving State Enterprise Performance

3.5 **Pricing of services.** The state enterprises are generally well run and the Government plans to retain a substantial share in them — with the exception of those in commercial or industrial activities. With or without privatization, it is recommended that the Government continue to improve their performance and strengthen its capacity to regulate monopolistic pricing, contain costs, promote adequate coverage and quality of services, and ensure that social objectives are achieved. It is particularly important to set adequate tariffs for enterprises such as BMTA and SRT that are well managed and efficient compared with transport state enterprises in other countries but suffer losses due to low fares. The present system of financing these deficits through subsidized loans and higher debt service payments is an obstacle to reaching satisfactory financial performance.

3.6 **Banking.** The requirement that enterprises conduct financial transactions only with government banks is not working well. Services received seem inadequate and the cash management function constrained. Several enterprises are retaining cash up to three or four times their annual capital expenditures, indicating poor cash management, or investment problems (in 1991, the ratio of cash to investments reached 3.4 in PTT, 2.0 in MEA and 1.9 in MWA, but was a reasonable 0.23 in EGAT, and about 0.75 in PWA and PEA). It is recommended that state enterprises be allowed to use commercial, as well as government, banks, which would also provide a competitive incentive for government banks to improve their performance.

3.7 **Staff remuneration.** As recently as 1988, remuneration at all levels of state enterprise staff, including fringe benefits was 15% to 200% higher than in the private sector, particularly at lower skill levels. This situation continues for low-skilled staff, resulting from automatic raises within grades, and pressure from unions. Conversely, private-sector demand for qualified technicians and managers has substantially increased their salaries, and state enterprises are rapidly losing skilled staff. Designating some enterprises "Class A" (paras. 51, 3.21) would allow the best enterprises to set salary levels, but a critical drainage of skilled staff is likely to continue, particularly from those that need skilled staff the most.

3.8 **Boards of directors and management.** The Bank recommends that SEIC strengthen sections 1.1 and 1.2 of its Public Enterprise Operating Policies — which call for establishing a performance evaluation system for state enterprise board directors — by setting criteria for their appointment. While the statutes creating some enterprises specify criteria, these have often been political, rather than technical or professional. The key criteria to be used should be based on commercial, financial and managerial expertise in related fields, demonstrated integrity, and sound judgment. Board members should be appointed for staggered four year terms to ensure continuity (half every two years) and rules for dismissing directors before their terms end should be clearly set out to limit the scope for political intervention. It is also important to appoint professional managers with fixed-term contracts (say five years), to allow them to take long-term decisions without political interference.

3.9 **Mandated activities.** The Government should consider establishing a policy of compensating enterprises for mandated activities or public service obligations, such as non-commercial or social services. Compensation could be provided by using public service agreements that allow enterprises to collect the cost of these social services and protect their financial viability. This has already been applied to SRT.

3.10 **Audits.** State enterprises are audited by the Auditor General with an emphasis on procedures and regulations (accounting principles are established by the Comptroller General). Present audits do not fully follow generally accepted accounting principles on the treatment of foreign exchange gains/losses (unrealized foreign exchange losses are shown as other assets on the books of some enterprises), the valuation of existing assets and the accounting for pension liabilities (to reflect contingent liabilities from pension The Bank recommends applying generally accepted accounting principles and involving private auditors for enterprises for which divestiture is under consideration. More commercial and performance evaluation auditing using international accounting standards is also recommended. For this purpose private auditors could become "auditing agencies" as defined by the 1962 Auditor Act to supplement compliance audits by the Auditor General, as is done in Austria, Malaysia, Israel and Tunisia, among other countries.

(D) Performance Evaluation System

3.11 Thailand established a performance evaluation for state enterprises in 1991 that has advantages of simplicity, and can be immediately implemented using available financial information. The system (Annex 12) has three components known as the **basic bonus**, **CEO base pay**, and **good enterprise determination** systems.

3.12 The **basic bonus** system provides up to 5 months' salary as a bonus for employees of most state enterprises, paid from a bonus pool set at 9% of accounting profit. **CEO base pay** is set using weighted indexes that take into account financial performance factors (25%) such as assets, revenue, and net profits, and non-financial criteria (75%), such as the firm's number of employees, importance to society, technological intensity, and the quality of its corporate plan.

3.13 A **good enterprise**, or "Class A" ranking gives a state enterprise additional freedom from bureaucratic interference, particularly in establishing salaries for its staff and is given firms meeting financial and efficiency criteria, including: (a) annual remittances to the Government of at least 30% of net profits (akin to the taxation of private enterprises); (b) a net profit-to-assets ratio higher than 6%; (c) a ratio of total personnel expenses to total costs (operational and non-operational) no higher than 10% (20% for less capital intensive enterprises); (d) an increase in productivity equal to or higher than 2% per annum (based mainly on wages, interest and depreciation); and (e) measures toward private-sector participation and privatization.

3.14 The establishment of financial indicators is a critical component of any performance evaluation system. However, it is important to improve and revise the initial financial indicators proposed: for example, total assets include current assets, but they may be financed by current liabilities. In addition, the return on assets is calculated after interest payments, which already include the interest remuneration for loans and may be widely different between state enterprises because of government policies to force indebtedness instead of raising user charges. Other indicators are needed to capture the management of the enterprise instead of its structural characteristics. The shortcomings of the indicators now used, and ways to improve them, are discussed in Annex 8.

3.15 A key concern is that the performance evaluation system focuses only on **financial** indicators, which are the key variables for private, profit-oriented enterprises, but are somewhat less justifiable for state enterprises, which have other important objectives. For example, while the water, telephone, and power companies should be financially viable, they must also provide reasonable service to the general public. While providing water or power to low income or rural areas is not profitable, it may be desirable for social reasons. Similarly, bus companies may have to accept lower

fares to promote higher use of mass transportation and reduce air pollution. In other enterprises, lower levels of investment may reduce operational and capital expenditures and improve financial indicators at the cost of system reliability. For example, a lower power reserve resulting from lower capital expenditures would improve financial results, but could cause power outages that cost the economy many times the value of the foregone investments.

3.16 **Improving performance indicators.** The Bank recommends that the performance evaluation system be reviewed to incorporate more meaningful indicators for each enterprise. To facilitate implementing a successful performance evaluation system, SEID staff should visit two or three countries that have already introduced such systems, such as Korea, New Zealand, Canada, Pakistan and the Philippines, and gain from their experience. To establish targets for the first year, all enterprises should be required at the beginning of each financial year to complete corporate plans and set performance goals for the next three years including key new actions and activities to be undertaken, performance objectives and monitoring goals by which performance should be judged, service and production targets, total annual capital expenditures, and estimates of remittances to the Government.

3.17 Although the evaluation of commercial enterprises should rely mainly on financial indicators, we recommend that a more comprehensive evaluation system be established for the utilities, based on four factors, for which typical indicators are listed:

- (a) **Achievement of government goals for enterprises.** Typical indicators include: the percentage of the population receiving services (water, power, telephones), number of houses built, percent of capital investment targets met, production of key services (water, number of passengers, number of lines and cargo, etc.), passenger-kilometers, kilometers per vehicle, percentage of the fleet availability, tons of cargo-kilometers. Other indicators are number of outages, percent of water samples passing sanitary criteria, percent of pending requests for connections on present customers, and percent power reserve capacity.
- (b) **Efficiency and productivity.** Typically these include the achievement of targets for unaccounted-for services (including losses) water, power or telephone calls, availability (in working order) of buses or locomotives, number of days or percentage of accounts receivable, number of customers or items produced (tons of water produced, kWh generated) per staff, quality of service (duration of water or power outages, water quality, call completion ratio, wagon turnover) changes in the cost per unit of output (water, houses, kwh, etc), percent wages to cost, net fuel efficiency for thermal plants.
- (c) **Financial performance.** Financial indicators should try to exclude factors beyond management control, such as approval or denial of a tariff increase. These indicators include the operating ratio (operating costs divided by operational revenues), the working ratio (operational costs excluding depreciation divided by operational revenues), rate of return on average fixed assets in operation (normally on revalued terms), percent of the investments that are self-financed, number of days of accounts receivable, debt service ratio and remittances to government on net income.
- (d) **Qualitative objectives.** These include outlays for research, the quality of services provided (power outages, safe water sampling, telephone calls getting through),

improvements in administration and training, adequate and timely financial projections and long-term planning.

3.18 Typically, an enterprise will surpass one objective but achieve a lower performance in others. Therefore, it is important to set a system of weights to indicate to managers the relative importance of each objective and provide a way of ranking enterprises. For example, financial ratios could have a weight of 35%, the achievement of targets and efficiency indicators 30% each, and other indicators 5%.

3.19 In the first year, each enterprise should set its own non-financial targets, but this should be changed once SEIC staff acquire the expertise needed for each sector. Performance targets can be established by monitoring key indicators for each enterprise in previous years and comparing them with efficient enterprises in similar sectors in other countries. In general, targets should eliminate the impact of factors beyond management's control (sudden fuel increases, tariff increases, minimum wages, etc). The draft plan or goals should be revised by the relevant sector ministry and the SEIC, and final targets and their weights should be negotiated.

3.20 We recommend establishing (as is done in other countries) a computerized system for financial projections based on a spreadsheet model, with adequate details and schedules to produce required tables, background details, monitoring indicators and graphs. This system should have the flexibility to be adapted to **all** enterprises. It would also simplify the consolidation of the state enterprise system by setting standard tables.

3.21 **Performance incentives.** It is recommended that Thailand establish incentives to reward the best performing enterprises. In Korea the publication of a list of the best and worst enterprises is in itself a powerful incentive to improve management performance. While the ultimate reward for a enterprise may be the freedom to establish its own salary standards, other countries have established less permanent incentives. In some countries, the incentives are bonuses of 3 to 4 months salary for the best rated enterprises (most enterprises in Thailand are already paying bonuses of at least one month's salary). This system creates a strong incentive for enterprises to try to surpass their targets every year. It should be noted that salary increases could be counterproductive for privatization: if salaries are higher than in the private sector, staff would strongly oppose such changes. Experience with Thai Airlines and the PTT indicates that the Government may need to provide guidelines for gradual salary improvements — for example, limiting the maximum real increase in a single year — so that the incentive to improve is maintained.

3.22 **Organizing the evaluation system.** After audit results are available, an evaluation by SEIC with the support of consultants should be completed to determine compliance with the performance evaluation system. Since the staff requirements for a performance evaluation are substantial and highly seasonal (due to the need to set targets for enterprises at the beginning of the year and review their performance at the end of the year), SEIC must be supplemented with adequate budget to hire consultants (staff from academia, business or consultants are used in Korea) and/or the temporary borrowing of top financial officials from enterprises.

(E) Main Recommendations for Improving State Enterprise Performance

(a) Financial Issues

- (i) Set adequate tariffs for state enterprises that are both well managed and efficient but suffer losses due to low fares (para. 3.5).
- (ii) Allow state enterprises to use private commercial banks of their choices. (para. 3.6).
- (iii) The Government should compensate enterprises for mandated activities to protect their financial viability (para. 3.9).
- (iv) Audits should fully comply with generally accepted accounting principles and should be privatized to the extent possible (para. 3.10).

(b) Boards of Directors

Select board members on the basis of commercial, financial and managerial expertise in related fields, demonstrated integrity, and sound judgment (para. 3.8).

(c) Performance Evaluation

- (i) The performance evaluation system should be reviewed to refine its financial indicators and include others relevant indicators to better measure state enterprise efficiency and achievements (para. 3.16). This will require revising the indicators used for each state enterprise to capture enterprise management as well as structural characteristics (paras. 3.11 to 3.19).
- (ii) SEID staff should visit two or three countries that have introduced performance evaluation systems (para. 3.16).
- (iii) Establish a common computerized system for state enterprise financial projections with adequate details and schedules to produce and consolidate the information required (para. 3.20).
- (iv) Establish incentives to reward the best performing enterprises (para. 3.21).

Chapter 4. Facilitating Privatization

(A) Privatization in Thailand

4.1 Thailand's Sixth (1987-91) and Seventh (1992-96) National Economic and Social Development Plans recognized the importance of private-sector participation and divestiture. This has led the Cabinet to propose increased private participation in state enterprises to achieve five objectives: (a) increase private funding for critical infrastructure investment; (b) reduce government loans and guarantees; (c) reduce government involvement in these activities; (d) increase efficiency, and (e) increase domestic economic welfare. The 15 public utility enterprises have operated relatively efficiently (para. 1.16), and the benefits from private-sector participation and expected partial divestiture would come from greater competition, increased external financing without government guarantees, and reduced government involvement. Privatization of the 24 commercial state enterprises would also clearly signal the Government's intention to leave commercial endeavors entirely to the private sector.

4.2 **On-going privatization.** Privatization efforts in the last decade have reduced the number of state enterprises from about 100 to 63. This includes liquidating small-scale enterprises, partial sale of shares, and private participation in managing and rehabilitating state enterprises. Recent actions include: (a) the merger of Thai Airlines Co. with Thai Airlines International, their commercialization and the sale of 7% of the new company's shares in the stock exchange; (b) privatization of the Laem Chabang Seaport, the Duty Free Shop, and the Limousine Bus of the Airport Authority. The main transactions (partial divestitures) include Telecom Asia (\$475 million), Krung Thai Bank Thai Airlines (\$237 million), National Petrochemical Co. (\$150 million), Bank of Asia (\$91 million), Kung Thai Bank Ltd (\$85 million) and PTT Exploration and Production Petroleum Petrochemicals (\$52 million). Even more important from the private viewpoint have been the awarding of very large concessions to the private sector including: the Bangkok Elevated Road and Transport System joining the Hopewell project to SRT and the Bangkok Transit System Company; the Second Stage Expressway System; 3 million telephone lines, the Elevated Rail System; and several joint-ventures for gas exploration and production, industrial estates and hotels.

4.3 **Future privatization.** The success or failure of a privatization program depends largely on government actions at the central level in choosing the enterprises to be privatized, privatization timing, sales procedures, and in creating a sound and transparent regulatory system. Responding to the Government's request, the Bank has focused most of its comments on the privatization of the 15 public utility state enterprises (Annex 1). These enterprises provide key infrastructure services, have a major impact on the economy, and require substantial capital investments to maintain or expand their services. Therefore, a major concern is to ensure that the privatization program does not create delays in implementing critical programs and investments required by the country.

4.4 Since most public utilities provide satisfactory services, Thailand's privatization strategy should be concerned not just with increased financing, but also with ensuring that privatized enterprises are at least equally, if not more, efficient than under government ownership. This requires a vision of the future for each sector, and reorganizing the enterprises to allow competition and free entry when appropriate. Although the 15 utilities mainly provide monopolistic services, different degrees of competition are still possible.

4.5 **Privatization framework.** The Government should be commended for establishing the privatization program. The program is briefly reviewed below, along with recommended measures to facilitate and strengthen its implementation. These measures would ensure an appropriate climate to maximize private-sector involvement in Thailand, improve the enterprises while still retained by the Government, optimize their performance, ensure that there is no hiatus in infrastructure investments that would affect the competitiveness of the Thai economy, and establish an efficient process toward divestiture.

4.6 **Privatization policies.** The Government's basic policy position in the state enterprise sector is that: (a) government should not engage in activities that can be better managed by the private sector and, thus, should not establish or expand enterprises that compete with the private sector, except for activities related to public interest and national security; (b) state enterprise management should become more market-oriented and accountable, and be given adequate autonomy; (c) enterprises that are not operating efficiently should be restructured and become prime candidates for partial or total divestiture, and (d) private participation should be promoted and expanded — particularly in basic infrastructure services — through investment concessions and joint ventures to reduce the fiscal burden, expand services, ensure operational efficiency, and gradually reduce the size of the public sector. An April 1988 government White Paper provided recommendations for privatizing the 15 public utility enterprises. (see Annex 1).

(B) Enabling Environment

4.7 The key to successful privatization and divestiture is careful planning and good execution. Without good plans and implementing systems, privatization programs become hazardous and slow, and create adverse public opinion. Increases in welfare and efficiency achieved by divestiture depend on present enterprise efficiency, the policies applied, the establishment of a transparent regulatory system, and, most importantly, the structuring of sales and private-sector participation to maximize competition. Without adequate attention to these matters — particularly to establishing an adequate regulatory framework — a private monopoly may be worse than its public equivalent, leading to service deficiencies, excessive rents, and negative public opinion.

4.8 If privatization is to succeed, efforts must be directed toward creating an environment that enables private-sector participation and/or divestiture. The following steps would improve the enabling environment: (a) prepare adequate privatization studies, including the overall strategy for each sector; (b) establish an organizational framework to manage the privatization process; (c) introduce a legal framework for corporatizing state enterprises that removes obstacles to private-sector participation and facilitates divestiture while providing adequate protection to labor and investors; (d) address capital market aspects; (e) prioritize the state enterprises for corporatization and divestiture. These requirements are discussed below.

Privatization Studies

4.9 While several privatization studies have already been undertaken (see Annex 7), there is still a need for a comprehensive analysis of each of the 15 public utility enterprises. It is important that their terms of reference, and at least the draft consultant reports, be reviewed by staff of the SEIC and sector specialists to ensure a consistent approach and make sure that sector-wide strategic issues are addressed.

4.10 Consultancy studies needed include:

- (a) **Common policies studies** to define consistent policies for issues that cut across enterprises, in particular for: (a) overall sector structure (particularly when there is more than one state enterprise in a sector). This study should be included within the privatization study of the main enterprise within each sector, to ensure that the overall sector organization options are properly analyzed; (b) procedures and compensation for transferring staff from government to the private sector; (c) legal structure of the new enterprises; (d) allowable foreign participation; (e) targets for share offerings, and (f) policies for staff purchase of shares in enterprises (including discounts, price guarantees and minimum retention times).
- (b) **Regulatory studies** to recommend regulatory systems for each sector, including organization, regulatory options, financing, appeal mechanisms (see Chapter 5).
- (c) **Privatization studies** for each enterprise should analyze opportunities for divesting or separating non-related operations or selling under utilized properties (particularly land), establishing joint ventures, providing management services, commercializing enterprise units, and developing a road map toward more competitive systems and eventual divestiture. It should also identify the activities and services that could be better performed by private contractors (such as billing, security, cleaning, transportation, and maintenance), and review the potential for the private sector to undertake major projects. These studies should analyze the comparable experience in other countries (Chapter 5).

Organization for Privatization

4.11 Experience in other countries shows that the success of privatization programs is directly related to the strength of government political commitment and the institutional arrangements established for their implementation. Whether the organization responsible for divestiture should be a single centralized body, or come under individual ministries or enterprises largely depends on the number of enterprises, previous privatization experience, and other country-specific factors. The relative importance of privatization objectives may dictate the final mix: a centralized system is preferable to increase accountability and access to higher government levels, and minimize waste and corruption, while decentralized systems maximize speed and take better advantage of self-interest and competition. The common organization setup for countries where large scale divestiture took place — such as Mexico, Chile, Argentina and Malaysia — includes:

- (a) A **policy and decision-making group** to define the scope of the program, provide policy guidelines, approve divestiture proposals, and choose between options (Chile, New Zealand and the Philippines). These groups normally include cabinet members from relevant ministries.
- (b) An **implementation group** to prepare recommendations to the policy and decision-making group and, with the support of ad hoc consultants, carry out feasibility analyses, direct the bidding process, evaluate responses, and provide recommendations for award. This group normally relies on consultant support for key factors such as enterprise valuation, share flotation, and privatization options. The implementation group should be headed by a well known and respected person, who has direct access

to higher political authorities. These groups are generally small, located in the ministries of finance or economy, and have highly qualified staff: the Chilean and Mexican implementation groups each had seven staff, while Malaysia's had 25.

4.12 **The State Enterprise Improvement Committee.** Thailand's general privatization organization seems adequate. Responsibility for the state enterprise improvement and privatization program rests with the recently established SEIC, which is chaired by the Prime Minister and includes representatives of concerned ministries and agencies (budget, finance, NESDB, etc). This gives SEIC adequate authority and the capacity to coordinate and implement the program vis-a-vis extremely large and powerful state enterprises. Both successful privatization and the implementation of the proposed performance evaluation system will require strong leadership, a strong and capable (but not necessarily large) organization, and consultant support.

4.13 The Permanent Secretary of Finance serves as secretary to SEIC and day-to-day implementation of committee decisions rests with the State Enterprise Division in the Office of the Comptroller General. At this preliminary stage of the privatization program this institutional structure is practical, as it demonstrates a high level of political support while avoiding establishing a new large bureaucracy. Staff support is to be provided by related state enterprise divisions at the Ministry of Finance (under the Controller General's Department) and NESDB. This is a logical extension of state enterprise financial monitoring by the ministry and investment oversight by NESDB.

4.14 The State Enterprise Division employs about 50 persons, but is already heavily involved in monitoring other state enterprise operational activities, such as their finances, cash remittances, portfolio management for about 50 Ministry of Finance investments, and issuance and compliance with financial regulations. The division also analyzes the remuneration of the three top positions at each enterprise. Major strengthening will be needed for this division to cope with responsibilities for improving the performance of the enterprises, and even more to coordinate privatization. This group is dominated by accountants, and includes almost no economists, capital market specialists, or labor specialists. While the staff is competent, they have no direct experience with divestiture.

4.15 There are several possible organizational arrangements for facilitating privatization. One option is for the RTG to consider establishing a bureau within the MOF to be responsible for drawing up an agenda for the privatization program and for monitoring the performance of state enterprises. It should have clearly defined functions, powers and duties, adequate funding, and be staffed with high-calibre individuals from the existing State Enterprises Division, relevant sector ministries, and the private sector. It will also need assistance from consultants and external advisors, and a consulting budget. There may be some advantage to establishing two or three divisions within this bureau — one concerned with operational and implementation issues for privatization, another with improving state enterprise performance and monitoring, and a third for supervising current enterprise operations, mainly using staff of the existing division. The head of the bureau should be held in high regard and be knowledgeable in government and state enterprise operations.

4.16 While it may take time to establish a bureau, an immediate State Enterprises Improvement Division (SEID) should be established and staffed with at least two high-level advisers (category 8-9), and at least five category 7 staff to provide adequate expertise at this crucial initial stage. SEID should provide the leadership for the program, particularly for privatization and the proposed Performance Evaluation System.

4.17 For SEID to carry out this process it will require expertise in preparing prospectuses, evaluating bids, and actual sales. It will need well-trained staff, and technical assistance to evaluate proposals and to advise the cabinet committee on the best course of action for the country. It should be highlighted that appropriate divestiture is a complex process, which requires experienced advisors to achieve its proposed benefits. The funds required to prepare proposals for divestiture could come from enterprises being considered for sale, while the funds needed to strengthen the division itself, including subcontracting certain activities or hiring consultants, could come from available grants supporting privatization.

4.18 **Preparing for divestiture.** The major tasks involved in preparing a state enterprise for privatization and the roles of participants are outlined in Table 4.1. The process can take one to two years from the decision to divest. The actual sale of shares could be spread out over a longer period based on the absorptive capacity of the equity market.

Legal Framework

4.19 There are a number of legal issues affecting the Government's plans to promote greater private-sector participation in the state enterprise sector. This section focusses on key macro legal aspects of the Government's plans but is not intended to be exhaustive. Specific legal issues affecting individual enterprises will need to be analyzed in the course of the various state enterprise privatization studies and additional details are provided in Annex 4).

Activity	Local Consult-ant	Ministry	SE	Internal Audit	Local Law Firm	Internat Law Firm	Internat. Consult-ant	Internat Invest. Firm
Physical Plant Assessment			P				L	
Receivables Assessment			P	L				
Supplier Payable Assessment			P	L			P	
Independent review of latest auditors report			P	L				
Changing legal status of carrier/staff	L		P		P	P	P	P
Separation of regulatory functions	L	L			P	P	P	
Determination of shares to be offered	L	L					P	P
Valuation of carrier	P			P			L	P
Descriptive material for bid			P				L	P
Preparation of Invitation to Bid						P	P	L
Briefing for potential bidders	P	P					P	L
Evaluation of bids, selection	L	P				P	P	P
Negotiation with selected bidders	L	P					P	P
Selection of winner(s)	L	P					P	P
Drafting negotiation of license (concession)	L	P			P	P	P	P
Negotiation/finalization of documents					P	P	P	P

L: Lead Organization. P: Participating Organization
Source: Adapted from Booz, Allen & Hamilton 1992.

4.20 **Competition law.** The Government has introduced a draft anti-monopoly law designed to prohibit anti-competitive behavior within the Government, state enterprise and private sectors, and encourage private-sector participation in activities now carried on by state enterprises by removing the monopoly provisions contained in individual state enterprise legislation.

4.21 The draft law does not purport to introduce a general competition regime applicable to all businesses operating in Thailand. Since the draft law does not seek to regulate merger or acquisition activities or control prices, both of which are frequently the subject of competition legislation in other countries, it is questionable if from the perspective of private-sector participation it is appropriate at this stage to introduce such a narrowly focused law. Since competition is a complex problem, it might be preferable to initiate a study on ways to promote and regulate competition in the Thai economy rather than to deal with this important issue on a piecemeal basis.

4.22 The law's implementation provisions are relatively weak. In essence, it is proposed that the Prime Minister monitor anti-competitive behavior. In most developed and developing countries, the approach has been to create a separate authority to oversee competitive activities rather than vest responsibility for such issues in a ministry. However, as the draft law has such limited objectives it may, as a transitional measure, be appropriate for the Office of the Prime Minister to assume this responsibility. In any case, the resolution of this issue will be significantly affected by the approach the Government adopts in relation to regulating public utilities. If, for instance, it is determined that a separate regulatory authority should be established to oversee the telecommunications sector, the regulator should clearly exercise prime responsibility for monitoring competition in that sector. As recommended in Chapter 5, in the longer term, responsibility for regulating competition should be transferred to an independent agency. It is recommended that the Government draw up and approve a highly needed competition law.

4.23 **Procurement and contracting with the private sector.** Contractual relationships between government agencies (other than state enterprises) and the private sector are subject to the 1992 Rules on Procurement of the Office of the Prime Minister. Generally, if a contract between a government agency and the private sector is not in compliance with the standard form of contract set in those rules, the contract has to be approved by the Office of the Attorney General and in case of disagreement the case is submitted to the Cabinet. State enterprises have their own rules on procurement. In addition, in the case of large-scale infrastructure projects, the procurement process is regulated by the Royal Act on Private Participation in State Affairs (B.E. 2535).

4.24 This act sets references to requirements and rules of the Office of the National Economic and Social Development Board (Articles 6, 7 and 9), the Ministry of Finance (Article 7) and other ministries (Article 15). The act seems to involve many government agencies, ministries, and the Cabinet, and creates requirements not stated in the act. These processes might not appear entirely transparent to the private sector or provide a certain outcome. For instance, Article 12 envisages that an invitation for private participation will be issued and also that an agreement will be prepared covering project scope and conditions. However, there does not seem to be any requirement that the agreement be attached to the invitation for private participation. Moreover, it is not clear whether an invitation for private participation should be issued on a competitive basis or otherwise. This is confirmed in Articles 15, 16 and 17, which indicate that a variety of bidding methods could be adopted. Clearly, this would achieve considerable flexibility, but the private sector would have little way of knowing what to expect and might be uncertain as to whether a competitive bidding method would be adopted, and if it were to be adopted, whether it would be carried out fairly. There are no clear criteria as to what processes are to apply, in what circumstances, or how

proposals for private participation in a project would be evaluated. This seems to be left to a qualified consultant to be engaged by the project owner under Article 17. However, Article 17 does not set out any guidelines for consultant terms of reference or evaluation.

4.25 In addition, the committee structures in Articles 13 and 22 may prove to be rather rigid. It is unusual for the composition of project implementation committees to be fixed by law. Indeed, it is unusual for projects to be implemented by committees at all. Normally, it is a matter for individuals with clearly-defined responsibilities and accountabilities to take the project forward. These individuals might seek advice from steering groups or working parties on a regular basis to ensure coordination. They could be subject to oversight by a board of directors or supervisory or policy committee, which would be more likely to be interested in implementing the policy than in the policy itself.

4.26 It is vital that policies not be changed once the private sector has started a project. The provisions of Articles 13 and 22 focus less on the skills and talents needed to implement a project successfully and more on ensuring that the concerns and interests of ministries and governmental bodies are represented and that they have a say in the process. In this way, the law is unusual and looks inwards rather than outward. This is unlikely to facilitate the kind of swift and well-informed decision making that is necessary for implementing large projects. If Thailand is to increase private-sector participation in infrastructure projects, it is recommended that it establish an improved procurement regime that looks outward, gives the private sector confidence, and attracts investments in a stable and certain environment. This will facilitate private financing, provide proper controls and protect the Government from negotiating disadvantages.

4.27 While procurement rules should achieve transparency and certainty, and create enforceable rights and obligations, they should not be overly specific, as this creates excessive legalism. It is recommended that bidding documents clearly spell out:

- (a) project timetables (with the necessary degree of flexibility);
- (b) pre-qualification procedures (with clear objectives as to what the pre-qualification is designed to achieve);
- (c) the information to be given to — and provided by — bidders, and the timetable for bidder responses;
- (d) the contents of requests for proposals or invitations to tender, together with the forms of contract to be attached;
- (e) the basis for evaluating bids and selection criteria (without excessive rigidity) to facilitate comparability and evaluation;
- (f) procedures for obtaining further information from bidders and clarifying bids, (as envisaged in Law B.E. 2535);
- (g) procedures when only one or no bids are received (it may be tempting to allow the state enterprise to act as builder/bidder of last resort, but this may be unwise);

- (h) conduct of negotiations prior to the award to the preferred bidder (to avoid giving unfair negotiating advantage or monopoly position in relation to the state enterprise);
- (i) procedures for award to the preferred bidder;
- (j) requirements for keeping records of the competitive procurement process by the state enterprise and bidders; and
- (k) rules for accepting and awarding bids, publishing signed agreements, and financial closing within a specified time (to avoid a second round of negotiations with the banks).

4.28 It is recommended that the Government fully review procurement procedures and documents for large scale infrastructure projects to establish a competitive procurement system that is internationally acceptable, relatively standardized, and encourages private-sector participation in infrastructure projects.

4.29 **Legal advisors.** Generally the Government has contracted infrastructure projects with the private sector under advice from the Office of the Attorney General and legal and financial advisors in the Ministry of Finance and other concerned ministries. Non-government lawyers or external investment bankers are only hired in rare circumstances. For the last 50 years the Office of the Attorney General has been the exclusive advisor on all government contracts and its lawyers have developed considerable expertise in this area; the Attorney General's staff believes there is no justification for engaging outside lawyers, and that they are not at a disadvantage in negotiating with major foreign law firms and investment advisors. There are occasions, however, where the ability to transfer the risks associated with drafting and negotiating legal contracts to the private sector may be an important factor with benefits that outweigh the cost of external advisors, the need to maintain confidentiality, and the risk of losing the confidence that the Office of the Attorney General enjoys within the Government.

4.30 **Corporatization act.** The need for a general corporatization law appears to be accepted in Thailand. Indeed, a draft law, the State Enterprise Capital Act, seeks to achieve the objective of corporatization. It would enable the capital of each state enterprise to be converted into common shares and a percentage of these shares to be sold to the public. If any part of a state enterprise is established as a company and the Ministry of Finance holds less than 70% of the shares, it would become a limited company under the Companies Act. Upon registration of a former state enterprise or associated company, the legislation establishing that enterprise would be automatically repealed. The act provides that the Cabinet would appoint a State Enterprise Capital Committee (SECC) responsible for transforming state enterprises into private limited companies.

4.31 The SECC would have authority (with Cabinet approval) to transform an enterprise's capital into share capital and to: (a) value the assets, classify the shares and fix the ratio to be retained by the Ministry of Finance; (b) fix the minimum share price, the proportions of shares to be sold to the public and to foreign investors; (c) revise, restrict or cancel (with Cabinet approval) any special rights available to enterprises concerned with public utilities or infrastructure; (d) consider the compulsory purchase of property, and (e) approve the administrative regulations of the privatized companies.

4.32 The qualifications for committee membership, the conditions for early vacation of office and the general composition of the committee mirror those of the existing state enterprises. Other provisions of this draft act include:

- (a) **Sale of shares.** The Government would make a loan to each state enterprise to the extent that its shares remain unsold to third parties;
- (b) **Special rights.** Any special rights pertaining to public utilities or infrastructure would remain in force until specifically repealed;
- (c) **Expropriation.** If companies concerned with public utilities or infrastructure need to acquire property compulsorily, compensation would be paid by the Government, and the property would pass to that company, albeit with possible restrictions on transfer rights;
- (d) **Profits and tax.** The net profit of each company would be available for paying a dividends. The rate of tax payable would generally not exceed that of personal income tax, but the Government could seek higher rates from monopolies or when additional revenue was required;
- (e) **Pricing.** For public utilities in infrastructure and energy in which there was limited competition, prices would have to be approved by the Cabinet unless they were approved by a 75% majority of the SECC.

4.33 The draft Act sets some conditions needed by a general corporatization law, but requires improvements: (a) it needs to define the establishment of a clear regulatory regime for public utilities; (b) the 5% maximum ownership of shares by individuals is low and may be a disincentive to foreign and domestic investors; (c) it should clarify whether foreign investors would be able to obtain representation on the boards of the newly established companies; (d) corporate taxes are unclear, and there is ambiguity regarding repeal of earlier legislation. Section 6 provides that former acts are repealed, but Section 19 maintains the special rights granted to some organizations. It is recommended that the Government review the corporatization law and make it more comprehensive to allow the Government to corporatize enterprises without further parliamentary involvement; a draft corporatization law is presented in Annex 4.

4.34 In practically all cases, the exclusive rights and monopolistic privileges given to state enterprises are obstacles to private-sector participation and divestiture. For example, the legal framework governing telecommunication operations in Thailand is incompatible with the modern structural trends in the industry and needs to be revamped. A detailed analysis of the changes needed is in Annex 6.

Labor and Pension Issues

4.35 **Labor issues.** In some countries the main resistance to privatization has come from state enterprise employees. Their concerns center around the risk of unemployment, lower salaries, and losing entitlements to pension and severance payments — issues that are very important in any substantial divestiture. Employee and trade union opposition to privatization can be significantly reduced if the Government puts in place, ahead of privatization, measures that ensure fair treatment for employees of all state enterprises. A policy that anticipates labor difficulties and provides

appropriate solutions will be critical for increasing private participation. We recommend that the Government identify and resolve such concerns before they become too divisive and intractable. At present, all employees in the state enterprise sector receive one month's salary for each year of service when jobs are terminated. Measures used elsewhere, and recommended, include (a) increasing severance pay (for example to 1.5 months per year of service); (b) guaranteeing retention of employees (as done in Mexico telecoms), which would be easy given the rapidly expanding need for utility services in Thailand; and (c) grandfathering salaries and benefits.

4.36 Overstaffing is not a serious problem in most Thai enterprises, but options to deal with this issue include offering staff jobs with the new firms, or allowing them to continue as civil servants (in Malaysia, employees were given a choice of remaining in civil service positions or joining the new firms), and providing early retirement on favorable pension terms. These options preserve jobs while improving productivity.

4.37 Governments have also provided inducements to labor through offers of equity in privatized firms. The Mexican government sold 4.4% of Telmex stock to employees at preferential prices financed by long-term loans, and Chile offered 6.4% of shares to employees through a scheme involving advance payment of retirement benefits. A further 7.6% of shares was sold to pension funds. The British and Japanese governments had similar schemes. The key to addressing the labor issue is developing an understanding of worker needs. If workers need assurance that they will be able to find new jobs, it is possible to devise innovative solutions to redeploying labor.

4.38 **Pension benefits.** The Ministry of Finance is considering converting the present state enterprise defined-benefit pension plans, which provide lump-sum benefits based on a month's salary for each year of service, into provident funds (Annex 11). Employees could choose to join the new provident funds or remain in current plans. The conversion proposals are consistent with provident funds already set up by Thai Airlines International, Krung Thai Bank, and PTT. Existing benefit entitlements can be met, as existing employees are given an option to remain in the current pension plans.

4.39 While the proposed conversion is reasonable, there are several shortcomings in the operational and funding aspects of the current and proposed retirement systems: the pension liability of each enterprise is unknown, and there has been no actuarial assessment of their pension liabilities. There is also a serious mismatch of assets and liabilities. We recommend:

- (a) Actuarial valuation to determine pension liability, compared with available assets, and appropriate level of contribution, of each enterprise. The financial status of the pension plans disclosed by these valuations will enable the Finance Ministry to make an informed decision on whether to retain the existing system or proceed with conversion.
- (b) Allowing diversified investment portfolios for pension plan assets, including a significant proportion of equity-type investments, consistent with their long-term obligations.
- (c) Keeping pension plan assets independent of state enterprise finances. This will ensure equitable treatment of provident fund assets that are wholly secured independently of employer and the pension plan assets. The concept of "juristic person" can be applied

to the pension plans; beneficial trusts analogous to those used in the mutual fund industry are also suitable.

4.40 If the Ministry of Finance implements its proposed arrangements, the following measures are also recommended:

- (a) Detailed projections of expected benefits, using various financial scenarios and membership profiles, should be carried out to determine the appropriate level of contributions for provident fund members. Projections should be made for employees who remain in the old pension plans, for those joining the provident funds, and for new entrants.
- (b) Having a period of consultation with employee representatives before pension changes are implemented. In due course, an employee communications exercise should be carried out to inform and educate employees on the changes to their pension benefits.

4.41 Apart from the need to perform actuarial valuations, investment objectives and strategies have to be established. These issues should be addressed in the near future. Implementation considerations include establishing appropriate asset allocations, selecting and appointing fund managers, and instituting regular review and monitoring of fund manager investment performance. A controlling body responsible for instituting objectives and implementation is also required.

4.42 **Provident funds industry.** The pension system for the private sector will be applicable to converted state enterprises. The private-sector pension system is governed by the 1987 Provident Fund Act. The main objectives of the act are to promote private-sector provision of retirement benefits and mobilize employee savings.

4.43 There are 708 provident funds covering about 400,000 employees, or about 1% of the active work force in Thailand. Total assets managed by 16 licensed managers amounted to B 21 billion as of September 1993. While provident fund assets have grown about 37-fold since 1984, their size is modest compared to Thailand's stock market capitalization of \$130 billion and the \$6 billion mutual funds industry. There is also a lack of awareness among employees and employers of provident fund issues and the act that regulates the operation of private-sector funds. It is clear that there has been little penetration of provident funds in the work force. There is ample opportunity and potential for further growth in the retirement scheme industry to meet the objectives of closing the current savings gap, and assisting capital market development.

4.44 The issues surrounding establishing and monitoring funded schemes are complex, and will require specialized knowledge of pension matters. Consideration should be given training Finance Ministry personnel involved in pension issues. An external consultant can be retained to provide ongoing advice and training on all aspects of pension matters.

Capital Markets and Divestiture

4.45 The strength of divestiture programs depends on the depth of capital markets. Thailand has one of the most dynamic stock exchanges in Asia. As of December 1992, market capitalization stood at \$130.5 billion compared with \$1.0 billion in 1980. The number of companies listed in the Security Exchange of Thailand rose from 77 in 1980 to 347 in 1993. The volume of trading rose

from an average of \$1.0 million in 1980 to an average of \$500 million in 1993. Capital mobilized by listed companies in 1992 amounted to about \$2 billion compared with \$25 million in 1980. Foreign portfolio investment (both direct and indirect through country funds) has increased substantially since 1986 and amounted to \$2.2 billion in 1993. In that year, the market P/E ratio was 27.5, the Price/Book Value ratio was 4.7, and the dividend yield was 1.5%. The Stock Exchange Index in December 1993 stood at 1605.0. The growth of the Thai stock market is very impressive, given that the stock exchange was formed only in 1974. Its size compares favorably with Korea (\$139 billion), Taiwan (\$195 billion) and Malaysia (\$220 billion).

4.46 The dramatic growth of the Thai stock market is due to several factors, including rapid economic growth during the 1980s, a favorable environment for direct and portfolio foreign investment, a relatively stable political climate for investment, prudent fiscal and monetary policies, and an open economy. Moreover, the future appears bright, as the capital market still has not yet fully realized its potential. At the end of 1993, the ratio of total market capitalization/GNP was over 100%, comparing favorably with developed markets such as the United States, Japan, and Britain. Divestiture of the major state enterprises could provide a further impetus for further capital market growth.

4.47 There is no one single divestiture method that is suitable for all cases (para. 6.22). The proposed divestiture of commercial (particularly small enterprises) could be better achieved by competitive bidding but when labor is a major component of the value added of an enterprise a better method could be the sale of the company to its employees. For large companies the gradual divestiture offer advantages from the viewpoint of popular capitalism (para. 6.30), and to better define the value of shares, and these methods have been used successfully in other Asian countries (Malaysia, Singapore, Philippines). However, for full divestiture, a strategic investor would need to replace the Government to provide the required technical and managerial leadership and control.

4.48 The divestiture of the 24 commercial state enterprises should be the Government's priority (para. 1.5). Most of them could be privatized by competitive processes. Divestiture of the 15 public utility enterprises would both depend on and greatly affect the capital markets in Thailand. For this reason, as well as to increase effectiveness and acquire additional experience, it is recommended that initial efforts be concentrated on the four or five of the 15 enterprises that are most efficient, profitable, and attractive to local and foreign investors. The leading candidates are EGAT, PTT, TOT, and MEA. Based on the combined net worth of these four companies of about B147.0 billion (\$5.9 billion), total market capitalization of these four companies would be roughly B 588.0 billion (\$23.5 billion), or 19% of the capitalization of the stock market. The Thai Airlines issue of 95 million shares in 1992 was offered at 2.9 times book value and at 16 times the P/E ratio based on 1992 projected earnings.

4.49 As the expected market capitalization for these four enterprises is very large, the market may not be able to absorb all these new securities at the same time. However, it should be able to absorb 5-10% of these firms' securities each year with proper preparation of the market and its participants. Furthermore, simultaneous offering of these securities internationally would improve the chances of the offerings and expand the market for Thai securities. American Depository Receipts could also be considered for enterprises, especially TOT, given the strong demand for telecommunications stocks in United States markets. Offering preferred shares and convertible securities should also be considered to attract foreign institutional investors. The Government, in the past, had a clear policy of restricting domestic borrowing by state enterprises to avoid crowding out local borrowing by the Government or the private sector. This further suggests a gradual approach to

privatizing large enterprises such as EGAT, which would require large financing from the private sector and exacerbate the crowding-out problem for smaller private companies unable to borrow from official sources or foreign markets.

4.50 A review of a potential offering of the securities of five companies indicates that, given their operating profitably, they meet the Thai Stock Exchange's listing requirements and should have little difficulty in complying with the disclosure requirements stipulated by the Securities and Exchange Commission. The basic problem is that converting these enterprises into corporate entities under the Public Companies Act requires parliamentary approval in each case; the process could be much speeded by new legislation setting parameters for corporatization and leaving the details to the Government (para. 4.30). Other key corporatization issues include a need for audits by independent auditors in accordance with generally accepted accounting standards (para. 3.10). Once they are converted to public companies and proper audits are carried out, underwriters should handle the offerings. Labor issues also need to be considered in the share offerings (para. 4.35). The case of Thai International Airlines and the Krung Thai Bank, where up to 5% of shares were offered to the employees at par, could be used as models, with some modifications. Such an arrangement appears reasonable, particularly if employees are required to hold the shares for a period of time, say two years. The valuation of these enterprises' underlying assets to reflect prevailing market prices may need to be considered to reflect their true value. Finally, contingent liabilities related to pension obligations would need to be properly reflected. The Government would need to employ consultants to carry out independent valuations of these enterprises.

4.51 A major divestiture would soon test the market. EGAT recently created a subsidiary company, EGCO, to take over a 300 MW power plant in Rayong with a planned expansion to 1200 MW and a total investment of about \$800 million that will be managed by former EGAT staff. With a debt/equity ratio of 3:1, the equity base of EGCO would be about \$250 million. Fifty-one percent of the shares will be offered to the public in late 1994. The experience of the EGCO transaction will be useful for pricing future issues.

4.52 Foreign participation in direct or portfolio investment would increase divestiture yields to government, reduce constraints on the size of one or several simultaneous public offerings, and reduce pressures on local financing for other activities. It would be especially important if substantial shares are offered simultaneously. Direct foreign participation could also bring in technical/managerial know-how. Concern over passing of ownership to foreign operators can often be an issue, and most countries have restrictions on foreign ownership — the United States and Japan limit ownership of shares in telecoms firms to 20%, and many countries restrict land ownership. For countries with developed capital markets and adequate technical expertise, such restrictions may not be an issue. However, where corporate markets are still developing and expertise is needed from foreign operators, involvement of foreign strategic investors seems desirable. Often this is achieved by domestic investors setting partnerships with foreign strategic partners to acquire a controlling interest. Limits on foreign share ownership — now set at 25% — can be used to attract foreign participation without giving controlling interest.

(C) Financing Infrastructure Requirements During the Transition Period

4.53 Capital expenditures by the 15 public utilities rose at an annual average rate of 54% over 1989-93 to B243 billion (\$9.7 billion); they are expected to grow at an annual average rate of 8% to B417 billion (\$16.7 billion) by the year 2000. This massive investment is essential to support the projected growth of the Thai economy during the period. Thus far, the RTG and the state enterprises have been very successful in mobilizing resources from international sources, from both commercial and bilateral entities. Given the magnitude of additional funding that would be required to sustain infrastructure investments and the need for longer term finance, it would be beneficial to

explore other alternatives to reduce reliance on bilateral sources and to diversify the currency mix of borrowings.

4.54 **Infrastructure Development Facility.** One of these options would be an IDF. The concept and operations of an IDF are discussed below and are illustrated in Chart 4.1 on the preceding page. An IDF could expand financing available for capital expenditures for key infrastructure projects for both private- and public-sector enterprises. The IDF could be funded by a part of state enterprise remittances, and domestic and external borrowing, either through sales of its securities or direct borrowing. The IDF would be managed by a fund-management company, the Investment Corporation of Thailand (ICT). The ICT's shares could be owned by Government through the Krung Thai Bank, Industrial Finance Corporation of Thailand, and the Government Savings Bank. Foreign shareholders could include international fund managers with experience in investing in infrastructure projects. Multilateral institutions such as the International Finance Corporation and the Asian Development Bank might also be invited to have minority shareholdings in the ICT. It is likely that this approach will continue to be successful. The RTG should also take full advantage of the availability of long-term resources from several international private infrastructure funds which have been launched recently. In addition, the RTG should also intensify its efforts to build up a domestic bond market. However, given the magnitude of additional funding that would be required to sustain infrastructure investments and the need for longer term finance, it may be beneficial to explore other alternatives to reduce reliance on bilateral sources and to diversify the currency mix of borrowings. These options include creation of (a) a guarantee facility; and (b) an Infrastructure Development Facility. The guarantee facility is not considered desirable by the RTG given its ready access to the capital market.

4.55 The other option would be an IDF. The IDF would be a complementary source for infrastructure financing that state enterprises and private companies could access through loans or other debt instruments at market rates and terms. As equity financing would come from private investors, there would be a need for debt finance to complete the investment for new projects, particularly if the part financed by export credits was minor. The IDF would not replace the existing process of allocating investment for state enterprises, but provide additional resources for the enterprises to complete priority projects within the overall agreed framework for increasing private-sector participation.

4.56 Resources for the IDF could be mobilized from domestic and foreign sources. Domestic sources could consist of government pension funds, the Government Savings Bank, insurance companies, provident funds, and mutual funds. This could also include the additional funds received by MOF as a result of increasing taxes (or remittances) from all state enterprises to 30%. This would be very important in creating a level field for public and private enterprise competition and increased efficiency. The Government might also consider investing a part of government employee pension plan resources in the IDF. This would enable the Government to start funding its pension liabilities without disrupting the domestic market, and ensure financing of required infrastructure at the same time. Foreign sources could include multilateral institutions, international borrowings, and issuance of securities in international or regional markets.

4.57 The IDF would have the added benefit of assisting development of the Thai capital market. Once the IDF had made substantial investments, it should be able to replenish its resources by securitizing its assets, or offering securities of companies it invested in blocks or through a series of mutual funds. The IDF is still a new concept and to date there is no example of a well functioning IDF in either developed or developing countries. Therefore, there is a need to proceed with great care. The design of IDF would need to encompass its legal system, management structure, investment policies, operating guidelines, and funding. The Bank could assist in these areas if the government desired.

THAILAND

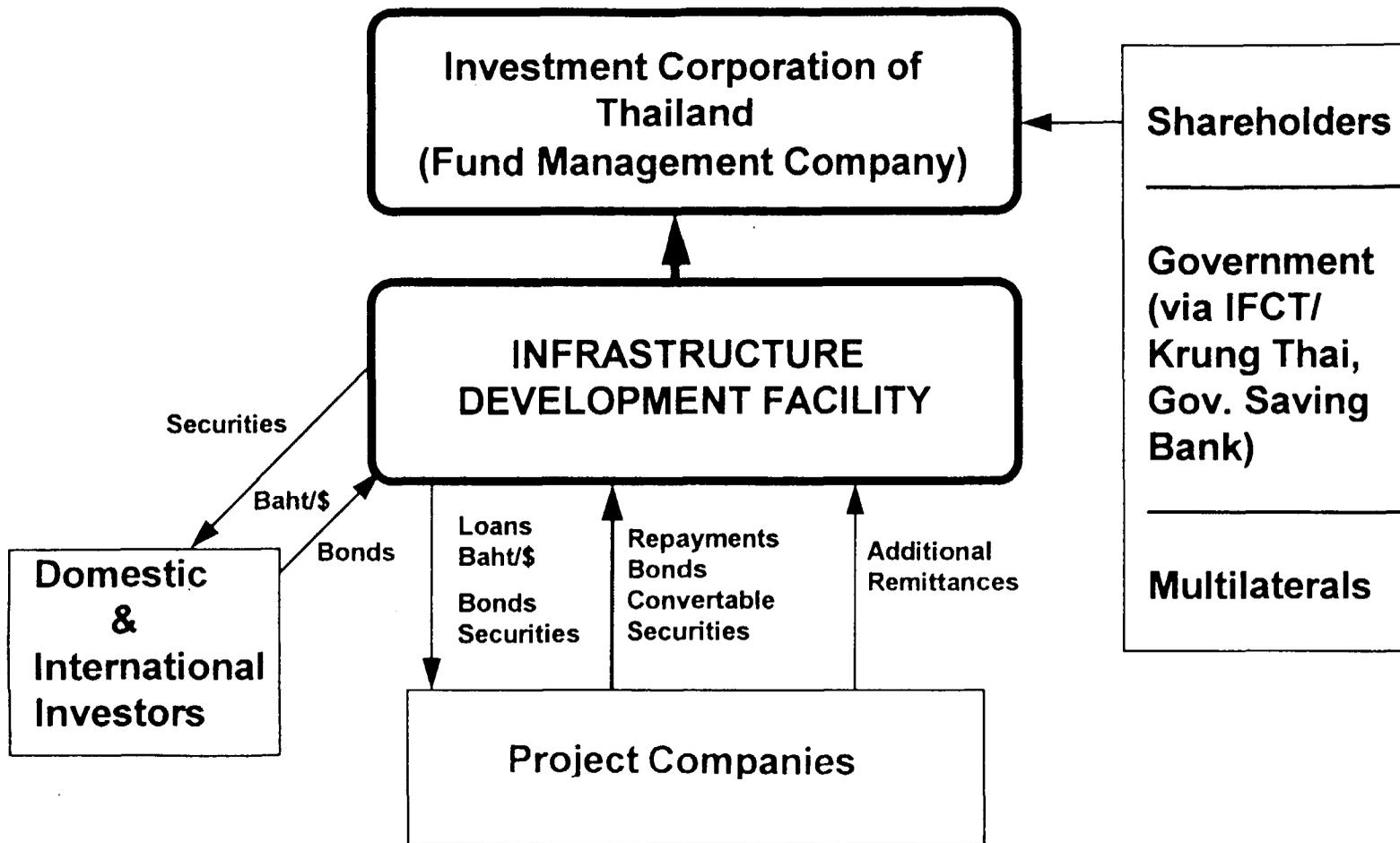


Chart 4.1

(D) Main Recommendations for Facilitating Privatization

(a) Studies

- (i) Undertake a comprehensive study of most of the 15 public utility enterprises to make sure that sector-wide strategic issues are addressed. SEIC and sector specialists should comment on the draft consultants' reports (para. 4.9).
- (ii) Policy studies are needed to define standard privatization policies for all state enterprises, including sector structure, staff policies, legal structure of new enterprises, allowable foreign and staff participation in purchasing enterprise shares (para. 4.10).

(b) Organization

- (i) As one of the options, RTG can consider establishing a bureau in the MOF solely responsible for drawing up an agenda for the privatization program and monitoring state enterprise performance (para. 4.15). The bureau should have clearly defined functions, powers and duties, adequate funding and be staffed with high-calibre individuals from the existing State Enterprises Division, relevant sector ministries and the private sector. In the interim, a State Enterprises Improvement Division should be established and adequately staffed (para. 4.16). It should be recognized that privatization is a complex process, which requires experienced advisors to achieve its proposed benefits. Therefore, assistance will be needed from consultants and external advisors (para. 4.17).
- (ii) Revise and approve the highly needed competition law (para. 4.22).
- (iii) Establish an improved procurement regime to give confidence and facilitate private financing, provide proper controls and protect the Government from negotiating disadvantages (para. 4.26).
- (iv) Review the bidding documents for large scale infrastructure projects to establish competitive, internationally acceptable, and relatively standardized documents and encourage private-sector participation (para. 4.28).
- (v) Review and issue a comprehensive corporatization law, enabling the Government to corporatize individual enterprises without further parliamentary involvement (para. 4.33).
- (vi) Protect Labor by putting in place, ahead of the privatization, measures that ensure fair treatment for employees of all state enterprises including increasing severance pay, guaranteeing retention of employees, and grandfathering salaries and benefits (para. 4.35).

(c) Pensions

- (i) Undertake actuarial valuations to determine pension liability, compared with available assets, and appropriate level of contribution, of each enterprise to enable the Finance Ministry to make an informed decision on whether to retain the existing system or

proceed with conversion. Allowing diversified investment portfolios for pension plan assets, including a significant proportion of equity-type investments, consistent with their long-term obligations. Keeping pension plan assets independent of state enterprise finances to ensure equitable treatment of provident fund assets that are wholly secured independently of employer and the pension plan assets (para. 4.39).

- (ii) If the Ministry of Finance implements its proposed arrangements, it should make detailed projections of expected benefits to determine the appropriate level of contributions for provident fund members. Consideration should be given to a period of consultation with employee representatives before pension changes are implemented, and an employee communications exercise implemented out to inform and educate employees on the changes to their pension benefits (para. 4.40).

(d) Divestiture Targets

- (i) The 24 commercial enterprises are no longer a priority for government ownership, and the Government should sell these firms to the private sector as soon as possible (para. 4.48).
- (ii) The privatization of the large state enterprises considered would take several years, given their size, their importance to all macroeconomic activities and the need to decide in the best sectoral structure and establish adequate regulation (Chapter 5) prior to their divestiture. Therefore, the priority should be in completing adequate studies and concentrating initial divestiture efforts on those four or five state enterprises (EGAT, PTT, TOT, MEA and PEA), which are more profitable and attractive to local and foreign investors (para. 4.48) and employ consultants to carry out their independent valuation (para. 4.50).
- (iii) The Government should consider a dilution and divestment of PTT's shares in its 13 subsidiary companies, particularly those which are not in its core areas of operations (such as fertilizer and chemical companies) over a period of time.

(e) Infrastructure Development Facility

The Government should consider creating an Infrastructure Development Facility capitalized by state enterprise remittances, and domestic and external borrowing that enterprises could access through loans at market rates and terms, or issuing convertible bonds (paras. 4.54 to 4.57).

Chapter 5. Regulatory Framework

(A) Regulation: An Overview

5.1 **Regulation.** Regulation means direct or indirect government monitoring and control of the prices, quality of service, and operating and investment decisions of a private or government-owned enterprise. Regulation can be made effective in many ways, but it usually takes the form of controlling enterprise structure, conduct, performance, or a combination of all three. This chapter presents summary recommendations for a regulatory system in Thailand; a more comprehensive approach is presented in Annex 13. The principal objectives of a regulatory regime are monitoring, control, transparency, and certainty. Monitoring can often be as effective as direct control of an industry by government or a regulatory authority.

5.2 Privatization does not automatically guarantee competition. Good competitive markets need to be created and nurtured. Regulation gives regulated enterprises the freedom — and the responsibility — to make their own commercial decisions within a framework of clear, certain, and transparent rules. It benefits government by achieving better and more informed decision making, improved performance, greater efficiency and accountability, and better use of scarce resources. This results in better-performing and more efficient industries than inflexible control by direct and often uncoordinated government intervention. It can also serve as a mechanism for obtaining the information governments need for strategic planning and policy-making.

5.3 **Extent of regulation.** The art of regulation is to know when to regulate and when not to regulate. Its success depends also on a systematic approach that clearly defines an apex organization — usually an independent commission — that is responsible for and coordinates all regulatory actions. Canada's Ontario Province began establishing a regulatory system by asking a set of key questions:

- (a) What is the public policy or abuse that renders regulation necessary for the benefit of the public?
- (b) Can that purpose be accomplished with the proposed regulation or any part of it?
- (c) Are there any provisions that duplicate existing provisions that are applicable and sufficient?
- (d) Are there any provisions that are more detailed or more narrowly focused than necessary to accomplish the main purpose or, in other words, can a proposed regulation be "thinned out" and remain sufficient and adequate to achieve the required goal?

5.4 This raises a related point. Regulators cannot accomplish the impossible. If basic industry structure is unworkable because of conflicting economic incentives, regulation will not be able to correct for the underlying problems. No matter how intelligent or hardworking the regulators may be, they will be unsuccessful in achieving desired outcomes. A regulator can issue a multitude of rules but its rules will be ignored unless private companies have economic incentives to comply.

5.5 There are limited precedents for fully independent regulatory authorities in Thailand. The main ones are the Auditor General and the Bank of Thailand, which operate largely outside the direct influence of political officials and are highly regarded for their independence and performance. Other regulatory functions have been carried out by ministries or state enterprises themselves. The Thai government's 7th Five-Year Economic and Social Development Plan recognizes the need for regulation and lifting the burden of red tape obstructing state enterprise activities, noting that the present "public administrative system lacks flexibility and is governed by a myriad of rules, regulations and restrictions."^{12/}

5.6 The Plan recommends establishing improved regulatory systems by "amend[ing] relevant laws, rules and regulations for supervision of state enterprises to promote greater flexibility for state enterprises" (Section 5.1.3), and proposes to "revise rules, regulations, criteria, restrictions and reduce unnecessary steps of the Government to support flexibility and speed in consideration of projects and to be conducive to a more business oriented approach in the provision of services, as well as set up and efficient monitoring and evaluation system" (Section 3.1.2 (2)). It calls for establishing "a permanent body which is independent from political intervention to supervise and determine price levels for each type of infrastructure services to reflect actual production costs in order to encourage an efficient use of services and to be fair to both the suppliers and users of services" (3.1.4 (1)).

5.7 **World Bank framework for regulation.** The Bank recommends setting six basic elements to achieve transparent and consistent regulatory decision making: (a) a clear set of rules, known in advance; (b) rules actually enforced; (c) mechanisms to ensure application of the rules; (d) conflict resolution through binding decisions of an independent judicial body or arbitration; (e) known procedures for amending the rules when they no longer serve their purpose, and (f) a framework of regulatory incentives to support competition and induce efficiency. A detailed regulatory framework is explained below and applied to the infrastructure sectors.

(B) The Need for Regulation

5.8 Regulation is essential for both consumers and suppliers of monopolistic services, particularly infrastructure. No regulation is required when there is adequate competition, which is the case for all commercial products, since market forces would bring an equilibrium between supply and demand; however, even in these cases, there is a need to protect the consumers with adequate anti-monopolistic laws. Regulatory systems provide a more effective alternative to direct government ownership or control in inherently monopolistic sectors — such as power transmission or water supply — and industries — such as transport or communications services — in which public service and macroeconomic or strategic objectives often conflict with short-term goals of profit-focused private firms. The systems need to be able to adapt to external changes and reconcile potentially competing interests of consumers, investors, and government in regulated enterprises.

5.9 **Monopoly.** The need for regulation arises where the structure or nature of an industry or enterprise is such that it has the features of a monopoly. Regulation should ensure that enterprises

^{12/} Seventh Economic and Social Development Plan, Section 3.2.2 (1).

are properly managed, set fair prices, and prevent the use of monopoly^{13/} power to the detriment of consumers. Utility industries providing gas, electricity, water, telecommunications and, to a certain extent, transport are natural monopolies, primarily because of their infrastructure requirements. New networks are expensive to build and this can be a barrier to competition and deter new market entrants. Industrial monopolies, particularly in essential industries with relatively inelastic consumer demand, inevitably give rise to cost inefficiencies and high prices. Regulation is needed to protect consumers and encourage efficiency while preserving the monopoly's economies of scale.

5.10 Privatization alone cannot ensure efficiency or that the interests of consumers are protected. Private monopolies can perform as poorly as public companies. Indeed, one of the reasons why countries placed some industries in the public sector was unsatisfactory performance in terms of quality of service or price in private hands. Accordingly, it is necessary to regulate industries in both the public and the private sectors.

5.11 One of the main reasons for private and public industries failing to perform in a cost-efficient, consumer-oriented manner is lack of competition. Competition, is, however, no panacea, and where essential industries are concerned, prudent governments will always have other objectives, including social policy objectives, in mind. Competition is, however, generally recognized as the best means of ensuring minimized costs, lowest prices, and the best quality of service.

5.12 In some industries effective competition is not possible and creating it artificially would reduce economic efficiency from economies of scale or require sub-optimal use of installed capacity. One of the principal aims of regulation is to replicate the benefits of a competitive market structure in industries in natural monopolies. The best regulation will introduce into a monopoly the economic incentives that characterize a naturally competitive industry.

5.13 **Consumer protection.** Consumers do not simply need protection from monopoly abuse. They also need certainty that services will be provided to them at prices they can afford, and that service quality will be maintained. Investment in infrastructure must be encouraged to ensure that service can be offered and that its quality does not deteriorate.

5.14 **Investor protection.** Regulation is also useful in protecting the interests of investors by preventing direct or indirect expropriation of investment capital. If regulation is independent of government, it can act as a buffer against interference in investment and pricing decisions. This buffer function is particularly important, as government objectives may act as a disincentive to investment and, indeed, may not even be in consumer interest. Similarly, governments, for political or social reasons, may wish artificially to deflate prices to the detriment of investors. Investor security is especially important in countries such as Thailand with limited histories of private participation in such sectors as power: private investors must be convinced that the Government, acting directly or through a regulatory commission, will protect their investments and will not use

^{13/} A monopoly is a natural monopoly when production by a single entity represents the least cost way of producing any level of output and production for this market. See Richard Schmalensee, *The Control of Monopolies*, Lexington Books, D.C. Heath and Company, 1979, p.2. Not all monopolies are natural. For example, a company may persuade government authorities to grant it a legal monopoly so that it has the exclusive right to sell a commodity or service in a particular area. If this geographic market is large enough to support sales by other firms, then the Government's decision to grant an exclusive franchise to this one firm will probably hurt consumers. It is a mistake to create a legal monopoly where there is no natural monopoly. Similar arguments apply to oligopolistic markets dominated by a small number of producers able to exploit or abuse their dominant positions.

regulation as a direct or indirect mechanism for "administrative expropriation." Since Thailand is competing against many other countries for limited amounts of international private capital^{14/}, investors with doubts about the safety of investments will either require very high returns, or not invest. The only way for Thailand to be successful in attracting capital at a reasonable price is to establish a regulatory regime that reduces these risks.

5.15 **Government requirements.** Governments need regulation to ensure that essential industries operate efficiently and optimize the resources available to them in line with broader policy objectives ranging from social policy to environmental protection. Regulation can be used not only to monitor and control, but also to obtain the information that government needs to undertake essential or strategic planning and policy making.

5.16 **Enterprise requirements.** Regulation shields enterprises from political interference from governmental bodies and unforeseen changes in policy. Enterprises want maximum flexibility to operate in their commercial and increasingly competitive environments and are keen to see regulatory certainty, transparency and consistent decision making that facilitates well-informed business and investment decisions. The management and staff of state enterprises will be motivated and stimulated in their working environments by being responsible and accountable for the decisions they take.

5.17 The financial and other resources of private and state enterprises are limited. A well-designed regulatory regime allows regulated enterprises to plan for the future and make best use of their resources. The private sector needs a great deal of certainty and protection against unforeseeable changes: a stable and predictable regulatory regime is a necessary precursor to private-sector participation and privatization.

Regulation and Privatization

5.18 The establishment of a transparent and sound regulatory framework is indispensable for effective privatization of monopolistic state enterprises. Experience in many countries confirms the importance of putting a sound regulatory framework in place before transferring monopolistic state enterprises to private ownership. Unless the private sector is confident that fares and tariffs will be fairly established, its involvement is likely to be limited. Most state enterprises can benefit, even while under state ownership, from clear rules for fixing prices and responsibilities. Most Thai state enterprises now receive instructions from sector ministries, particularly with regard to standards of operation and service charges. Regulatory systems should be established as soon as possible to define clear rules for financial performance, provide practical experience to the staff responsible for their implementation, and provide assurance to the private sector that the regulatory system is sound, which, in turn, will increase sales proceeds to the Government. The establishment of automatic tariff increase mechanisms, as recently done for several state enterprises, including EGAT, MEA, and PEA is also a good mechanism to define prices, even if a full regulatory system is not established.

5.19 Adequate regulation requires a general legal and commercial framework that provides essential preconditions for private investment and ownership. This legal framework defines the

^{14/} The Standard and Poor Company in New York recently issued a report that provides many useful insights into the requirements and expectations of private institutional investors who are contemplating power sector investments. See Standard & Poor's Credit Review, October 4, 1993.

treatment of property rights^{15/} and the general rules of the game for the entire economy; it is critical to competing successfully for private capital at a reasonable price. Thailand plans to enact an anti-monopoly law that would complement its already satisfactory legal framework, which includes protection from expropriation, arbitration of commercial disputes, and respect for contract agreements. These issues are critical for new contracts with the private sector, and for privatizing state enterprises, whose financial viability depends on honoring their contracts and pricing agreements.

5.20 Given the general legal framework, regulation provides a special set of rules that apply uniquely to one economic sector or activity. It is important that the regulatory framework be in place before there is significant privatization in a sector. Uncertainty reduces the attractiveness — and prices — of state enterprise assets or shares, and raises the prices of BOT contractors, who seek high returns to compensate for the uncertainties and risks.^{16/} There will be direct financial benefits to the Thai economy from establishing a proper regulatory system before increasing private-sector participation and privatization.

5.21 **Regulatory goals.** The regulatory system for the public and private sectors should: (a) allow as much competition as possible; (b) be transparent; (c) be as simple as possible; (d) apply the same principles and methods to all monopolistic former state enterprises; (e) remain at arms length from government; (f) provide adequate appeal mechanisms for disputes; and (g) allow adequate participation by the public. In countries such as Malaysia, a single consultant company prepared the detailed regulatory framework for all public enterprises (water, power, telecommunications, post) to ensure a consistent approach and lower costs. It is recommended that the Government commission a general regulatory study to ensure overall consistency of approach and compatibility with the Government's macroeconomic, social, financial and institutional objectives.

5.22 Regulation is not costless. There is the obvious direct cost of the regulatory commission's budget. The indirect costs are even more important. **Whenever an economic enterprise is regulated, its economic behavior is changed, distorted, or delayed.** Once a government begins to regulate, it will be tempted to regulate too much, without considering the additional costs and inefficiencies created by hidden regulatory activities. The regulatory system should minimize the costs and distortions associated with regulation, and only establish regulation to the extent that expected benefits exceed costs.

5.23 Government regulatory goals should be strategic and take into account desired medium- and long-term markets and service levels. Regulatory goals are recommended to ensure that: (a) all reasonable demand for service from regulated utilities are met; (b) the price and quality-of-service interests of consumers are protected; (c) enterprise economic efficiency is maximized while direct government intervention in operating or investment decisions company is minimized, and (d) investor interests are protected by encouraging cost efficiency, reasonable return on capital, and preventing expropriation of investment.

^{15/} This distinction is based on a discussion in Anthony Churchill, *Energy Financing: An Institutional Challenge*, World Bank, November 1993. Mr. Churchill is the Principal Advisor for Finance and Private-sector Development at the World Bank.

^{16/} For example, a country is likely to pay higher rates for private power if it acquires the power through one-on-one negotiations with individual developers. Most private power developers do not like competition. A country's state enterprise will be taken advantage of if they purchase on a BOO and BOT without the benefit of competing offers.

5.24 Transparency of accounts and charging can go a long way toward achieving many of these goals. This requires the separation of accounts (for example between water and sewerage or long-distance and mail expenditures). Where competition is being introduced into one segment of an industry, such as downstream gas supply, while a vertically integrated utility continues to provide both gas supply and transport, the need for transparency is particularly acute. In such circumstances, it is only through transparency that potential investors can be assured of a level playing field with the integrated utility.

5.25 Transparency in charging is also essential to ensure that competition is fair. For example, where competing generators seek connection to a transmission or grid system, it will be important for them to be satisfied that they are being offered the same terms and conditions as their competitors. If there is a requirement that all consumers be offered services from a regulated enterprise on a non-discriminatory basis, transparency will be a prerequisite for achieving this.

(C) Regulatory Approaches

5.26 **Regulation goals.** Just as privatization can produce good or bad outcomes, so can regulation. At its worst, regulation can blunt incentives for efficient operation, lead to overcapitalization, and waste resources and time on slow, overly legalistic administrative processes. If regulation is to be successful, considerable attention must be paid to deciding when and how to regulate. The long term goals of regulation in each sector should be: (a) economic efficiency in operations, investment, and pricing; (b) assuring secure and reliable supplies to users, and (c) minimizing government financial involvement directly through loans or indirectly through guarantees. Regulation can achieve these goals by: (a) encouraging fair, open and orderly competition; (b) minimizing direct and indirect government interference in investment and operating decisions, and (c) developing incentive mechanisms where competition is not feasible.

5.27 Industry structure — especially the degree of **competition** — is the most important determinant of the kind of regulation that is appropriate. As Charles Stallon, a former Commissioner of the U.S. Federal Energy Regulatory Commission says "competition is not a state of nature - it needs rules and the power of government to protect it." While competition is far from a panacea, particularly in essential industries, if customers already have even a limited choice of suppliers the need for price regulation, at least, is reduced.

5.28 Other important issues and considerations in formulating a regulatory regime for an industry are: (a) whether new competition is going to be introduced or monopoly power retained; (b) what sorts of market mechanisms are going to be used in the competitive sectors; (c) the extent to which the industry is vertically or horizontally integrated (in a vertically integrated business there is more scope for hidden inefficiencies, such as cross-subsidies between the different businesses of utility^{17/}), and (d) ease of entry and exit into the industry: high entry barriers increase the scope for monopoly abuse through such practices as predatory pricing.

^{17/} Cross subsidies complicate regulation and can become an obstacle to privatization. Their principal disadvantage is the distortion created in investment and operating decisions throughout the economy. Although cross subsidies are common in electricity tariffs throughout the world, there are not an appropriate goal for regulation. Given Thailand's laudable priorities for income redistribution and universal access to basic services, a better approach would be to give subsidies in an open and transparent way rather than hiding them in the differential rates that EGAT charges to MEA and PEA. For a discussion of different ways to give subsidies for rural customers, see Gerald Foley, "Rural Electrification, The Institutional Dimension," *Utilities Policies*, October, 1992, p. 283-289.

(D) Types of Regulation

5.29 The main duties of the regulator would be to: (a) ensure that all reasonable services are provided; (b) establish the rights and responsibilities of the licenses; (c) secure that licensees are able to finance the services that they are expected to carry out; (d) promote that the services provided are efficient and economic; (e) promote competition when feasible; (f) protect the interest of the consumers and (g) control the implementation of safety standards.

5.30 Sector regulation can control structure, conduct, and performance. Privatization provides governments with a unique opportunity to change the structure of an industry and a bad choice may not be reversible. Once an industry model is approved, all regulation will take place within the constraints of that model.

5.31 **Structural regulation.** An industry's structure is defined by several characteristics: the number of public and private entities allowed to operate, their vertical and horizontal integration, the provision for competition or exclusive franchises, service obligations, and entry and exit rules. Industry structure is the single most important determinant of the appropriate kind of regulation. A useful regulatory approach for one industrial structure may be unnecessary or even counterproductive for another. For example, it may make sense to regulate the rates that MEA and PEA charge their industrial customers if these customers have no other potential suppliers. However, this sort of regulation would be unnecessary if Thai industrial customers were supplied directly by independent power producers, as in England and Norway.

5.32 **Conduct regulation.** Conduct regulation is the review and control of operating and investment decisions of regulated companies. It can be done *ex ante* (for example, by requiring approval of contracts before they are signed) or *ex post* (requiring approval for recovering expenses after a contract is finished^{18/}). Conduct regulation is based on a lack of trust in firms, and there is a danger that it will result in micromanaging and shadow management by the regulator.

5.33 Conduct regulation is the worst kind of regulation. If a regulatory commission finds itself engaged in substantial conduct regulation, it means regulated firms lack economic incentives to act correctly. Regulator reviews of conduct are likely to fail if the industry structure does not provide good economic incentives. As one former U.S. regulator observed: "If you find yourself spending most of your time chasing after bad conduct, then you better go to the President or Congress and tell them they better do something about the industry structure."

5.34 **Performance regulation.** Performance regulation is based on setting one or multiple targets for firms. The concepts, systems, incentives and indicators are common with the performance evaluation discussed in para. 3.16. They can include rates of return on equity (U.S. cost-of-service regulation) or price increase (British price cap regulation). Benchmark performance competition could be particularly important for sectors where there is no competition (water, power distribution, and transmission systems). Although international indicators are taken for reference, the particular conditions of such systems could be very different due to service densities, income of the population, per capita consumption, previous factors (old, leaking pipelines), salary levels, use of

^{18/} In the United States, privately owned electric utilities had more than \$10 billion of capital costs of nuclear generating costs "disallowed" by various state regulatory commissions during the 1980s. This means that the utilities were not allowed to recover these costs in the rates that they charged their customers.

technology (automatic controls, computerized metering), differences in collecting systems etc. The setting of benchmarks is, therefore, facilitated by comparing companies within the same country (although regional differences would still be important). This would justify separating the water systems or dividing PEA or MEA.

(E) Basic Decisions on Regulation

5.35 In all cases the Government should retain responsibility for wider policy objectives while the regulator oversees compliance and operational performance, but should not interfere in the micro-management of the regulated enterprises. Several basic issues have to be decided in setting up a regulatory mechanism for a sector. Among the most important are: (a) the structure of regulation itself: should regulation be carried out by existing government bodies, multi-member commissions, or individual regulators (para. 5.43); (b) What dispositions should be included in the law creating the new commission? (c) What activities should be regulated? What are the control mechanisms? For several of these questions we offer preliminary recommendations, which, as explained above, depend on the sector structure approved.

5.36 **Regulatory independence.** No regulator or regulatory commission can be totally independent of political considerations. Nor should it be: It is the function of any government to establish broad national political and economic goals, including those relating to essential industries. The issue, then, is a question of degree: Once a regulatory structure is in place and broad policy goals have been established, these goals are more likely to be achieved if government restrains itself from getting heavily involved in investment and operating decisions.

5.37 **Regulatory structure.** There are three basic regulatory structures:

- (a) leave regulatory responsibilities dispersed within ministries and agencies^{19/};
- (b) create separate regulatory divisions within those bodies;
- (c) create independent regulatory bodies separate from existing government ministries and other governmental bodies or authorities.

5.38 The danger of using government bodies to regulate industries lies in their potential for political manipulation. Regulation and private-sector investment will not be successful unless they can be protected from political pressures. Regulation by government departments also frequently leads to overlapping and confusing responsibilities. Thailand's Seventh Plan, for example, (Chapter 6, Section 3.3.2 (2)) seems to give primary responsibility for electricity to the National Energy Planning Office (NEPO) by recommending that it be upgraded to a permanent department within the Office of the Prime Minister — and at the same time assigns a "regulatory role" to the National Energy Administration within the Ministry of Science, Technology and Energy. Adding to the confusion, EGAT's investment plans require approval by several departments within the Ministry of Finance. Simplicity and certainty of regulation are essential to a successful regulatory regime; these are best achieved by independent bodies with clearly defined responsibilities.

^{19/} New Zealand's system has no separate regulatory entity inside or outside of an existing government ministry. This is the approach that has been taken in New Zealand. The New Zealand government has decided that the right to file complaints with the existing monopoly commission will be adequate to restrain monopoly behavior. It is too early to assess whether this "backstop" approach will work.

5.39 It is recommended that the Government establish independent regulatory mechanisms outside existing ministries and agencies as the solution most likely to avoid micro-managing the investment and operating decisions of state enterprises. Thailand has a long and commendable tradition of not interfering in the day-to-day decisions of the main state enterprises, which has been a factor in the good performance of most state enterprises. The creation of an independent regulator or regulatory commission would institutionalize this tradition of minimal political interference.

5.40 Independence in regulation is a careful balancing act in itself. Independence may be achieved by: (a) setting out clearly the powers and duties of the regulator or regulatory commission in legislation; (b) appointing regulators or commission members for fixed terms, during which they may only be removed in limited circumstances, such as incapacity or misbehavior; (c) giving regulators financial autonomy; and (d) permanently prohibiting regulators from working for the companies they regulate. To foster the independence of the regulator, its cost can be financed by a given and normally very small percentage on the revenues of the regulated companies.

5.41 Regulators should be free from political interference (in a similar fashion to the judiciary, whose independence is enshrined in the Thai Constitution). Independence can often be promoted by appointing senior or retired businessmen or academics rather than career bureaucrats, since they will be less dependent on the appointers. Where a commission rather than a single regulator is chosen, staggering the terms of commissioners can give continuity and a broader political blend, as appointments will span governments.

5.42 **Accountability and transparency.** The regulator should be accountable to government for performance of his duties. Achieving accountability is difficult without creating a situation where regulators are directly answerable to the appointing minister or government. A reporting requirement in the form of a published annual report can be a first step. It is recommended to achieve regulatory transparency by: (a) imposing time limits on regulatory decision-making; (b) requiring regulators to consult with affected interests, consumer groups, and government bodies; (c) requiring regulators to give reasons for their decisions, and (d) requiring regulators to publish their agendas, planned deliberations, activities or issues that are to be addressed. Regulators often resist transparency on the basis that they do not want to have their authority undermined by being proven wrong.

(F) A Single Regulator or a Regulatory Commission?

5.43 A new regulatory regime must tackle the issue of whether to have a single regulator (the British model) or a regulatory commission (as in the United States). The benefits and drawbacks of single regulators are:

- (a) decisions can usually be made more quickly than by committee; on the other hand, a single regulator may be more subject to political influence and may have a strong interest in securing tenure of office, and to a "cult of personality". Moreover, the regulator may lack of expertise in key areas.
- (b) Transparency and accountability are more likely with a single regulator, as committee structures tend to mask accountability. Committees are also more likely to have conflicting motivations and political affiliations.
- (c) There are inherent risks in a single individual controlling the fate of an industry; the effectiveness of the regulatory regime will be at the mercy of the personality,

preoccupations and interests of the regulator and there may be substantial lack of continuity.

5.44 Commissions are less subject to political interference, particularly if their terms are staggered. Their members can — and should — have different backgrounds (accountancy, engineering, economics and law) to broaden and deepen the intellectual input into regulatory decision-making. It is recommended that Thailand establish regulatory commissions, a form that would also seem more attuned to Thailand's tradition of committee style, multi-disciplinary decision-making. Another advantage of a commission is that there is safety in numbers: the danger of manipulation by special interest groups, regulated enterprises, or the Government is lessened when more than one person is involved.

5.45 Commissions also have some disadvantages. Accountability is reduced by being spread among more people, and the committee structure raises the likelihood of conflict, delays, and compromise in decision-making.

5.46 An important question is whether it is better to have one regulator or regulatory commission for all related industries or individual commissions for each industry. The main issues are: (a) given the different natures, needs and stages of development of each industry, is it possible to apply common regulatory rules and methodology to each sector; (b) whether it is desirable to place so much power in the hands of one regulator or regulatory commission; (c) whether a single regulator or regulatory commission for all sectors can have sufficient knowledge of each sector, and (d) the extent to which it is important to avoid inconsistency in decision-making between sectors.

5.47 State-level utility commissioners in the United States often regulate more than one sector and, on the whole, the experience has been satisfactory. Perhaps the reason for this is that all sectors are at a mature stage of development and share a common regulatory methodology. At the federal level, commissions are more specialized. In view of the interstate nature of regulation and the national perspective, a cross-sectoral approach would probably be too cumbersome and bureaucratic.

5.48 There are clear advantages for regulating all energy, or all transport industries, together to achieve coordinated policies and optimize the use of resources. There are also advantages in cross-fertilization of ideas and regulatory solutions from one sector to another, as some of the needs and goals of the regulatory regimes will be similar. Good internal organization can provide sufficient knowledge of each sector. The danger in cross-sectoral regulation is assuming that a common regulatory methodology or a particular regulatory solution applies to more than one sector when there are good reasons for different treatments, methodologies, or solutions.

5.49 In Thailand, given the very different stages of development and needs of each sector, there is no justification for establishing a regulatory commission that deals with all sectors. One way of achieving consistency would be to begin with a single regulatory commission capable of being extended from, for example, telecommunications (where the need for a regulatory regime is already evident) to electricity (where the need is clear, but a structure must be determined) and then to gas, transport and water. The alternative would be to develop a model for a commission, then replicate it as the need arises to introduce regulation into a other sectors. Ultimately there could be separate telecommunications, water and sewerage, energy, and transport commissions. The United States (at the federal level), Britain, Malaysia and Argentina have adopted this sector-by-sector approach. This approach can, however, give rise to political problems in that it may appear to the state enterprises

and their staff or trade unions that the Government has singled them out for special treatment in a run up to privatization, even though privatization may not be planned in the short-term. For the electricity sector, regulatory commissions with three to five members exist in many developed countries and some developed countries which previously have substantial private sector participation (Philippines). Regulatory commissions have been established under recent sector reorganizations in Mexico, Argentina and now Colombia.

5.50 **Commission organization.** The optimum number of commissioners should be small and odd, usually three to five; even numbers can create deadlocks that delay or prevent decisions. Giving a chairman a second or casting vote to deal with deadlocks is often seen as vesting too much power in one person. A larger number of commissioners makes make the decision process long and unnecessarily bureaucratic; large numbers also tend to create factions and entrenched positions.

5.51 The main concern in designing commissions is to ensure that decision-making is informed by the best specialist knowledge of the enterprise or sector in question and that there is also cross-fertilization with ideas from specialists and generalists in other sectors. To achieve the ideal balance of specialist and generalists knowledge in decision- and policy-making, it is better to establish a simple and flexible structure rather than one that involves many working groups and committees where reporting lines and accountability can become unclear.

5.52 **Appointing the right people.** The key to good regulation, as with everything else, is the appointment of the right people with the best available background experience. Commissioners' terms should be staggered to provide institutional memory, and stability and consistency in the decision-making process so that the Government, regulated enterprises, consumers, investors, and potential private-sector lenders and investors in infrastructure projects in Thailand can have confidence that their interests are being balanced and the regulatory risk is minimized.

5.53 At the beginning there will, inevitably, be a shortage of trained manpower for regulatory positions. Part of the problem can be overcome by setting out clear powers and duties in the legislative framework for the regulatory regime, so that it is clear what the tasks and priorities are. It would also be helpful, in the initial stages, to enlist the help of experienced international regulators or regulatory consultants.

5.54 We recommend that the Thai government give immediate consideration to drafting regulatory laws for each sector establishing regulatory commissions and defining:

- (a) **The sectoral jurisdiction of each commission, and division of responsibility between the regulatory commission and the rest of the Government.** Ultimate policy responsibility for each sector should rest at the ministerial level. For example, in the power sector, this includes fuel policies, trade and interconnection decisions, and general energy policies. The regulatory commission would be responsible maintaining fair and open competition, price setting, technical standards, quality of service, and customer complaints. This would require defining how regulatory rules are to be distributed between primary legislation, secondary legislation, licenses, concessions and regulatory commission decisions.
- (b) **The number of commissioners.** Commissioners should come from different educational backgrounds (sector, engineering, accounting, law and economics). It is also advantageous to establish overlapping terms, so not all commissioners leave at the

same time. Some of the best commissioners in the United States are on leave from universities, or recently retired. They bring two advantages: relevant knowledge and experience rather than just political connections, and the likelihood that their decisions will be impartial and in the national interest because they are less vulnerable to political and career pressures. At the same time, it should be pointed out that such individuals make many politicians nervous because they are less susceptible to being controlled.

- (c) **The relationship between the regulatory, administrative, competition, and commercial laws, and the rights of companies or consumers to appeal commission decisions.**

(G) Regulatory Control Mechanisms

5.55 Four main mechanisms are available for controlling the performance of a regulated monopoly enterprise. They are: cost-of-service, price cap, yardstick and performance contract regulation.^{20/} We will focus on cost-of-service and price cap regulation, since they are more commonly used and better documented. However, we recommend examining the use of yardstick^{21/} for the power distribution companies.

5.56 **Cost-of-service regulation.** Cost-of-service regulation is the dominant mode for regulating privately owned electric utilities in the United States and is frequently used for revenue covenants in World Bank projects. The regulatory agency sets the company's overall revenue requirements equal to operating expenses, capital costs, and an allowed rate of return on invested capital. Costs may be keyed to historic or to revalued costs. Once an overall cost or revenue level is set, it is then allocated among different customer groups.

5.57 Cost-of-service regulation, as practiced in United States (which is an extreme case), often resembles a complex civil court case, with witnesses for the company and opposing parties, filed testimony, cross-examination by lawyers, and appeals. It is a slow and litigious process. Cost-of-service regulation is successful in controlling profits, but at a cost of significantly reducing incentives for regulated firms to increase efficiency, since it is a form of cost-plus regulation. This requires the regulator to focus attention in the allowable costs included in the rate of return.

5.58 **Price cap regulation.** British regulation uses a retail price index less X (RPI-X) formula. The formula allows a company to raise its rates on regulated services from a base level by the change in the retail price index (which is not tied to the company's own costs) minus an X-factor

^{20/} Performance contract regulation is used by the French government to regulate EDF, the state-owned electricity enterprise. The French approach appears to have the following features: some price indexing that is similar to the British RPI-X formula, the use of financial targets and the requirement for certain specified levels of investment. The French refer to their regulatory approach as the "contract plan." The terms of the contract between the Government and EDF may not be enforced. Its principal benefit may be that it clarifies the Government's performance expectations for the state enterprise. Performance evaluation systems, properly applied, have been successful in several countries (see Chapter 3).

^{21/} Yardstick or benchmark regulation is used in Chile to set an overall revenue level for distribution companies. A variant of it is being considered for distribution companies in the proposed restructuring of the Peruvian electricity sector. We are aware of only two instances of yardstick regulation for vertically integrated generation, transmission, and distribution utilities. The first program exists for one major utility in the state of Mississippi in the United States. It has been in operation for several years. To the best of our knowledge, its effectiveness has not been independently assessed. A second, somewhat different program has been proposed for the Niagara Mohawk Company which is a privately-owned utility in New York State.

targeted to the expected effect of productivity increases, demand growth and capital expenditures.^{22/} Price cap regulation is used in the British natural gas, telecommunications, water and electricity industries. Within the British electricity industry, the RPI-X formula is not applied for power generation but for transmission and distribution. There are 37 price cap formulas — one for the national generation company, and three for each of the 12 distribution companies; nevertheless only 35% of the final price of electricity is subject to price cap regulation.

5.59 In theory, the British system regulates price, while the American system regulates profits. In fact, this is not true. The British system provides for something akin to a cost-of-service review every five years.^{23/} The price produced by this review becomes the new base level to which the RPI-X formula is applied. Therefore, the British approach is the same as the rate of return regulation but with an institutionalized five-year regulatory lag between cost-of-service reviews. In theory, the price cap formula produces better incentives for a regulated company to operate efficiently because the company keeps profits for five years if is efficient, while it loses money if it is inefficient, but it is still too early to judge whether practice supports this theory. The RPI-X approach may be vulnerable in several ways. First, will regulators be able to resist the temptation to make downward price adjustments if companies start earning higher than expected profits? Second, will regulated companies try to increase profits by reducing quality of service?^{24/} Third, will the formula provide sufficient incentives to encourage capital investments? Fourth, will companies make efforts to increase efficiency when such improvement will be required permanently and may result in unrealistic X coefficients in future years? Table 5.1 compares cost-of-service regulation with British price cap regulation; details of British experience with the new regulatory systems in several sectors are presented in Annex 13.

^{22/} The price cap can be established on a revenue per unit, total revenue or revenue per customer basis.

^{23/} The updating of the RPI-X formula requires the regulator to perform an extensive efficiency review and an assessment of the projected investment plans of the company. The first post-privatization review for the British National Grid Company took about 18 months to complete. It may be easier to perform these reviews for the 12 regional distribution companies since cross-company efficiency comparisons should be possible.

^{24/} The National Grid Company and the twelve distribution companies are subject to license conditions that are intended to maintain quality and technical standards.

Table 5.1 - Comparison of Cost-of-Service and Price Cap Regulation

Cost-of-Service	Price Cap
<p>Used for many years in United States and other countries</p> <p>Applicable to generation, transmission and distribution</p> <p>Because of legalistic approach in United States it creates a heavy administrative burden there.</p> <p>Low incentive to control costs, but regulator can force efficiency gains by not reimbursing certain costs.</p> <p>Incentive to overinvest. This is less of a concern in developing countries where power demand is increasing very rapidly and only part of the population is served.</p> <p>Can be intrusive (e.g., prudence reviews)</p> <p>Responds to popular concerns about excess profits</p>	<p>In use for only a couple of years in UK, Chile, and now Argentina.</p> <p>More suitable for transmission and distribution</p> <p>It is likely to require a similar or even more complex system given the need to forecast five years and the relationship between company cost and RPI.</p> <p>Stronger incentives to minimize costs</p> <p>Incentive to underinvest and cut quality of service</p> <p>Requires more complex review of investment plans and operating efficiency. Difficult to estimate efficiency gains. The X factor needs to be positive when large investments are needed (as in Thailand)</p> <p>Focus on price, the main concern to customers</p>

(H) Regulatory Legislation

5.60 Adequate regulation requires a general legal and commercial framework that provides essential preconditions for private investment and ownership and is critical for successfully competing for private capital at a reasonable price. This legal framework defines the treatment of property rights and the general rules of the game for the entire economy. Thailand plans to establish an anti-monopoly law that would complement its already satisfactory legal framework. This includes protection from expropriation, arbitration of commercial disputes, and respect for contract agreements. These issues are critical not only for new contracts with the private sector, but also for the privatization of state enterprises, since their financial viability depends on honoring their contract and pricing agreements. Key elements recommended for regulatory legislation are:

- (a) **Purpose of agency:** (i) exist independently of legislative and political forces; (ii) exist independently of enterprise management and operation; (iii) promote national interest: availability, quality and efficiency of service; (iv) exercise public oversight over private operators; (v) monitor operator performance; (vi) prevent abuse of market power; (vii) enforce law and agency regulations; and (viii) promote open entry and competitive markets.
- (b) **Structure:** (i) membership from outside the Government, with limited-term ex-officio government members until privatization of state enterprises has been accomplished; (ii) members nominated by the Government and approved by parliament or parliamentary committee; (iii) fixed and staggered (4-5 year) terms of office; (iv) financing from sales fees on regulated industry; and (v) budget review by minister.

- (c) **Organization:** (i) support from permanent professional staff (engineering, economics, law); and (ii) compensation commensurate with private salaries.
- (d) **Authority:** (i) commission decisions would be final. However, for actions prior to privatization the recommendations may be reviewed by government; (ii) appeal of commission decisions to Supreme Court, on basis of legal errors but not substantive issues; (iii) disputes can be referred to arbitration; and (iv) agency decisions subject to judicial review.
- (e) **Regulatory powers:** (i) basic formula mandated in legislation and licenses, including productivity, inflation, and exogenous cost factors (automatic adjustments); and (ii) pricing (for some enterprises it would be highly desirable to use a CPI-x system, with parameters reassessed every four or five years), for others a rate of return may be desirable.
- (f) **Cost accounting system:** established by agency and reporting required from all regulated enterprises.
- (g) **Interconnection:** in telecommunications or power transmission promulgate policy of right to nondiscriminatory access and apply regulatory intervention only if parties fail to negotiate terms.

(I) Sectoral Regulation Recommendations

Energy Sector

5.61 Thailand's three electricity sector enterprises — EGAT, MEA and PEA — are controlled through a variation of cost-of-service regulation, which in the case of EGAT includes automatic adjustment for fuel costs. This is very similar to the regulatory approach used in the United States for privately owned utilities. However, Thailand supplements this with a limited form of performance contract regulation and conduct regulation by controlling the overall investment program. The limitation of the performance evaluation system and recommendations for its improvement are set out in Chapter 3. of this report.

5.62 Cross subsidies complicate regulation and can become an obstacle to privatization. Their principal disadvantage is the distortion created in investment and operating decisions throughout the economy. Although cross subsidies are common in electricity tariffs throughout the world (particularly as "life savers"), they are not an appropriate goal for regulation. Given Thailand's laudable priorities for income redistribution and provision of universal access to basic services, a better approach would be to give subsidies in an open and transparent way rather than hiding them in the differential rates that EGAT charges to MEA to subsidize PEA.

5.63 It is impossible to make recommendations about regulation without first specifying the structure that regulation will be applied to. Based on the mission's review of past and planned actions, conversations with Thai officials, and a review of the Seventh Development Plan, the structure that seems most likely to develop in the next several years will have the following features:

- (a) EGAT will remain a vertically integrated entity responsible for meeting the country's generation requirements (either as a producer or buyer), and the only entity responsible for high voltage transmission and central dispatch;
- (b) Independent power producers will compete to sell power by entering into BOO or BOT transactions with EGAT;
- (c) Independent producers will only be allowed to sell to EGAT^{25/} (i.e., EGAT will perform a central procurement function and independents will not be allowed to make direct sales to PEA, MEA or other regional distribution companies, industrial, or commercial customers);
- (d) Independent producers will compete against EGCO, EGAT's generation subsidiary, on most if not all BOO and BOT competitions;
- (e) At least two (PEA and MEA) or more distribution companies will have exclusive rights to make bundled retail sales (except for the industrial direct sales customers currently supplied by EGAT) in specified geographic areas;
- (f) Less than 50 percent of the shares in EGAT, PEA and MEA will be made available to private investors.

5.64 In an ideal world, the regulatory commission would not need to supervise EGAT closely in its role as a buyer of new generating capacity. However, the likelihood is that EGAT will continue — at least in part — to build generating capacity rather than buy power from independent producers. As indicated below, cost-of-service regulation may strengthen a bias towards building and the regulatory commission should closely monitor EGAT's procurement of new generating capacity.

5.65 To maximize the benefits of competitive procurement from independent power producers, we recommend that the Government:

- (a) **Mandate competitive procurement from independent power producers** . Many independent power producers will offer to build power plants at claimed "good prices" and argue that competitive procurement is a waste of time. These offers will be tempting given EGAT's expansion need and relatively low reserves. The danger of negotiated deals is that they often produce high prices and unfavorable contract terms. The single best way to obtain good price and non-price terms is by competitive procurement.
- (b) **Give EGAT breathing space by raising its reserve margin**. The current 15% limit on capacity reserves is low compared with other high-growth utilities and the risk that

^{25/} Northern Ireland has also chosen this approach—central procurement of long term power supplies by a single national generation and transmission entity. A somewhat different approach will be taken by Portugal beginning in 1994. The G & T subsidiary of EDP will have the legal responsibility to conduct competitive procurement of long term capacity and energy on behalf of wholesale and retail customers who want the protection of a regulated market. However, the four new distribution companies and large industrial customers will also have the option of bypassing the supply services of the G & T entity and purchasing electricity from IPPs and other suppliers in a separate non-regulated market. Initially, the distribution companies will only be allowed to obtain a maximum of 25% of their supplies from the non-regulated market. The eligible industrial customers have the right to obtain all of their electricity supplies from the non-regulated market. Once they make this decision, they will have to give two years notice if they wish to return to the protection of the regulated market.

lignite generation may have to be stopped for weeks if inversion conditions result in high air pollution levels. Given demand growth of more than 10% a year and the likelihood of construction delays, this limit should be raised to at least 20%-25% to avoid the risk of expensive outages to the economy. The Bank's Fuel Option Study completed early this year provided important recommendations to optimize fuel usage. If such emergency conditions appear the power to negotiate diminishes and unnecessary premiums will have to be paid to ensure fast construction.

- (c) **Encourage EGAT to develop an inventory of potential generating sites that comply with permitting requirements.** Since EGAT has historically been the only generation supplier in the country and it is likely to continue as a state enterprise for the next several years, it has a comparative advantage in acquiring the necessary permits for new generating sites. If EGAT develops an inventory of suitable sites for new generating units it reduces the risk of obtaining adequate sized site control and increases the number of independent producers likely to bid. This would require authorizing EGAT to acquire sites for future generating plants ahead of its specific generating plan.
- (d) **Avoid a bias towards too large plants.** The larger the plant (more than 300 MW), the higher the financial requirements and the result in limited competition and very few bidders. Recent technological changes have substantially eliminated the traditional cost advantages of very large generating plants.
- (e) **Do not over-specify the conditions of requests for proposals.** EGAT should be receptive to alternative ways to satisfy its capacity needs. EGAT should specify plant capacity (e.g., total MW, baseload, intermediate or peaking) and locations, but it is preferable not to specify the technology or minimum plant size. Experience in U.S. utilities show that a combination of several smaller bids often provides a lower cost and less risky supply alternative than a single larger bid. Over-specification discourages ingenuity and creativity among competing bidders.
- (f) **Incorporate bidder's recommendations.** Bidders often can provide recommendations to improve the technology, the specifications, the location and the efficiency of their proposals. In some countries this is incorporated by negotiating with the winner bidder. However, since this can seriously compromise the apparent transparency of the awards, we recommend instead to establish a question and answer period within one month of the invitation for bids, to consider suggestions that may accepted and result in win-win improvements and lower prices.
- (g) **Publish an annual plan detailing Thailand's capacity needs** for the next 7-10 years. Competition works better when there is adequate information. The report should forecast overall demand growth, and preferred locations for new generation and transmission capacity. Similar documents are published by the New England Power Pool in the United States, the National Grid Company in Britain, and the National Electricity Commission in Mexico. In combination with increased private-sector participation, this would gradually allow movement from least-cost planning to indicative planning.
- (h) **Hire consultants to provide support in preparing competitive procurement.** This would be particularly important for creating initial or standardized bidding documents

for each type of plant. These consultants should have had hands-on extensive experience with BOT and BOO procurement, and advice on the bidding documents, setting pre- and post-qualification criteria and creating optimal risk sharing between EGAT and the winning bidder. The consultants should be disqualified from participating in any bids.

- (i) **Review the prudence of EGAT's purchase decisions as quickly as possible.** EGAT's incentives to purchase efficiently against self-generation are uncertain under the existing industry structure; therefore, there will be a need for the regulatory commission or inter-ministry committee to review the power purchase agreements that EGAT proposes to accept. However, this review should be completed promptly and should ensure that the decision is binding to reduce the risk for developers and achieve lower bid prices. It should be possible to reduce the review of EGAT's power purchase decisions when other entities are able to purchase directly from independent producers.
- (j) **Encourage EGAT to promote interconnection and long-term contractual purchases with neighboring countries (Laos and probably China).** This would encourage the development of their renewable resources, improve reliability and reduce air emissions from power generation.

5.66 **Should EGCO be allowed to compete?** The possibility that EGCO will compete against other IPPs may have an adverse effect on competition, reducing the number of bids submitted to EGAT. The perception will be that the competition will be unfair because EGAT will always favor EGCO and that, once selected, EGCO will obtain terms and conditions that would not be available to a truly independent producer.

5.67 It has been argued that affiliated company participation in competitive procurement helps establish a baseline that the state enterprise can use to assess the bids of non-affiliated entities. While it is useful to have this information, it can be acquired without relying on a bid from an affiliated power producer. For example, EGAT could assess bids using the regularly updated information developed by the U.S. Electric Power Research Institute on the capital and operating costs of different generating technologies.^{26/}

5.68 We are not aware of any country other than Thailand that has chosen to promote private power by creating a generating company that is affiliated with, and competes for, the purchases of its parent company. The danger of encouraging associated, rather than independent, power producers is that it may discourage competition. Instead of genuine competition between non-affiliated independent power producers, Thailand will get an unnatural competition to join forces with EGCO to get an inside track on EGAT's business. It is, therefore, recommended that the Government eliminate bids from affiliated power producers as soon as feasible.

5.69 Two options that the Government may wish to consider are: (1) Reducing EGAT's ownership in EGCO from 99% to below 50% as soon as possible and (2) intensively reviewing all agreements between EGAT and EGCO to ensure that they are arms length agreements. In our view, Option 1 is a preferred long-term solution for Thailand. It will dispel any suspicions that EGAT might favor EGCO because of their affiliate relationship. The second option would require setting up clear "rules of the game" and careful review of the agreements to ensure that they are "arms length agreements".

^{26/} See, for example, the "synthetic cost" numbers published by the U.S. Electric Power Research Institute in Palo Alto, California.

5.70 **Regulation of independent power producers.** There is no need for direct price or cost regulation of independent power producers; they will be controlled indirectly through the competitive procurement process and through the Government's review of the agreements that EGAT proposes to sign. In a sense, there will be regulation by contract rather than through a more formal ongoing regulatory process.

5.71 Independent producers will avoid Thailand, if they believe they run a risk of being subjected to a traditional form of cost-of-service regulation. Therefore, it is important that the new regulatory statute give the regulatory commission the clear legal authority to forebear from direct regulation of independent producers. In the United States, the Federal Energy Regulatory Commission operates under a statute that is unclear as to whether the agency has authority to approve market-based wholesale rates that are the outcome of competitive processes. This is not surprising since the law was enacted in 1935 when there was little or no expectation of competition in short-term or long-term power sales. Since 1987, FERC has approved more than 40 requests for market-based pricing, but it still runs the risk that some reviewing court will conclude that it has exceeded its legal authority.^{27/} Thailand can avoid this difficulty by giving the regulatory commission explicit authority to approve market-based transactions. Within the new law, this authority should be tied closely to the commission's obligation to promote competition.

5.72 The technical and engineering aspects of independent power producer operations can and should be regulated. This can be done by requiring firms to obtain generating licenses. A model for such a license can be found in the England and Wales system.

5.73 An electricity sector can support two principal kinds of competition: competition in generation (wholesale competition) and competition in supply (retail competition). It appears that Thailand's industry structure would allow competition in generation only in providing a long-term supply source. In other words, there will be no short-term or spot market competition such as exists presently in England, Norway, Sweden and the United States. Figure 5.1 shows competition in the Thai electricity sector compared with several other countries. It is not clear what additional efficiency could be achieved this way, or the impact on agreements between the utility and the consumers in a given franchise area.

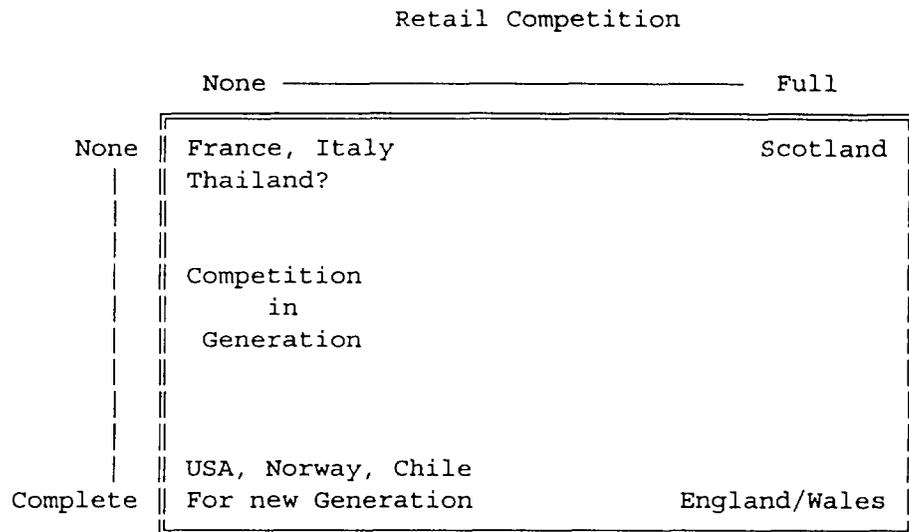
5.74 Our recommendations on regulation are based on the assumption that the Thai electricity sector will have the characteristics described above. If the Government chooses a different structure these recommendations may not be appropriate.

5.75 There are several problems associated with this structure. First, EGAT will have limited incentives to purchase on either a BOO or BOT basis from non-affiliated producers. It is, of course, possible for the Government or a new regulatory agency to mandate such purchases. However, such a policy is unlikely to be successful if a privatized EGAT's economic incentives and corporate culture are to continue building on its own or purchasing from its generation subsidiary. Second, even if the Government decides to require EGAT to provide unbundled transmission service to independent generators or the distribution companies, it will be difficult to enforce such an obligation. EGAT is likely to favor its own generation sales. Therefore, it will be difficult to introduce more competition. Third, if the Government decides that a separate transmission and dispatch company is needed (as in Norway, Argentina and Britain), it will be difficult to make this further

^{27/} See Bernard W. Tenenbaum and J. Stephen Henderson, "Market-Based Pricing of Wholesale Electric Services," The Electricity Journal, November 1991, pp. 30-45.

structural change once EGAT is privatized as a vertically integrated entity. As the former Deputy Director-General of Regulation in England and Wales observed: "It is infinitely easier to make structural changes before privatization than to do so afterwards." In our view, the best strategy for a government considering power sector reform is: **Restructure first, privatize later.**

Figure 5.1 - Extent of Present Competition in Power Generation



Transport Sector

5.76 While there is a widespread belief that open competition improves the efficiency of transport, the impact on the quality of service is less clear. In unregulated markets, there is a tendency for the prices of transport services to be driven down to their short-run marginal costs. The result is that there are insufficient returns on investment to support a regular program of investment. Instead, a short cycle of investment is followed by a long period during which capacity is utilized, often beyond the period of its economic life, without being renewed. At the end of this period, shortages of capacity, unreliability of equipment, and rising maintenance costs lead to higher prices, which then encourage a new round of investment. In the past, regulation has been used to provide more stable pricing and encourage a pattern of continuous investment. Unfortunately, this regulation has also fostered cost-based pricing, which does not encourage efficiency.

5.77 International experience with the role of the Government in regulating the transport industry has had both successes and failures. Regulation by government, or self-regulation by the industry, has been used to improve the quality of services and avoid destructive competition. For example, regulated public transit systems have provided frequency of service and vehicle quality that could not be sustained under a purely competitive situation. This same type of regulation has also produced low-cost, subsidized transport of relatively poor quality in many countries. Ocean shipping conferences have attempted to support the price of scheduled services to provide excess capacity to ensure the availability of space on the basis of a fixed schedule.

5.78 Bilateral agreements and government regulations in the airline industry have been used to encourage competition on level of service and price — and protect inefficient national carriers from market forces. Regulation of the rail industry was used to maintain reasonable prices and quality of service despite the monopoly position of the railroad, but the need for this regulation has disappeared as truck transport has successfully competed in most of the markets served by the railroads. Now this form of regulation is often used to protect the market share of unprofitable national railroads. Regulation of the trucking industry did not have the same justification as railroads because of ease of entry into the market by relatively small entrepreneurs. In most parts of the world, regulation has been eliminated from commercial activities except in areas of safety.

5.79 While it is not possible to make a single judgement with regards to the role of regulation in the transport sector, two conclusions are clear. The first is that where regulations are in opposition to basic market forces they have produced unfavorable results. The second is that where market forces do not apply, some form of regulation is needed.

Telecommunications Sector

5.80 **Independent regulation.** The Government should articulate and adopt a policy to establish an independent regulatory system for telecoms clearly separated from operational activities. Experience worldwide shows that this is essential for sector development. Regulation would help (a) insulate prices from political pressures; (b) safeguard the assets and financial viability of carriers; (c) promote a stable and predictable industry environment; (d) ensure fair treatment of operators and potential entrants, and (e) facilitate private and foreign investment.

5.81 The sector will face considerable change in the next decade due to technical developments, the openness of the export sector, and global trends causing communications, computing and data services to migrate to low-cost and rapid-innovation suppliers. This may shift substantial demand to foreign suppliers if Thailand's telecoms sector does not keep pace. Based on trends in leading telecoms markets of the world, regulatory policy will need to anticipate: (a) eventual state enterprise privatization; (b) liberalization of facility-based markets to admit multiple suppliers, and (c) at least limited deregulation of the dominant suppliers. Prior to privatization, an independent regulator should establish and define policies to oversee a reorganized state enterprise and later to shift to auditing and controlling a private enterprise. The establishment of this commission would largely influence the prices for shares sold and for services purchased from the private sector.

5.82 Although the Government and the proposed legislation should bear the main responsibility in opening markets and competition, since the main improvement in the sector will come from competition, which is likely to be a continuing process, ensuring that markets are open to new entrants will be a major target of the regulator. Thailand has opened portions of the value-added services market to competition; subsequent steps include licensing a second carrier for international service, restructuring domestic tariffs, and opening the local access markets to bypass and direct facilities competition. Given the substantial and increasing role of the private sector in telecommunications in Thailand, it is recommended to give priority to the establishment of a regulatory commission for this sector. Given the different stages of privatization in energy, transport and water sector, as and when the need arises the model could be replicated with due attention to sectoral differences among sectors.

5.83 **Regulatory authority.** There is consensus between the telecoms operators, outside observers, and most government officials that a telecommunications regulator should be an impartial

"referee" who can decide on disputes and take decisions affecting state enterprises and future private companies. It is recommended that the regulator for telecoms be a commission of three to five members selected from outside the Government.

5.84 **Key regulatory issues.** The regulatory authority should be empowered to act in the following key areas: (a) regulation of prices; (b) licensing of suppliers; (c) regulation of carrier relationships; (d) defining public service obligations; (e) setting technical standards, and (f) managing the radio spectrum.

5.85 **Telecoms pricing.** Effective regulation preventing suppliers from earning monopoly profits ensures fairness to consumers and promotes efficiency. At the same time, incentives should be maintained to earn returns commensurate with investment and risks, which would require changing rates in response to inflation and exogenous changes in costs. Price regulation should also promote fair competition and a level playing field on which the dominant firms compete on equal terms with new entrants.

5.86 Telecoms prices should not be used to raise revenue for transfer to the Government. There should be no revenue-sharing requirements in licenses or other forms of earmarking of charges levied by particular suppliers. When privatized, the state enterprises will have dominant positions in their markets and sufficient market power, if unchecked, to raise prices and earn monopoly profits. To control abuse of market power the regulator can directly control the profits of dominant carriers. However, a better system would be to set maximum prices (price caps or RPI-X), which will avoid extensive demands on regulatory staff for cost-based regulation while providing strong incentives for operators to improve productivity. Profit regulation requires extensive collection of cost data on major services, which is not available. The price cap formula should allow for a periodic reductions in average prices to reflect opportunities to increase productivity by benefiting from cost-reducing technical improvements. In any case the regulator needs to establish monitoring requirements to assess performance after a suitable (four- or five-year) period and be able to revise prices. Suppliers should have rate flexibility and be free to set their rates within the constraint on overall price levels. In future contracts it would be important to eliminate BTO arrangements that set rates as a fixed percentage of state enterprise costs and set specific prices for the new services.

5.87 **Pricing recommendations.** In the value-added services, sufficient competition may already exist to obviate the need for maximum prices. In paging and cellular telephone services, the regulator can simply require that suppliers file price lists of all offered services. The public filing requirement ensures transparency of service conditions and prevents discrimination among consumers. Notwithstanding the general objective of regulating only the average maximum price of suppliers, the regulator will need to review the structure of telephone rates to ensure they correspond to their costs. Additional recommendations include:

- (a) Local service rates (฿3 per call) are insensitive to call duration. Lengthy calls and the practice of holding a connection open consume scarce switching and trunking capacity and impose substantially higher costs on local networks. Timed-service rates should be implemented and the switching system is already equipped for this purpose.
- (b) In urban areas, local rates are insensitive to distance (e.g., ฿3 regardless of location within the Bangkok metropolitan area). Distance-related rates would better reflect costs. However, such rates may not be compatible with the metropolitan ring architecture being

constructed by Telecom Asia, which uses just a few central offices and a large number of remote switching units.

- (c) Access charges for interconnecting international gateway traffic to the domestic network are at B6 per minute. Access charges should reflect the direct costs of interconnection, the conveyance of traffic over the domestic network, and the cost of supporting public service obligations by the domestic supplier.

5.88 **Licensing and market entry.** Technological changes are rapidly shrinking the scope of natural monopoly in telecommunications. Radio-based communications, in the form of paging, cellular telephone, small-aperture satellite, and microwave services, are offer consumers alternatives to traditional fixed-line local loops. Computer and switching developments are reducing the costs of private networks, enabling users to bypass basic-service suppliers for much of their traffic. These developments should be encouraged by the regulator following liberal licensing policies, favoring open entry into markets, and, with limited exceptions, issuing licenses to all qualified suppliers on a non-exclusive basis, to let the market decide the number of firms. Qualification criteria should be limited to demonstrating technical competence and adequate financial resources. For scarce resources (radio spectrum), the number of licenses issued may be limited, but the regulator should seek a minimum of two or three suppliers and use a competitive bidding procedure to select licensees. Licensing of new services and service areas by dominant suppliers should only proceed after determining that a supplier will not use its market power in a discriminatory manner. The regulator may need to require structural separation, via a separate subsidiary, or require separated accounting, for new lines of business.

5.89 BTO concessions have enabled private participation in the Thai telecoms sector. In paging and cellular markets, the BTOs provided sufficient flexibility to enable independent providers to develop services that to some extent compete with TOT and CAT services. In contrast, the very large BTOs to Telecom Asia (2 million lines in Bangkok) and TT&T (1 million lines outside of Bangkok) require the operators to follow the state enterprise's tariff structures, equipment standards, and billing systems. This will require thorough review by the regulator to ensure that objectives are achieved and inject flexibility and some degree of competition.

5.90 Thailand now restricts how customers may use leased private lines; these restrictions should be eliminated. Sharing of leased lines among users and resale of circuit capacity, including blocks of time and single calls, can rapidly inject new suppliers of retail telephone and data services into the Thai markets. Because this type of competition does not require construction of additional facilities, it does not result in duplicated investment or overcapacity as a result of competition. Resale is equally important in enabling new facilities-based competitors to extend service to areas in which they have not yet constructed their own physical networks.

5.91 **Regulation of carrier relationships.** Competition and the active presence of several suppliers in telecommunications require new regulatory actions. For at least the next five years TOT and its exclusive BTOs will control bottleneck facilities (access to domestic consumers). Carriers with bottleneck resources have incentives to favor their own vertically-related value-added suppliers and to give preference to their own customers. New entrants to the basic services markets, suppliers of value-added services, and additional long-distance and international suppliers require interconnection to the dominant supplier's networks for access to essential facilities to market their services and route calls to subscribers on those networks. Moreover, interconnection of telecoms networks on a non-discriminatory basis can significantly increase the efficiency and functioning of the sector by

increasing network services by extending the geographic area of coverage. Interconnecting firms also add new resources, particularly capital and technical and managerial expertise, to the nation's network sector. Interconnection also improves network sector performance by introducing and intensifying competition and raises the value and productivity of network infrastructure. Greater coverage through more subscribers and additional services results in a positive consumption externality, increasing network traffic and utilization.

5.92 The regulator should enforce the right of any licensed supplier to interconnect with any other on a non-discriminatory basis. The terms of interconnection, which include technical and operational details of individual facilities, can initially be left to negotiation between suppliers. By reserving the power to prescribe terms and conditions in the case of failure to reach negotiated arrangements, the regulator can protect new suppliers from discriminatory treatment. It can also exercise the power to require publication of negotiated interconnection terms.

5.93 **Public service obligations.** Thai economic development benefits from its "universal service" goal of having telecommunications services widely available across the country. Reliable personal communications strengthen social and familial ties and contribute to national and political cohesiveness. Yet because of unequal conditions and endowments, some regions and social groups located in high-cost and poor areas lag in obtaining the most basic access to telephone and other services. Parastatal and other integrated monopoly suppliers of telephone service have relied on internal cross-subsidies to support supply of basic service to much of the population. By shifting to an open-markets policy that relies on competition for network and service development Thailand will be accelerating the rate of investment in telecoms infrastructure and increasing the overall availability of basic services. Nevertheless, specific geographic areas and customer groups may continue to merit targeted support to ensure at least limited access. Thus, the objective of having public phone booth service available in smaller villages will require a different approach.

5.94 In place of internal cross-subsidies, the funding of the extra costs of providing basic access services in remote and low-density areas should be obtained from government revenues and paid to suppliers on the basis of services provided. Because of the strong economic and social externalities of establishing rural communications, a subsidy from general revenues is appropriate. An alternative source of revenue would be a turnover tax on all telecom sector suppliers.

5.95 **Telecoms technical standards.** If a telecoms sector is supplied by a single network operator, equipment interfaces can be effectively coordinated by the supplying firm. With multiple suppliers coordination requirements increase significantly. If standards continue to be controlled by the dominant supplier, there is the risk that it will use its market power to discriminate in favor of its own services and facilities and impose costs of adapting to proprietary interfaces on its rivals. Therefore, the regulator should establish procedures that are even-handed yet do not themselves greatly increase costs. New access service carriers, including wireless services and fixed-line suppliers, will require allocations of telephone numbers compatible with the national numbering system. Procedures for awarding numbers may, unless revised, favor the dominant carrier. For example, cellular and BTO operators should have the ability to obtain blocks of numbers in advance that can be activated as soon as physical service is installed and a customer account established.

5.96 The regulator should develop sector-specific performance indicators for telecoms, emphasizing measures of service quality and productivity and require carriers to report regularly. Performance standards should include geographic availability of service in the licensed area of service, extent of unfilled service orders, reliability of completing calls, availability of circuits, and time

required to clear faults. Thailand already permits open connection of subscriber equipment to the domestic telephone network. Type approval for subscriber terminal equipment can be implemented by using bench marks already established by European or US standards bodies.

5.97 **Frequency allocation.** Authority to allocate and assign radio frequency spectrum affects both common carrier telecommunications and broadcast telecommunications, and interacts with the conduct of foreign policy. The use and value of spectrum for wireless point-to-point communication is increasing rapidly. Technological advances are enlarging the demand for non-broadcast uses, including mobile and cellular telephone services, advanced paging, and data and fax services. Other technical developments, including data and video compression, are tending to reduce the requirements for broadcast uses. With little or no feasible spectrum unallocated, the opportunity cost of having existing allocations locked into current uses and licensees is growing. To obtain more efficient use of the spectrum, users should be induced to shift fixed microwave services to higher bands, introduce radio trunking technologies, and adopt higher capacity access systems. Market-based spectrum assignment procedures have been introduced in several economies. They merit consideration by the regulatory authority as wireless service markets are liberalized and demand grows. Two alternatives for improved management of Thai spectrum resources should be considered: retaining management authority in the Post and Telegraph Department and empowering the regulator to participate as a public advocate in its proceedings, or transferring spectrum licensing authority to the telecommunications regulator.

(J) Main Recommendations on Regulation

(a) Regulatory Framework

- (i) Achieve transparency and consistency for regulation by setting a clear set of rules, known in advance; enforcing rules and establishing mechanisms to ensure their application; resolve conflicts through binding decisions of an independent judicial body or arbitration; set clear procedures for amending rules when they no longer serve their purpose, and introduce a framework of regulatory incentives to support competition and induce efficiency (para. 5.7).
- (ii) The Government should commission a general regulatory study to ensure overall consistency of approach and compatibility with its macroeconomic, social, financial and institutional objectives (para. 5.21).
- (iii) Regulatory goals should ensure that demands for services are met, the price and quality of service are adequate, enterprise efficiency is maximized, and investor interests are protected (para. 5.23).
- (iv) Establish an independent regulatory mechanism outside existing ministries and agencies (para. 5.39).
- (v) Achieve regulatory transparency by imposing time limits on regulatory decision-making, and requiring regulators to consult with affected interests, consumer groups, and government bodies, give reasons for their decisions, and publish their planned deliberations (para. 5.42).

- (vi) Regulatory commissions rather than single regulators would be more in harmony with the Thai culture (para. 5.44); they should have small and odd numbers of commissioners (three to five) (para. 5.50).
- (vii) Priority should be given to establishing a regulatory commission for the telecommunications sector. This model could be replicated with due attention to sectoral differences among sectors (para. 5.82).
- (viii) Immediate consideration should be given to drafting regulatory laws for each sector (para. 5.54).

(b) Sectoral Recommendations

- (i) To maximize competitive benefits from independent power producers (i) mandate competitive procurement; (ii) raise EGAT reserve margins from 15% to at least 25%-30%; (iii) require EGAT to develop an inventory of potential generating sites; (iv) avoid bias towards large plants; (v) do not over-specify the conditions of requests for proposals; (vi) request improvement suggestions from bidders before closing bids; (vii) announce annually Thailand's capacity needs for the next 7-10 years; (viii) hire consultants to prepare initial bidding documents; (ix) review the prudence of EGAT's purchase decisions as quickly as possible (para. 5.65), and discourage or eliminate bids from affiliated power producers (para. 5.68).
- (ii) Regulatory recommendations for the transport sector are presented in paras. 5.76 to 5.79).
- (iii) Regulatory recommendations for the telecommunications sector are presented in paras. 5.80 to 5.97).

Chapter 6. Divestiture: An International Perspective

(A) Introduction

6.1 In most non-socialist countries practically all commercial and industrial activities are provided satisfactorily by the private sector, as adequate competition from domestic producers and imports creates strong incentives for efficiency, innovation and improved management. The penalty for inefficiency is losing market share, or bankruptcy. In these countries thousands of companies are sold or closed every year and replaced by more efficient, dynamic, or better-led companies. Given the large number of companies providing services, the failure of any one of them is not critical and may not even be noted in the global economic context.

6.2 Infrastructure utilities differ in key ways from commercial and industrial companies, and these differences largely affect the public perception of the benefits of divestiture. In both developed and developing countries most public utilities have been state enterprises or belonged to part of government ministries or agencies. Many of these state enterprises were originally private enterprises that were nationalized because of real or alleged lack of adequate services, particularly their coverage of the poor. When true, this was often a result of inadequate regulation, lack of creditworthiness, or, in some cases, of the companies skimming the market, that is, providing services only to the richer minority that could better afford them. A major concern with these utilities is that deficiencies in power, water, telephones, or transport can have a major impact on all other economic activities. They are usually large, and their impact on employment, industry, and the welfare of the population is such that they cannot simply be allowed to go out of business or be replaced easily. Moreover, many of these enterprises provide services considered by some people as minimum human rights, such as safe water and sanitation, heating and lighting, and basic transportation.

6.3 While there are numerous examples of successful and efficient state enterprises — including most of those in Thailand — in many countries the state enterprise sector has become a problem rather than a solution. Governments have micromanaged state enterprises, used them to create employment, and held tariffs down for political purposes. Nationalization was often driven by political rather than economic or technical reasons, and there has been a similar trend in recent years toward privatization without considering the problems inherent in conversion. These issues are considered in this chapter. It focuses on divestiture of telecoms and power generation utilities, as these have been most common in developing countries; experience in these two sectors is, however, applicable to others. In most countries and infrastructure activities private and public efforts coexist and complement each other, and even in countries where privatization is the norm there are both public and private utilities — in the United States, for example, most multipurpose hydro and municipal water distributions remain in public hands, as do nuclear generation plants in Britain.

6.4 Divestiture is defined as the partial or full transfer of ownership or control of state enterprises to the private sector. Measures to improve the already large participation of the private sector in activities dominated by state enterprises are covered in Chapter 2.

(B) Benefits of Divestiture

6.5 Experience in several countries indicates that divestiture can bring significant gains to society when it is accompanied by appropriate measures to enhance competition and establish effective regulation, and when the sale structure itself is well designed. The appropriate divestiture strategy for Thailand depends on the performance of individual state enterprises, the developmental objectives of the program, and the urgency of carrying out its implementation. This chapter addresses three questions: (a) Is divestiture beneficial to society?; (b) What should be done to make it a success?; and (c) What recommendations can be made for Thailand to attain these benefits?

6.6 Governments goals in privatizing state enterprises usually include one or more of the reasons given below:

- (a) increasing investment and modernizing infrastructure without adding to government financial burdens (Britain, Mexico).
- (b) increasing the financial and operational efficiency of state enterprises (Britain, Argentina, Chile).
- (c) responding to technological challenges, opening competition and increasing the role of the private sector (Japan, Britain, New Zealand).
- (d) raising funds to curb fiscal deficits or ease debt burdens (Mexico, Argentina, Japan, Malaysia).
- (e) attracting foreign investment and stimulating domestic capital markets (Mexico, Chile).

6.7 Thailand's major motivation for privatization is a perceived need to increase state enterprise investment without government loans or guarantees; the Government also believes that efficiency gains can be achieved — beyond those targeted from the proposed performance evaluation system (Chapter 3), because privatized firms will be more efficient, flexible, and responsive to market demand.

(C) Divestiture Results

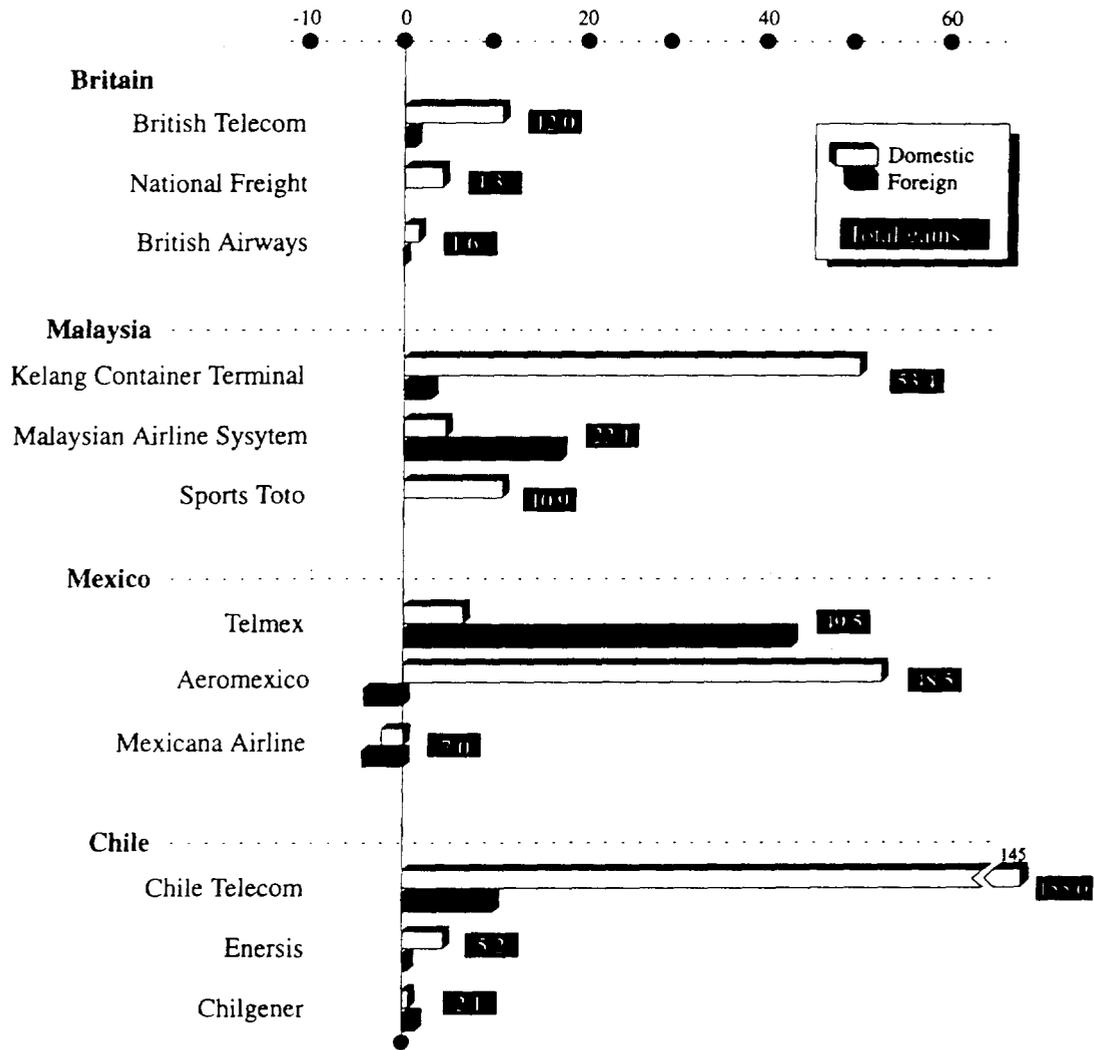
6.8 Divestiture is a phenomenon of the 1980s and 1990s. It emerged primarily in response to mounting public deficits that left fewer public resources to sustain state enterprise expansion, or in some cases to subsidize inefficient operations, and resulted in the divestiture of many parastatals in developed and developing countries. Divestiture of infrastructure utilities is relatively recent and is still being evaluated in terms of its impact on consumers, employees, government finances and equity, the enterprises themselves, and, above all, on national economies. The lessons learned on maximizing the gains from divestiture are particularly important.

6.9 A recent World Bank study^{28/} found that divestiture had a positive impact on economic welfare in all but one of 12 cases analyzed (including telecommunications, airline, electricity, a lottery

^{28/} Galal, Ahmed, Leroy Jones, Pankaj Tandon and Ingo Vogelsang, Welfare Consequences of Selling Public Enterprises: Case Studies from Chile, Malaysia, Mexico and the United Kingdom, Oxford University Press, forthcoming 1994.

company, and a transport company in Chile, Malaysia, Mexico and the U.K), the exception being Mexicana Airlines. The magnitude of the gains in relation to the annual sales for the year prior to divestiture are given in Figure 6.1.

Figure 6.1 - Privatization Gains and Losses*



* Annual welfare gain as % of annual sales in last year before privatization.

6.10 The bulk of the gains came from relaxing state enterprise resource constraints, which resulted in significant **expansion** of services after divestiture; for example the telephone company of Chile doubled its capacity within four years of divestiture. Divestiture improved **productivity** at Malaysia's Container Terminal, Mexico's Telmex and Aeromexico, and Chile's telephone company and a power generating firm through improved labor-management relations, better incentives and internal reorganization. Divestiture provided newly privatized firms an opportunity to restructure **prices** to reflect their real cost to the economy, while effective regulation prevented monopolies from exploiting their market power. Divested firms **diversified output** at low cost by capitalizing on their existing strengths. For example, British Telecom and Chile's telephone company used their institutional networks and know-how to provide new value-added services and the Sports Toto lottery in Malaysia introduced new products. These new activities could have been pursued under public ownership, but remained unexplored because state enterprise managers either had no incentive to pursue them, or were blocked by bureaucratic restraints.

6.11 Who were the winners and the losers? One surprising result of the study is that although there were layoffs or forced retirements, the affected workers were compensated sufficiently to make them no worse off than before. Moreover, the purchase of shares by workers resulted in substantial gains for them (for example, in the U.K.'s National Freight, Mexico's Telmex and a Chilean electricity distribution firm). therefore **workers did not lose --- and sometimes won. Consumers, also, usually won — but not always.** In the majority of cases, they benefitted from expansion and better service, and were protected from monopoly exploitation — thanks to competition and effective regulation. In some cases, however, they ended up worse off: users of telecommunications services in Mexico now pay higher prices, but the stage has been set for service expansion. The Chilean electricity distribution firm is a special case; after divestiture, the company reduced theft, which hurt one group of users, but other consumers benefitted from the resulting lower tariffs.

6.12 Foreigners and national buyers did well on the divestitures, and so did governments. Foreigners profited in all but one case, but they also contributed to national economies by bringing much needed fresh capital to meet additional demand (for example in Mexico's Telmex and Chile's telephone company. Buyers, including many small shareholders in the UK and pension funds in Chile, came out ahead in every case except Mexicana airlines. So did governments in the majority of cases: after divestiture their treasuries received more in sale proceeds and the discounted stream of taxes than they would have received in dividends and taxes had public ownership continued. Only in three cases — two in Chile — did governments lose and then only by small amounts.

6.13 The size of these gains seems to depend primarily on two factors: the efficiency of the enterprise being sold and its potential for improvement, and the size of the state enterprise sector in relation to the economy. With well-run enterprises — such as Singapore Airlines — potential gains are small. For a typical developing country where state enterprises account for 10% of GDP, the evidence indicates that the sale of half of these enterprises can result in **annual** welfare gains of about 1% of GDP or 7.6% of government consumption. Additional economic benefits can be generated by unleashing private entrepreneurial activity, accelerating capital market development, better use of scarce administrative resources — and heightened productivity in the remaining state enterprises as their managers and workers recognized that they, too, could be privatized.

(D) Key Aspects of Successful Divestiture

6.14 Since the benefits from divestiture can be sufficiently large to warrant expenditure of political capital by decision makers, what must be done to achieve these benefits? Successful

divestiture requires decisions on which enterprises should be sold, how, by whom, to whom, and following what guidelines? Although there are no simple and general answers, there is an emerging consensus of key recommendations for divestiture.^{29/}

6.15 Setting general criteria to justify public ownership or divestiture and applying it to classify enterprises into those to be retained, liquidated, merged and divested has been successful in the Philippines but encountered mixed results in Turkey,^{30/} where a comprehensive classification of enterprises triggered strong opposition from vested interests — and state enterprise managements and staff — and resulted in prolonged debate that delayed the process. Proceeding pragmatically, on the other hand, is advisable.

6.16 The best approach is to give priority to the divestiture of enterprises for which there is no clear economic or social justification for public ownership. This includes **small enterprises** operating in **competitive markets** that are not able to exploit market power. Their small size facilitates divestiture under competitive bidding and rapid performance changes. This is the strategy recommended for Thailand and was followed by Chile and Mexico (and recently by several socialist countries), where hundreds of enterprises in competitive commercial sectors, such as hotels, auto parts, and textiles were sold early in the divestiture program.

6.17 For **large state enterprises** in competitive markets, there is a trade-off between the ease with which the best and worst run enterprises can be sold and the gains from divestiture. These gains are likely to be greatest from selling the worst run firms, but these often require financial or organizational restructuring and may be difficult to sell at prices acceptable to the public. Early sale of profitable enterprises facilitates the start of a program and brings higher income to the Government, but the gains from divestiture are likely to be smaller. Therefore, the course of action has been decided on a case-by-case basis.

6.18 Several components of the infrastructure state enterprises are not natural monopolies, and it is important to introduce **competition** in their markets before divestiture. In telecommunications this applies to the markets for telephone sets, paging, data transmission and long distance services. To varying degrees, this policy has been adopted in the U.K., Chile and Mexico. In transportation this can be achieved by separating the provision of infrastructure from its operation and the provision of transportation services. In the electricity sector, although electricity transmission and distribution are natural monopolies, electricity generation is not; therefore, Chile, for example, broke up vertically integrated companies into independent generating and distribution units before divestiture. The generating units then competed to supply power to larger customers. The separate distribution units, though non-competitive, at least gave regulators a comparative basis for monitoring costs and setting prices.

6.19 **Regulation.** Adequate regulation should be in place before divesting monopolies. This includes specifying and enforcing appropriate rules regarding entry, pricing, conflict resolution mechanisms, technical standards, and the role and nature of the regulators. Rules may vary across sectors, but there is a set of general principles that should apply to the regulation of all sectors: (a)

^{29/} This section draws on Galal, et. al, cited previously. Other references include Kikeri, Nellis and Shirley, Privatization: The Lessons of Experience, World Bank publication, 1992.

^{30/} Despite the completion of a Privatization Master Plan in June 1986, Turkey only sold 0.5% of state enterprise assets by 1991.

regulation should permit as much competition as possible; (b) prices for services should provide a reasonable profit for investors while providing incentives for efficiency and protecting consumers against monopolistic exploitation; (c) mechanisms should be established to solve disputes fairly; (d) appropriate standards should be specified, for example, with respect to interconnection, to avoid incumbents undercutting and precluding competition, and (e) regulators should be independent from political influence or capture by the regulated firms. These principles have been implemented recently in several countries including Britain, New Zealand, Chile, Argentina, and Mexico.

6.20 Recommendations on regulation are provided in Chapter 5, but it is important to highlight that there are important benefits from applying regulation ahead of divestiture: First, enterprises operating under clear rules increase their efficiency; second, establishing the regulatory regime early allows firms to gain experience prior to divestiture, and provides clear rules that can enhance the sale value of state enterprises. This approach was followed by Chile, where regulation of telecommunications and power was introduced in the early 1980s, and divestiture took place in the second half of the decade.

6.21 **Adequate implementing agencies.** For the State Enterprises Division (para. 4.11) to manage divestiture, it will require expertise in preparing prospectuses, evaluating bids, and actual sales. It will need well-trained staff, and possibly technical assistance to evaluate proposals and to advise the cabinet committee on the best course of action for the country. The funds required to prepare proposals for divestiture could come from enterprises being considered for sale, those needed to strengthen the division itself, including subcontracting certain activities or hiring consultants for which some grant support is available.

(E) Divestiture Methods

6.22 Experience shows that the privatization process can be derailed by allegations of wrongdoing in sales; thus it is critical to design a transparent system, based mainly on competitive bidding. Bids have to be evaluated in as transparent manner as possible. Negotiated bids, even when optimal, are subject to claims of corruption and are more easily blocked through legal maneuvers. In addition, to avoid disappointing results, attention should be given to the qualifications and background of the bidders as well as price. For example, in contrast to its successful second wave of divestitures, Chile's first attempt in the 1970s was largely unsuccessful, resulting in bankruptcies and eventual return of most of the enterprises and banks to effective public control in the early 1980s. Bangladesh's mid-1980s divestitures of many small and medium firms had much the same result. In both instances, financially weak buyers were lent money to buy firms based on the collateral provided by the highly indebted firms themselves.

6.23 **Partial and full divestiture.** Partial and gradual divestiture is preferable for large state enterprises. Thailand is considering full divestiture of some commercial enterprises, but in the immediate future it would retain majority ownership and control of the 15 public utility enterprises. After partial divestiture, some countries (such as Mexico), found that relinquishing control while maintaining majority ownership increased efficiency. If the Government does not have an immediate need for resources, as appears to be the case in Thailand, the divestiture process can be gradual, with sale of equity paced to the market's absorptive capacity. However, full divestiture among small investors does not provide the required management and strong ownership needed for large companies; therefore, it would be important to sell 20% to 40% of the shares to a strategic partner, which would provide the required technical and managerial leadership. Divestiture of the 15 utilities will have to be gradual, both because of the impact on the capital market, and to allow government to determine a fair

price for the shares and capture expected price increases over time, but, as explained above a strategic placement —competitively selected— would be important for these enterprises. While full divestiture will make it possible for the private sector to turn enterprises around as market conditions require, partial divestiture should not be viewed as a mere cosmetic change, since even private participation in ownership is likely to cause the Government to exercise its ownership and control functions differently. This was observed in Malaysia's Airline Systems and Kelang Container Terminal, which the Government initially sold only partially. It later changed its pricing and investment policies, with positive implications for society. For large enterprises we recommend proceeding with initial partial divestiture by selling shares in the stock market. It is difficult to determine a fair price for the enterprise. Partial divestiture by floating shares on the market in tranches will help ease this problem, and may be the only solution compatible with political and the large impact on capital markets.

6.24 "Golden Share". The benefits of improved enterprise efficiency gains can be delayed unless private management is allowed to take control at an early date. Various equity restructuring methods have been adopted by countries to transfer management control to private operators with the Government retaining some strategic control over managing board authority. For key infrastructure utilities, governments are often concerned about ensuring adequate services and performance after privatization. This concern can be met by the Government retaining a "golden share" that prevents the entity from being taken over, changing its business, or removing government-appointed directors. Such mechanisms, which have been widely used in other countries, are recommended for large, critical, infrastructure utilities, and could be incorporated in a general corporatization law. The Government should also consider using financial engineering techniques to transfer control of enterprises without necessarily transferring majority shareholding (as was done in Mexico for TELMEX). Some examples are given below of approaches used in telecommunications privatization:

6.25 Mexico wanted to retain domestic control of Telmex while attracting financing from abroad. To do so, a new class of shares was issued with limited voting rights, and the existing share classes were restructured as follows :

<u>Class of Share</u>	<u>Percent of Shares</u>	<u>Ownership Limitation</u>	<u>Percent of Voting rights</u>
Series AA	20.4%	Mexican	51%
Series A	19.6%	Unrestricted	44%
Series L	60.0%	Unrestricted	0% (except in limited cases)

6.26 The limited shares were sold to foreign investors, while the A shares were sold to a consortium of strategic investors majority-owned by a Mexican firm, with minority shares held by two experienced operators, France Telecom and Southwestern Bell. This structure permitted the Mexican government to maintain domestic control of Telmex with management and financing provided by foreign operators and investors. One possible disadvantage of this approach is that the controlling shareholders — the Government — may not be to subject market discipline through possible takeover bids.

6.27 Similarly, the Venezuelan government separated CANTV's shares into three classes: Class "A" shares (40% of total) to be sold to a foreign strategic investor that appoints 5 of the 9 board members, assuring control of the company. Class "B" shares (49% of total) had limited voting rights (2 board seats) and the Government would progressively sell them on local and international stock exchanges. Class "C", (11 % of shares) were sold to CANTV employees, who would control the

remaining 2 board seats. This allocation allowed the Government to: (a) offer strategic control of CANTV without selling the majority of shares; (b) retain the earnings from the appreciation of the unsold portion of the stock after privatization, and (c) to offer employees 22% of voting rights with only 11% of the equity.

6.28 In privatizing British Telecom, the Government created a golden share (the only share retained by government), with a par value of £1 but with veto power over key board decisions, including the resale and change of control of equity and the company's mission. The Malaysian government, although still owning 75% of Telkom's shares issued a golden share to retain veto power on decisions affecting the composition of shareholders. It has also limited the maximum ownership by a single entity or individual to 5%. Similarly, New Zealand created a "Kiwi share", the only share retained by government, which gives it similar control, and required domestic share ownership of 50.1%.

6.29 **Foreign participation.** The disadvantages of foreign participation may be economic (since some of the gains from divestiture would accrue to foreigners) and political (their participation can spur opposition for historical or ethnic reasons). However, a limited foreign participation is recommended in Thailand due to the following advantages: (a) increasing the number of bidders, thereby enhancing yields to government from divestiture; (b) adding capital, domestic investments and reducing balance of payments constraints and (c) bring motivated technical/managerial know-how. In Turkey, the sale of five cement companies to a foreign buyer, and the subsequent blockage of this transaction through court proceedings, led to a government announcement that no more foreign sales would be allowed. To maximize the benefits of foreign participation, attention should be given to the structuring of the sale itself. For example, in the Malaysia's Kelang Container Terminal, foreigners were given only a 10% stake in the enterprise, but they brought important know-how that resulted in welfare gains for the country. In Chile Telecom, foreigners took 49% of the firm, but agreed to double the capacity of telephones in a few years.

6.30 **Popular capitalism.** Substantial benefits can accrue to the country and the population from privatizing large state enterprises through offers in the stock exchange. In several countries (Britain, Chile, and Malaysia among others) this has resulted in "popular capitalism" that shares ownership among many thousands of citizens. This is often combined with offers to the staff and management of the firms to purchase part of their shares with some price or term facilities. In any case the divestiture of large enterprises requires an analysis of an optimal strategy for sales, including the stock exchange, sources of savings, the potential buyers, and the size of the enterprise.

6.31 **Enterprise restructuring.** Financial restructuring and new investments should be generally avoided for parastatals that are to be divested in the immediate future, or just to try to make them more attractive for sale. Restructuring is inconsistent with the belief that the private sector can do a better job, and these investments may add only a fraction of their cost to sale values: new owners, for example, may want to use other technologies. On the other hand, legal, labor and price changes may be unavoidable to permit the sale of firms and ease social costs of divestiture. Typically, there is a need to establish a joint stock or limited liability corporation, and this opportunity can be used to establish separate corporations for independent business activities. Labor restructuring may also be needed if there is excess workforce. In such cases, up-front solutions would be needed for the deal to materialize, and to ease the burden of divestiture on workers.

6.32 Financial restructuring, although undesirable, may be required to achieve a politically acceptable selling price for an enterprise, particularly if its net equity is small, or negative. The best

way in this case is for the Government to convert into equity some debt (as was done with Philippines Airlines), which would then result in correspondingly higher prices. Another, more costly, option is to grant the buyer special privileges (exclusive rights, protection from imports and entry). In addition, it is important to determine if parts of the enterprises should be separated before divestiture. This requires careful analysis of assets and subsidiary activities to determine which peripheral activities should be trimmed, the degree of competition that could be established, and perhaps the need to separate some services by geographical areas (for example, in several countries, water services are provided by river-basin or provincial companies).

(F) Towards a Divestiture Strategy for Thailand

6.33 The international divestiture experience outlined above provides suggestions for Thailand's approach to divesting state enterprises. However, even the partial divestiture of large enterprises would require building a consensus among the Government, the private sector and the population at large to define the required strategy, guidelines and schedule for partial or total divestiture, and ensure that the following key objectives are achieved: (a) maintain adequate services; (b) increase private financing; and (c) improve the efficiency of infrastructure services.

6.34 **Divestiture of commercial state enterprises.** There is no longer a rationale or economic justification for continuing public ownership of the 24 small, commercial enterprises operating in competitive markets. Since these state enterprises operate in markets where there is adequate competition from private sector firms or imports, their sale would not lead to exploitation of consumers. Divesting revenue-generating enterprises — such as the tobacco or lottery companies — should not deprive the Treasury of revenue; experience elsewhere (for example, the lottery company Sports Toto in Malaysia) suggests that the Government could generate higher profits and more taxes under private operation. We recommend selling these state enterprises to the private sector as soon as possible.

6.35 In contrast, substantial parts of the 15 state enterprises in the nontradable sectors — telecommunications, power, transportation and water supply — are large monopolies (main local phones, power distribution and transmission systems, highways, airports, water supply and sewage treatment). Their divestiture without adequate regulation could lead to consumer exploitation. Divestiture alone also would not address Thailand's immediate need to increase infrastructure to keep up with the country's remarkable economic growth. The World Bank is in agreement with the RTG's sequential approach of increasing private-sector participation, improving the structure of each sector to foster competition, creating regulatory systems, corporatizing state enterprises, and initiating partial divestiture by selling shares in the stock exchange.

6.36 **Divestiture guidelines.** Successful divestiture requires:

- (a) Clear guidelines to ensure the transparency, fairness and speed of the process, including rules for dealing with workers and pension funds, and well-defined parameters for foreign participation and conducting public bids, auctions, direct sales, etc. At present, the only guidelines for selling state enterprises are dated 1961 (Annex 14). These guidelines should be expanded and updated using recent international experience.
- (b) Clear definition of the authority and powers of the actors involved in conducting sales transactions. Once the SEIC Division is established it could be responsible, in consultation with the technical ministries and state enterprises, for preparing divestiture

proposals, calling for bids, evaluating these bids, and, after Cabinet approval for the best proposal proceed with its implementation.

6.37 Divestiture of the 15 large state enterprises will be complex and time consuming. The following factors seem critical on the path to improved efficiency and successful gradual divestiture:

- (a) Developing a strategy (Chapter 2) that identifies medium- and long-term desired market structures, desirable competition levels for each sector, and establishing regulatory regimes for monopolistic segments of the market (Chapter 5).
- (b) Avoiding actions that might preclude competition and appropriate regulation in the future, such as franchises and other contracts that may create short-term gains at the cost of locking in new monopoly right.

6.38 **Divestiture framework.** Within this broad framework, state enterprises should be encouraged to divest non-essential services or subsidiaries as soon as possible. Out of the 15 public utility state enterprises, the best candidates for successfully expanding capital markets and fostering privatization seem EGAT, TOT, PTT (oil activities), MEA and PEA, and ETO as a candidate for employee ownership. The market absorptive capacity and the need to avoid crowding out financing for other smaller private enterprises are discussed in para. 4.45.

6.39 Privatization plans should be approved by the Cabinet for each state enterprises, including key milestones for private sector participation and for completing the respective privatization studies.

(G) Main Recommendations on Divestiture

- (a) **Divestiture Priorities.** Divestiture priority should be given to the 24 commercial state enterprises, since there is no economic or social justification for public ownership, and tax revenues from these enterprises are likely to be as high as the remittances they now transfer to government (paras. 6.16 and 6.34).
- (b) **Partial Divestiture.** For large enterprises, proceed with partial divestiture by gradual selling shares in the stock market because: (i) it is difficult to determine a fair price for the enterprise. Partial divestiture by floating shares on the market in tranches will help ease this problem; (ii) partial divestiture may be the only solution compatible with political constraints; and (iii) the large impact on capital markets. However, full divestiture among small investors does not provide the required management and strong ownership needed for large companies; therefore, it would be important to sell 20% to 40% of the shares to a strategic partner, which would provide the required technical and managerial leadership (para. 6.23).
- (c) **Enterprise Restructuring.** Financial restructuring and new investments should be generally avoided for state enterprises to be fully divested in the near future (para. 6.31).
- (d) **Divestiture Guidelines** are needed for transparency and the success of privatization (para. 6.36).

- (e) **Divestiture Framework:** (i) develop the strategy for each sector, defining the role of the public and private sectors, the desired competition and appropriate regulation; (ii) state enterprises should divest non-essential services or subsidiaries; (iii) out of the 15 public utility state enterprises, the best candidates for successfully expanding capital markets and fostering privatization seem EGAT, TOT, PTT (oil activities), MEA and PEA, and ETO as a candidate for employee ownership (para. 6.38).

- (f) Privatization plans should be approved by the Cabinet for each state enterprises and include some key milestones for private sector participation and for completion of the respective privatization studies. The privatization study for the main enterprise in each sector should analyze and provide recommendations for the overall sector structure and organization.