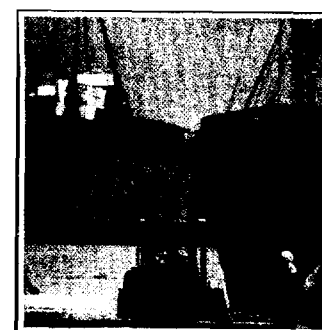
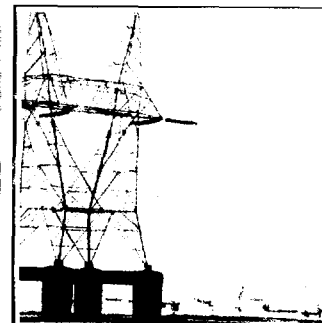


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Private Solutions for Infrastructure: *Opportunities for the Philippines*



PUBLIC-PRIVATE
INFRASTRUCTURE
ADVISORY FACILITY



THE WORLD BANK

Private Solutions for Infrastructure: Opportunities for the Philippines

A Country Framework Report

Public-Private Infrastructure Advisory Facility
and the World Bank Group

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Contents

Abbreviations	v
Acknowledgments	vi
Executive Summary	i
PART 1. CROSS-SECTORAL ISSUES	4
1. Business Environment	4
Foreign Direct Investment in the Philippines	4
Obstacles to Private Participation	5
2. The Legal Environment	6
Tax Regime	6
Foreign Exchange Regime	6
Labor Issues	7
Access to Land	7
Legislation on Foreign Direct Investment	7
3. Build-Own-Transfer and Other Mechanisms	9
Solicited and Unsolicited Build-Own-Transfer Proposals	9
Private Participation in Infrastructure outside the Build-Own-Transfer Law	10
Environmental Protection	10
4. Financial Institutions	12
The Capital Market	12
Public Sources of Debt Financing	14
Private Sources of Debt Financing	14
5. Decentralization and Institutional Capacity	15
PART 2. SECTORAL REVIEW	17
6. Power	17
Physical Performance	17
Tariffs and Financial Performance	18
Current Private Participation	18
Future Demand and Private Participation	20
Policy and Regulation	22
Risk Allocation	24

7. Water and Sanitation	25
Market Structure	25
Physical Performance	27
Current Private Participation	27
Demand Forecasts and Implications for Private Participation	29
Proposed Private Participation	29
Regulatory Framework	30
8. Telecommunications	37
Market Structure	37
Physical Performance	37
Financial Performance	38
Legal Environment	39
Current and Potential Private Participation	41
9. Transportation	42
Institutional and Regulatory Framework	42
Investment Issues	43
Private Participation	44
10. Ports	46
Market Structure	46
Physical and Financial Performance	46
Current and Potential Private Participation	46
11. Airports	49
Market Structure	49
Physical Performance	49
Current and Potential Private Participation	50
12. Heavy Rail	52
Market Structure	52
Physical and Financial Performance	52
Current and Potential Private Participation	54
13. Light Rail	55
Physical and Financial Performance	55
Current and Potential Private Participation	55
14. Roads	57
Market Structure	57
Physical Performance	57
Current and Potential Private Participation	57
PART 3. POLICY RECOMMENDATIONS	61
15. Proposed Action Program	61
Reduce Dependence on Government Financial Resources	61
Rationalize Institutional and Legal Processes	63
Strengthen and Deepen Sectoral Reforms	64
References	69

Abbreviations

ASEAN	Association of Southeast Asian Nations
ATI	Asian Terminals, Inc.
ATO	Air Transport Offices
BLT	Build-lease-transfer
BOO	Build-own-operate
BOT	Build-own-transfer
BT	Build-and-transfer
EDC	Economic Development Corporation
ERB	Energy Regulatory Board
IOD	Investor-owned distributor
JICA	Japan International Cooperation Agency
LRTA	Light Rail Transit Authority
MRT	Metro Rail Transit
MRTA	Metro Rail Transit Authority
MWSS	Metropolitan Waterworks and Sewerage System
NEA	National Electrification Administration
NEDA	National Economic and Development Authority
NPC	National Power Corporation
PEA	Philippines Estate Authority
PLDT	Philippines Long-Distance Telephone Company
PNCC	Philippine National Construction Corporation
PNOC	Philippines National Oil Corporation
PPA	Philippines Ports Authority
PNR	Philippine National Railroad
REC	Rural Electricity Cooperative
teu	Twenty-foot equivalency unit
WAPCO	Wage and Position Classification Office

Acknowledgments

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

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

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The report was initiated by Vinay Bhargava, World Bank Country Director for the Philippines, and prepared by a core team led by Aldo Baietti (team leader)

and Russell Muir (Country Framework Report program advisor) and comprised of Jordan Schwartz (transport), Philip Gray (telecommunications and power), Chiaki Yamamoto (water and cross-sectoral issues). In addition, Aloysius Ordu provided in-country coordination and technical support to the team. The report also draws on inputs from the local consultants of Urban-Rural Balance, Incorporated, led by Apolo Jucaban and Gilbert Llanto; other development institutions; and representatives of the private sector. Members of the World Bank Philippines Country Team, including Heidi-Hennrich Hanson, Vijay Jagannathan, Sanjay Dhar, Sally Burningham, and Selina Shum peer reviewed the process and provided quality control inputs to various report drafts.

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Executive Summary

The Philippines has led many of its East Asian neighbors in creating a policy environment that is conducive to private sector participation in infrastructure. Together with a strong commitment to generating results, this policy environment produced an impressive record of private sector transactions in a relatively short period of time.

The Philippine government has been committed to private participation in infrastructure since the early 1990s, when it sought to boost the country's competitiveness by improving key infrastructure services while relieving itself of the significant fiscal pressures associated with national infrastructure development programs. The private sector policy was first adopted in the early 1990s, with the establishment of the Committee on Privatization for the disposal of large public industrial and infrastructure enterprises. Further progress was made when the government passed the build-own-transfer (BOT) law—the first such law in the region. The BOT law opened the door to private participation in infrastructure in the Philippines by establishing a transparent, competitive process for BOT schemes.

Private Participation Has Been Strong in Several Sectors

The Philippines has attracted private participation in infrastructure in several key sectors. Notable successes include greenfield projects for bulk power generation, the concessioning of Manila's water supply and sanitation systems, and the long-term leasing of Manila's con-

tainer terminal facilities. Successes have been more limited in other sectors, in regions outside of Manila, in service-level transactions, and in privatizations that would likely have involved more extensive and politically charged sectoral reforms. Notwithstanding these limitations, the Philippines' record for private participation in infrastructure sets it apart from the rest of the region and establishes a strong foundation for future progress. Some progress has been made in every sector.

Power

The Philippines has gone farther than most Asian countries in attracting private capital to its power sector. It has contracted 33 projects, augmenting capacity by 5,533 megawatts. In addition, private distributors have contracted for another 518 megawatts of capacity. There are several private distributors of power, including the largest, Meralco, which distributes power in Manila and the surrounding area. The government plans to privatize the National Power Company's remaining power facilities and its transmission system as part of its power restructuring plan. The Electricity Industry Reform Act, which would facilitate the new reforms, is currently pending before Congress.

Water

Two concessions for Manila's water system reached closure in July 1997. The projects will involve estimated investments of about \$7 billion over 25 years. A joint venture for water installations in Subic Bay was awarded in April 1997. Another concession, which had been

awarded to the Clark Development Corporation in March 1996, was terminated in April 1999. Several unsolicited proposals, mainly for bulk water supply, are pending. Under the Local Government Unit Urban Water and Sanitation Project, headway is being made to bring in the private sector through lease arrangements in small towns.

Telecommunications

Until the telecommunications sector was liberalized, the Philippines Long-Distance Telephone Company had a monopoly; investment was inadequate, and there was a three- to five-year waiting list for phone service. Liberalization of the sector began in 1993, when 11 new licenses were awarded for basic telephone, cellular, and international gateway facilities. By the end of 1998 almost 4 million new lines had been installed as a result of these licenses. The Philippines now has 76 local exchange carriers, 5 cellular providers, and many other smaller providers. There is at least a duopoly in virtually every major market in the country, and the backlog of customers has been cleared up.

Transport

Private companies operate the two major terminals for international container trade in Manila, several private toll roads are under construction or about to become operational, and a consortium of local and international investors has been awarded the right to build a major international terminal at the Ninoy Aquino International Airport. The government is also pursuing a concessioning program for Metropolitan Rail Transit Authority, the light rail operating division. The Philippines National Railways has yet to benefit from private sector participation, and Manila's attempt to build a second light rail line, LRT3, with private finance does not shift enough risk away from the public sector.

Despite Progress, Important Challenges Remain in All Sectors

Challenges as great as those the government faced in the early 1990s lie ahead. To meet those challenges, the government will need to prioritize its objectives, gain consensus among key stakeholders, and move ahead with a well-managed and coordinated effort. It will need to broaden and deepen reforms and create an environ-

ment in which private participation in infrastructure can be replicated across sectors, throughout the country. Three types of reforms will be critical: sector-specific reforms, financial reforms, and institutional reforms (figure 1).

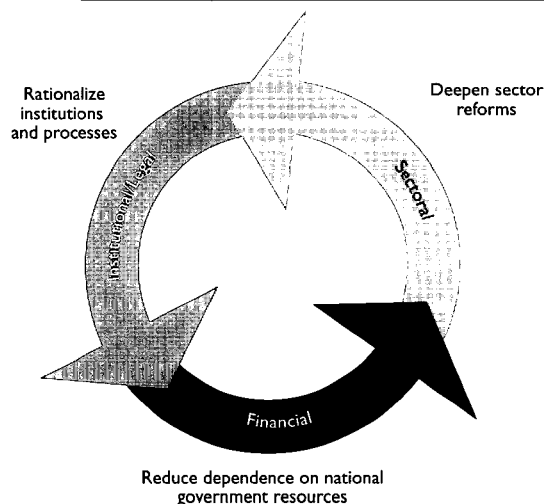
Since the early 1990s several different schemes and institutions have proliferated to promote investment in the Philippines. The result has been redundant incentives, conflicts among multiple authorities, and duplication of efforts. Currently, the Board of Investments, the Bases Conversion Development Authority, the Philippines Economic Zone Authority, and regional investment councils all promote investment. The Department of Trade and Industry has developed several measures to eliminate redundancies, but these measures have yet to be evaluated by the government or implemented.

The Philippine government has demonstrated a clear commitment to expanding the role of the private sector in infrastructure. It can build on that record and take advantage of the window of opportunity opened by the East Asian financial crisis by pushing forward with important sectoral reforms and the privatization of infrastructure assets.

Power

The power sector in the Philippines has gone farther than most in the region in stimulating private sector participation. Nonetheless, problems associated with

Figure 1 Proposed Three-Point Strategy for Increasing Private Participation in Infrastructure



Source: World Bank staff.

early independent power projects, which increased tariffs, and the precarious financial situation of the National Power Corporation, as well as the poor financial and managerial performance of the electricity cooperatives have led the government to plan an ambitious series of new reforms. These reforms should lead to a fully privatized and liberalized market place.

Water

Although the successful award of two concessions for the Metropolitan Waterworks and Sewerage System service area in 1997 is regarded as a model for successful water privatization, additional reforms will be needed to overcome remaining obstacles and successfully involve the private sector. The private sector has submitted many unsolicited proposals, but they focus largely on bulk supply schemes. No unsolicited projects have been approved, reflecting several problems in the sector. These problems include the sector's fragmentation and dearth of viable water systems; an unclear regulatory regime, in which responsibilities are allocated to various agencies; and lack of adequate resources by local governments. The government is currently considering a technical assistance facility to enable local governments to prepare solicited projects.

Telecommunications

Despite the introduction of competition in the sector, the Philippines Long-Distance Telephone Company remains the dominant operator. Interconnection remains a thorny issue that the regulator, the National Telecommunications Commission, has yet to resolve satisfactorily.

Transport

Although a few transport investments and projects have transferred operations to the private sector, all modes of transport suffer from a lack of coordinated planning, particularly with respect to private participation. In the port, airport, and rail subsectors, private investors continue to initiate proposals, even as state transport entities try to control or subvert their own privatization programs in the absence of a clear national strategy. Clear tariff policies that allow for cost recovery, greater independent regulation, improved integration of modal planning, a stronger commitment to right-of-way financing, and a new emphasis on competitive and transpar-

ent bidding will be required before the government can move to the next level of private participation in the sector.

In Addition to Sectoral Reforms, Financial and Institutional Reforms are Needed across Sectors

To reduce the burden of private infrastructure projects on government resources, the government should focus on the privatization of existing assets rather than on greenfield investments. This new emphasis is particularly important in the wake of the East Asian crisis. Where the government does contract for greenfield investments, it should attempt to take on only those risks over which it can exercise some control, minimizing its exposure to commercial risks (such as construction and market demand)—risks the private operators may be better able to mitigate.

Institutional reforms need to simplify and rationalize the design and implementation of private infrastructure projects and privatization strategies. In addition, competitive bidding procedures need to be put in place for both privatization and greenfield projects. If the government is to achieve its goal of increasing private investment in infrastructure, it will be essential to clarify the rules of the game by establishing regulators that are independent of regulated firms, consumers, and private investors on the one hand and the political authorities on the other.

PART I. CROSS-SECTORAL ISSUES

Business Environment

The Philippines has achieved one of the most impressive records in the region for promoting policies for private sector-led growth. Significant structural adjustment reforms were introduced under the Aquino and Ramos administrations in the area of fiscal and monetary reforms to liberalize trade, deregulate business activity and improve export competitiveness, promote foreign direct investment, and privatize state enterprises. Other reforms were launched in the banking sector to tighten supervision.

Investors reacted favorably, and private investment and capital inflows increased significantly. The Heritage Foundation, a policy think tank, grades the Philippines highly for creating a favorable private sector framework, giving the country's government intervention a 1, its regulation a 3, and its wage and price control a 2 on a 1–5 scale on which 1 represents outstanding performance.

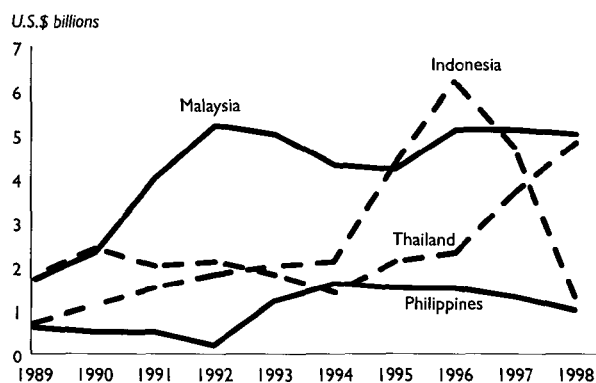
Foreign Direct Investment in the Philippines

As a result of increased political stability under the Ramos administration, improved macroeconomic fundamentals, and deregulation and other reforms, total investment inflows increased substantially in the 1990s, especially after 1993. The manufacturing and financial sectors attracted the bulk of foreign direct investment, but investment in infrastructure rose as well. According to the Philippine central bank, foreign direct investment in public utilities increased from about \$15 million in 1992 to about \$150 million in 1997. Investment in power generation was particularly great.

Despite recent growth, however, the Philippines still lags behind neighboring countries in terms of both aggregate and per capita foreign direct investment (figure 1.1). The low level of foreign investment may be attributed to several factors, including inadequate infrastructure, the high cost of unskilled labor, and the often conflicting array of investment promotion schemes and institutions.

Since the early 1990s several different schemes and institutions have proliferated to promote investment in the Philippines. The result has been redundant incentives, conflicts among multiple authorities, and duplication of efforts. Currently, the Board of Investments, the Bases Conversion Development Authority, the Philippines Economic Zone Authority, and regional

Figure 1.1 Foreign Direct Investment in Selected East Asian Countries, 1989–98



Source: World Bank 1999a.

Table 1.1 Ratings of the Philippine Business Environment

Feature	Index	Global ranking	Regional ranking
Overall rating	6.8	33	9
Political environment	5.7	35	10
Political stability	7.3	25	4
Political effectiveness	4.4	46	13
Macroeconomic environment	7.9	25	6
Market opportunities	5.5	35	11
Policy toward private enterprise and competition	6.6	33	8
Policy toward foreign investment	8.3	22	2
Foreign trade and exchange controls	8.9	8	4
Taxes	7.4	11	6
Financing	6.3	39	10
Labor market	7.2	17	6
Infrastructure	4.2	49	10

Note: Highest possible index is 10.0. Global ranking based on 60 economies. Regional ranking based on 16 economies: Australia, China, Hong Kong (China), India, Indonesia, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, the Republic of Korea, Sri Lanka, Taiwan (China), Thailand, and Vietnam.
Source: Economist Intelligence Unit 1999.

investment councils all promote investment. The Department of Trade and Industry has developed several measures to eliminate redundancies, but these measures have yet to be evaluated by the government or implemented.

Obstacles to Private Participation

Despite remarkable progress in developing a competitive private sector, obstacles to private sector growth remain. Private investors often cite the Philippines' convoluted bureaucracy. Transparency International—which, together with Göttingen University, publishes a corruption perceptions index—rates the Philippines in the bottom half of 99 countries surveyed in 1999. The Philippines ranks poorly in terms of transparency and clarity in business practices, with a corruption perceptions index of only 3.3 out of a possible 10. The Economist Intelligence Unit gave the Philippines mediocre ratings, ranking it 9th out of 16 economies in the region (table 1.1).



The Legal Environment

The Philippine legal system is based on civil law and is heavily influenced by the Spanish and Anglo-American legal systems. An independent judiciary, headed by the Supreme Court, includes an anticorruption *Sandiganbayan*, a Court of Tax Appeals, an Intermediate Appellate Court, regional trial courts, and metropolitan and municipal courts.

Although the Philippines has one of the most liberal policy and regulatory frameworks for investment in Southeast Asia, a recent survey (by the Economist Intelligence Unit) revealed that 71 percent of the 21 multinationals surveyed viewed the courts as “capricious.” A large majority of survey respondents blamed the unpredictable court system for the inhospitable investment climate. Several recent court decisions have been perceived as inconsistent, and some investors have even viewed them as corrupt. Decisions regarding the sale of the Manila Hotel, the development of the Subic Bay container port, and the setting of the South Luzon Expressway toll rates are among a list of questionable transactions that have tarnished the country’s reputation.

Tax Regime

Investors in the Philippines are subject to both national and local taxes. National taxes include a value-added tax and a gross receipt tax on certain types of businesses, including electricity and water utilities. Local taxes include a sales or gross receipts tax on certain businesses, such as manufacturing and wholesale, a property tax, and a community tax.

To expand the country’s tax base, the government adapted a comprehensive tax reform program in late 1997. The corporate income tax rate was reduced to 33 percent in 1999 and is scheduled to be cut to 32 percent in 2000. Personal income tax rates were restructured into six bands, ranging from 5 to 35 percent of annual income.

Foreign Exchange Regime

Foreign exchange regulations were relaxed in 1993 (Central Bank Circular 5). Under the new regulations, foreign exchange can be freely sold and purchased outside the banking system. In addition, foreign exchange receipts, acquisitions, or earnings may be retained and deposited in foreign currency accounts, either in the Philippines or abroad. They may also be sold for pesos to any agent, including unauthorized agent banks or agents outside the banking system. Proceeds of foreign loans and foreign investments must be sold to authorized agent banks for pesos.

Under the new rules foreign investments registered with the central bank or with a custodian bank designated by the foreign investor are entitled to full and immediate capital repatriation, dividend, interest, and remittance privileges. Without prior approval authorized agent banks can sell the foreign exchange equivalent to sale or divestment proceeds, dividends, or interest of duly registered foreign investments by submitting confirmation document and other required supporting documents to the central bank. Direct foreign equity

investment registered with the Securities and Exchange Commission or the Bureau of Trade Regulation and Consumer Protection (BTRCP) is deemed registered with the central bank upon the recommendation of either agency. Previously, companies had to apply to the central bank for approval and registration of their foreign investments. Direct foreign equity investments not required by law to be registered with the Securities and Exchange Commission or the BTRCP are registered with the central bank, which issues direct investment registration documents.

Labor Issues

The laws on labor standards and employment relations are consolidated in the Labor Code of the Philippines, as amended by 19 presidential decrees, 8 executive orders, 4 *batas pambansa*, 13 Republic Acts, and numerous other labor-related laws and social legislation that supersede or otherwise repeal some of its provisions. Wages and salaries in the Philippines are high relative to per capita income. Remuneration levels are close to those prevailing in Thailand, where per capita income is more than twice that of the Philippines, and are significantly above those in Indonesia, which has a similar per capita income (table 2.1). The recent depreciation has reduced the wage gap with China and Vietnam but not with Indonesia.

Republic Act 6727 of 1990 rationalized the structure of minimum wage adjustments in order to reflect regional and intraregional disparities in the cost of living. The minimum wage rates for nonagricultural workers are determined by the regional Tripartite Wages and Productivity Board.

Gross value-added per worker stagnated across all sectors between 1990 and 1995 (Department of Labor and Employment). According to the Washington Sycip

Policy Forum—a business study group that met with private investors in the Philippines in March 1999—investors rank availability of skilled labor and adaptability of workers in the Philippines higher than they do for its neighbors, including Singapore and the Republic of Korea, but report that the rigid labor environment is one of the greatest deterrents to operating in the Philippines.

Access to Land

Only Philippine nationals or corporations with at least 60 percent Philippine equity can own land in the Philippines. Foreign investors can lease commercial land on which they operate for 50 years, renewable for an additional 25 years. The Investors Lease Act of 1993 (Republic Act 7652) extended the maximum duration of land leases by foreign investors from 50 to 75 years. Under the new law, any foreign investor investing capital in the Philippines can lease private land as long as the lease contract is originally for 50 years, is renewable only once for another 25 years, the leased area will be used solely for investment, and the lease conforms with the comprehensive Agrarian Reform Law and Local Government Code. Foreigners can own office space as long as no more than 40 percent of a building is foreign owned.

Legislation on Foreign Direct Investment

The Philippine government has liberalized investment, deregulated trade, and reformed tax and tariff regimes to attract foreign capital. Several laws have been passed to encourage foreign investment, starting with the Omnibus Investment Code of 1987 (Executive Order 226). The Code, which is implemented by the Board

Table 2.1 Average Wage Levels in Selected East Asian Countries, 1996
(U.S. dollars)

Country	Unskilled workers (per day)	Skilled workers (per day)	Technicians (per month)	Engineers (per month)	Middle management (per month)
China	2.5	—	—	—	—
Indonesia	2.0–3.0	6.1	250	380	560
Malaysia	8.0	13.3	578	1,395	1,992
Philippines	4.0–6.7	7.0–9.2	350–550	650–962	1,076–1,307
Thailand	5.1–6.1	6.6–7.3	282–560	584–749	700–1,221
Vietnam	1.3–1.4	2.2–2.4	100–185	195	220

— Not available.

Source: World Bank 1997.

of Investments, provides fiscal and nonfiscal incentives to investors in sectors specified in the annual investment priorities plan. Investors are also eligible for incentives offered under the Special Economic Zone Act of 1995 (Republic Act 7916), the Bases Conversion and Development Act of 1992 (Republic Act 7227), and the Export Development Act of 1994 (Republic Act 7844).

The Foreign Investment Act of 1991 (Republic Act 7042) allows up to 100 percent foreign equity participation in all sectors except those that appear on the Foreign Investment Negative List. The list includes activities reserved to Philippine nationals, either by mandate of the Constitution and other specific laws or for reasons of security, defense, health, morals, or protection of small and medium-scale enterprises. The Second Regular Foreign Investment Negative List of 1996 (Executive Order 362) specifies that up to 40 percent foreign equity is allowed in public utilities and build-own-transfer (BOT) projects requiring a public utilities franchise.

3

Build-Own-Transfer and Other Mechanisms

The Philippines stands out as one of the few developing countries that has created an explicit legal framework for build-own-transfer (BOT) projects. The policy toward private participation in infrastructure was originally prompted by a looming power crisis in the late 1980s and early 1990s. In 1987 the government passed Executive Order 215, which abolished the monopoly of the National Power Corporation and provided incentives for private investors to enter the power sector, which was experiencing massive shortfalls in generating capacity. In 1990 the government passed the first BOT law in Asia (Republic Act 6957). In 1994 that act was replaced with Republic Act 7718, which increased the number of variants of the BOT concept. The same year the BOT Center was created under the Coordinating Council for the Philippine Assistance Program. The center is designed to facilitate BOT transactions by promoting the country's BOT program and providing training and expertise to implementing agencies, local governments, and the private sector.

The BOT law has increased private investment in infrastructure in the Philippines by:

- Expanding private sector participation in infrastructure development in sectors other than power, including telecommunications, ports, toll roads, airports, and water utilities.
- Relaxing the 60 percent Philippine ownership requirement for operating infrastructure projects not classified as public utilities.
- Relaxing the requirement that all private sector construction contracts be awarded to companies whose capital is at least 60 percent Philippine owned.
- Preventing the use of explicit government guarantees and limiting the use of public funds so that no more than 50 percent of the total project cost can come through government financial institutions.
- Delegating Congress' approval authority to the executive branch.
- Allowing implementing agencies to consider unsolicited project proposals and to negotiate proposals directly with the private sector under certain conditions.

Solicited and Unsolicited Build-Own-Transfer Proposals

BOT projects can be solicited or unsolicited. In theory, solicited proposals are identified and endorsed by implementing agencies (ministries, local governments, government-owned and -controlled corporations) as "priority projects" that correspond to the government's medium-term public investment program. Projects whose costs exceed P200 million require approval from the National Economic and Development Authority (NEDA). Once NEDA confirms their priority status, the projects are advertised for bidding. Pre-qualification is usually done before the bid, although the advertising of the prequalification tender and the bid can be handled simultaneously for smaller BOT projects. NEDA prefers solicited projects and considers unsol-

olicited projects as “priority projects” only in exceptional cases.

However, many implementing agencies feel that unsolicited projects in which investors undertake the necessary feasibility studies are the only viable way to get BOT projects started and thus propose very few projects to NEDA. About half of the proposals that are submitted are deemed incomplete and returned by NEDA for revision. The lack of complete proposals reflects several problems. First, authority over the BOT process is poorly defined. The responsibility of different implementing agencies overlaps, and there is little coordination among them. Second, even when institutional responsibility is clearly defined, implementing agencies, particularly at the local level, lack the knowledge and expertise to conduct feasibility studies. The lack of funds for outside consultants makes it difficult for agencies to solicit project bids.

As a result of these constraints, implementing agencies tend to favor official development assistance financing, which appears simpler and more convenient to most implementing agencies. Consequently, most BOTs outside the power sector have been unsolicited.

To be accepted, unsolicited projects must involve a new concept or technology. They must not be listed as priority projects, and they must require no direct government guarantee, subsidy, or equity. All unsolicited proposals must receive NEDA approval, regardless of the cost. The submission of the bid is made in two separate envelopes, one including the technical proposal and the other the financial proposal. The technical proposal is evaluated first. Financial proposals are evaluated only for bids whose technical proposals are satisfactory.

Unsolicited proposals are subject to a “Swiss challenge”—that is, the responsible government agency must advertise the project for competitive proposal for three consecutive weeks and allow other investors to make better offers for a period of 60 working days. If a lower-priced alternative is submitted, the original bidder has the right to match the price within 30 working days.

In theory, the Swiss challenge overcomes the lack of competition associated with unsolicited projects. In practice, however, it is ineffective. Competitors perceive their chance of winning the contract over the original proponent as extremely slim given the limited time for them to develop the necessary feasibility work and the

close relationship already established between government officials and the original bidder during the negotiation period. For their part, the implementing agencies often view the challenge as a mere bureaucratic hurdle to be cleared to fulfill the Swiss challenge requirements. To date, the Ninoy Aquino International Airport International Passenger Terminal has been the only case in which an investor successfully managed to challenge a project within this framework.

Private Participation in Infrastructure outside the Build-Own-Transfer Law

Agreements for privatizations or joint ventures with state-owned companies can be reached independently of the NEDA Investment Coordinating Council evaluation and approval process. Based on their own charters, for example, the Philippines National Railroad, the Philippine National Construction Company, and the Public Estates Authority have the right to grant franchises for the construction and operation of road and rail transport infrastructure. In the transport sector, only one project went through the official BOT process; three major joint ventures were concluded outside the BOT framework. In the water sector, before the decision to privatize, the Metropolitan Waterworks and Sewerage System received 50 unsolicited proposals, four of which resulted in Memoranda of Understanding for the exclusive rights to undertake the technical and financial feasibility studies for specific water source development projects.

Since the revision of the BOT law broadened the concept of private participation in infrastructure, substantial duplication has existed between the roles of NEDA and the committee on privatization. Coordination of these projects and BOT projects remains a challenge for the government.

Environmental Protection

The government is beginning to take environmental protection more seriously. The Philippines Environmental Impact Statement System (Presidential Decree 1586) requires that projects that may affect the environment, including infrastructure projects, secure environmental compliance certificates from the Environment Management Bureau of the Department of Environment and

Natural Resources. Prospective private investors conduct environmental impact assessments to ensure that all possible environmental effects of the project are addressed and that the project is consistent with the Philippines' goal of sustainable development. Depending on the location and nature of the project, the prospective investor prepares an environmental impact system or an initial environmental examination. The final report is submitted to the Department of Environment and Natural Resources together with other documents, such as endorsements of the project from local government officials. After its review, the Department of Environment and Natural Resources decides on the issuance or denial of an environmental compliance certificate, without which the project cannot be implemented legally.

A key element of the environmental compliance certificate approval process is social acceptability, which requires prospective investors to secure approval from local communities. The environmental compliance certificate typically includes a number of conditions that the investor must meet during the construction and operation phases of the projects. It also identifies all other applicable environmental laws, regulations, or guidelines with which the investor must comply to ensure the implementation of the project.

4

Financial Institutions

The Philippine financial system is classified into two broad groups of institutions, banks and nonbanks. Banks, which are supervised by the central bank, are authorized to accept demand, savings, and time deposits. They are divided into commercial, thrift, and rural banks. With 83 percent of total financial sector assets (excluding the assets of the central bank) in 1997, the banking sector (particularly commercial banks) dominates the Philippine financial system. Better macroeconomic performance and intensified competition have improved credit availability and terms. Although most of the resources available to them are short term, banks have been increasingly willing to meet corporate requirements for credit with maturities of three to seven years.

Nonbanks include insurance companies, investment houses, finance and investment companies, venture capital firms, securities dealers, pawnshops, lending investors, and a variety of other intermediaries and financial services firms. The contractual savings institutions include the government-owned Social Security System, the Government Service Insurance System, and the Home Development Mutual Fund; personal and employer-sponsored pension funds; and private insurance and preneed firms. The system also includes specialized institutions, such as the Philippine Deposit Insurance Corporation, the Philippine Crop Insurance Corporation, the Home Insurance and Guarantee Corporation, and the Philippine Health Insurance Corporation. The largest nonbank financial institutions are the Social Security System and the Government Service Insurance System, with combined assets of about P250 billion.

Given its size and expected growth, the long-term nature of its liabilities, and the limited prospects for a lengthening of the maturity structure of bank deposits, the contractual savings sector is increasingly viewed as a potential and critically needed source of long-term peso debt finance for infrastructure and industrial projects. However, restrictions on investment allocations and the types of admitted assets limit the volume of funds that can be used for long-term lending or investment in debt securities issued by private companies. In addition, government-owned institutions are required to support certain social programs; the Social Security System has also been compelled at times to buy government paper at below-market rates. Despite these problems, the pension funds are the largest holders of commercial paper (insurance companies lead the market for privately placed corporate debt). Ongoing and proposed reforms in the contractual savings sector are expected to enhance the already important role these institutions play in providing term debt.

The Capital Market

Stock exchanges have existed in the Philippines for many years. Until fairly recently, however, the equity market remained narrow, with limited public participation, low trading volumes, and a relatively small number of listed companies. The market was dominated by a few large issues and subject to considerable volatility in trading volumes and prices. Improved political stability, the implementation of economic and financial sec-

tor reforms, better macroeconomic fundamentals (including declining interest rates), growing international investor interest in emerging markets, and liberalized policies for foreign investment have helped vitalize the market in recent years. The privatization of some government corporations and the divestiture of government holdings in others has also helped increase liquidity and the number of stocks. As a result of these measures, between 1993 and 1996, \$5.4 billion in net foreign portfolio investment flowed into the Philippines, market capitalization rose nearly six-fold to \$80.6 billion (83 percent of GNP), and turnover rose by a factor of eight to \$25.5 billion (IFC 1997). Higher share prices—which lead to higher premiums—made equity issues increasingly attractive to issuers.

Despite the increase in capitalization, turnover, and investor interest, however, the market continues to be accessible mainly to a few large corporate issuers. The number of listed companies remains relatively small (216 in 1999, up from 170 in 1996), and the 10 largest index stocks account for 35 percent of total market capitalization.

The market for securitized term debt is undeveloped, as a result of lack of liquidity, the imposition of a variety of taxes that undermine both yields and liquidity, and a history of volatile interest rates. The lack of liquidity has meant that securities are largely held to maturity.

Efforts to develop a Philippine bond market have been undermined by political and economic crises. The latest efforts began in 1991, with bilateral assistance and support from the multilateral financial institutions. The most important component of this effort has been an attempt to improve the management of the economy by improving fundamentals, reducing volatility, and cutting the fiscal deficit and the government's need to borrow, thereby lowering interest rates. In addition, the government and the central bank have sought to establish benchmarks for other issuers and offer investors a wider choice of instruments and terms through the phased issuance of first floating- and then fixed-rate treasury notes of lengthening maturities. Other measures include efforts to rationalize taxes and duties and improve the functioning of the secondary market to increase liquidity. There are also plans to reform the contractual savings sector to encourage social security institutions and pension funds to invest in longer-term instruments in

order to achieve a better match between their obligations and assets.

Because banks remain cautious, most loans have maturities of two to three years, with the possibility of a rollover if necessary. Loans with maturities of five to seven years are provided only to prime corporate clients or to facilities the banks believe are exceptionally well collateralized. To avoid interest rate risks, banks charge floating rates; to avoid exchange rate risks, they match the currencies of the assets and liabilities involved.

In addition to using a part of their own resources for term lending, commercial and thrift banks also provide term loans to enterprises under special program loans from the Development Bank of the Philippines and the Land Bank of the Philippines. Under the 1987 financial sector adjustment program, the Philippine central bank agreed to gradually eliminate its direct involvement in the management of government-sponsored credit allocation programs. These programs—which were funded by the government from foreign sources or the budget—were the main sources of medium- and long-term debt funding. Administrative responsibility for these programs was transferred to the Development Bank of the Philippines and the Land Bank of the Philippines, which were given responsibility for intermediating funds from foreign official sources and wholesaling them to other financial institutions for retailing to individual enterprises on a back-to-back basis. The hope was that these funds would increasingly be supplemented by funds mobilized from the domestic capital markets and contractual savings sector. Through this mechanism, private institutions assume only credit risk, not liquidity or interest rate risk (since the loans are provided on a variable rate basis).

Limited additional term credit is also available from investment houses and financing companies. A more important source of credit is the private placement market. Much debt is placed with insurance companies through investment houses and other intermediaries. Other investors include trust funds, corporations, and societies with investment funds.

Large corporations have the option of tapping the domestic securities market by issuing commercial paper. Exceptionally strong prime corporations may also be able to tap international capital markets.

Public Sources of Debt Financing

Traditionally, local governments have turned to government financial institutions, primarily the Development Bank of the Philippines and the Land Bank of the Philippines, for their short- to medium-term credit finance requirements. Since 1985—when unpaid obligations by local governments to government financial institutions rose to P2.1 billion, triggering a cessation of lending by government financial institutions—the national government has carried out a debt relief program that allows government financial institutions to resume lending operations. As of March 1997 the portfolio of loans granted by the Development Bank of the Philippines and the Land Bank of the Philippines to local governments amounted to some P12.0 billion. The Land Bank of the Philippines, the larger lender of the two, held a portfolio of infrastructure financing of P7.076 billion, skewed heavily toward Luzon and the national capital region, which received more than 50 percent of lending to local governments. Terms of lending ranged from three to five years, although some loans had maturities of up to seven years.

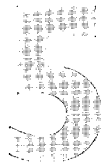
Official development assistance—either from multilateral financial institutions channeled through the municipal development fund or from loans made available through financial intermediaries or bilateral agencies—is another major source of public debt financing. Total loans extended under the Municipal Development Fund amounted to P10.7 billion as of June 1998 and included several infrastructure projects. Among bilateral sources the Overseas Economic Cooperation Fund has played a major role in providing concessionary long-term lending to water districts through the Local Water Utilities Administration (LWUA), created in September 1972 under the Provincial Water Utilities Act. As of February 1998 the LWUA had granted loans of about P12.3 billion to 462 water districts. However, the LWUA's financial position has deteriorated significantly since the national government drastically reduced its financial support through subsidies.

Private Sources of Debt Financing

Private commercial banks, municipal bond flotations, and the Philippine National Bank, which was privatized in May 1996, are the potential private sources for local

government financing. As of March 1997 the Philippine National Bank had total outstanding loans to local governments of P11.4 billion for 225 projects. The national capital region accounted for 56 percent of the total volume of loans. Before passage of the Local Government Code, private financing for local government projects was nonexistent. Recently, commercial banks have been changing their attitude toward lending to local governments in the face of growing market opportunities at the local government level, the presence of a legal framework for local government financing, and increasing comfort with more sophisticated financing structures. Establishment of a guarantee facility, like the one that is being established by the Development Bank of the Philippines, in cooperation with private banks could help promote greater private financing of local governments.

The Province of Cebu pioneered local government bond flotations in July 1990, when it issued a P300 million three-year, tax-free equity bond at an interest rate of 16 percent, with five equal semiannual principal repayments. Five more bond issues were also floated, all in the housing sector. All five issues had maturities of two to three years and paid 14–16 percent interest. Since 1990 few bond issues have been floated by sub-sovereign local governments.



Decentralization and Institutional Capacity

The lack of institutional capacity in the Philippines has become problematic as private participation has expanded beyond the power sector into water and transport. Two factors contributed to successful implementation of 25 BOT projects in power generation. First, the process was highly centralized, and it was carried out by a small number of staff within the National Power Corporation. Second, the setting of similar technical standards for power plants meant that contractual arrangements could be standardized, thus eliminating the need to enter into long negotiations. These conditions are not easily applicable to water or transport.

Since adoption of the Local Government Code of 1991 (Republic Act 7160), local governments have been given substantial financial autonomy to undertake investment transactions previously handled by the national government. Once the BOT Law enabled implementing agencies, including local governments, to develop private projects, the institutional structure of the BOT framework expanded drastically—without coordination among the Philippines' 75 provinces, 65 cities, and 21,000 municipalities. At each level of government, several agencies—including port and airport authorities, local offices of the Department of Transport and Communications or the Department of Public Works and Highways, water districts, and mayor's offices—are responsible for the various infrastructure sectors.

The Local Government Code of 1991 enables local governments to raise revenue and assume debt as a means of leveraging their financial resources in order to expand their investment envelope. This shift provides a

significant opportunity to expand infrastructure development throughout the country. Severe constraints prevent local governments from becoming credible borrowers and business partners, however. The shift in accountability to local governments requires a commensurate adjustment in the overall philosophy governing the management of resources and the measurement and assessment of financial performance. Local governments should adopt commercial financial management practices and reporting principles and shift away from appropriation accounting principles, which essentially measure performance purely as a control on spending. This shift is particularly important if local governments seek to enter into third-party transactions, such as debt financing, in which their creditworthiness will rely in great part on the accuracy, interpretation, and strength of their financial statements. As decentralization proceeds, local governments will be called on to provide their own guarantees to private sponsors and financiers. Their ability to do so will rest heavily on their financial standing and creditworthiness.

Local resource mobilization has been declining since 1991, as a result of increases in internal revenue allotment allocations and low tax assessments and business tax compliance. A World Bank analysis revealed that local governments can improve their financial performance by expanding their local resource bases and leveraging their resources. Incentives to improve financial performance at the local government level should also be emphasized and incorporated in the internal revenue allotment formula.

The Local Government Code of 1991—the legal framework for local government financing—provides for the following sources of finance:

- Internal revenue allotments, which transfer 40 percent of national internal revenue taxes to local governments based on fixed percentage allocations.
- Local taxation (primarily property and business taxes and licenses).
- Credit financing, debt service on which should not exceed 20 percent of the regular income of local governments. Local government units need not seek the Department of Finance's approval before submitting bank credit applications, and they need not have their borrowing capacity certified by the Commission on Audit.
- BOT schemes.

The main source of local government finances has been internal revenue allotments. Under the fixed percentage allocations, provinces receive 23 percent, cities 23 percent, municipalities 34 percent, and *barangays* 20 percent. Local government units' allocations are based on population (50 percent), land area (25 percent), and equal sharing (25 percent). Over the years the share of internal revenue allotment as a percentage of total local government revenues has been increasing, as local governments rely heavily on block grants rather than developing their own internal funds through property taxes and licenses. The internal revenue allocation formula heavily favors large cities, which have more financing capacity than smaller towns and can achieve greater scale economies in their investment programming. Internal revenue allocations to small towns are insufficient to finance even the basic core municipal services, thus impeding the development of infrastructure in smaller communities. In view of these problems, the national government should rethink its internal revenue allotment formula, graduate large cities, and prioritize allocations to smaller communities, which have fewer financing options than larger communities for developing their infrastructure.

PART 2. SECTORAL REVIEW

6

Power

The Philippine power industry comprises vertically integrated generation and transmission subsectors and an independent distribution subsector, made up of several larger private distributors and many rural cooperatives (figure 6.1). The National Power Corporation (NPC), also known as NAPOCOR, is the country's major generator of electricity. It generates electricity from its own power plants and purchases electricity from independent power producers. It is currently owned and controlled by the government, although its restructuring and eventual privatization is underway.

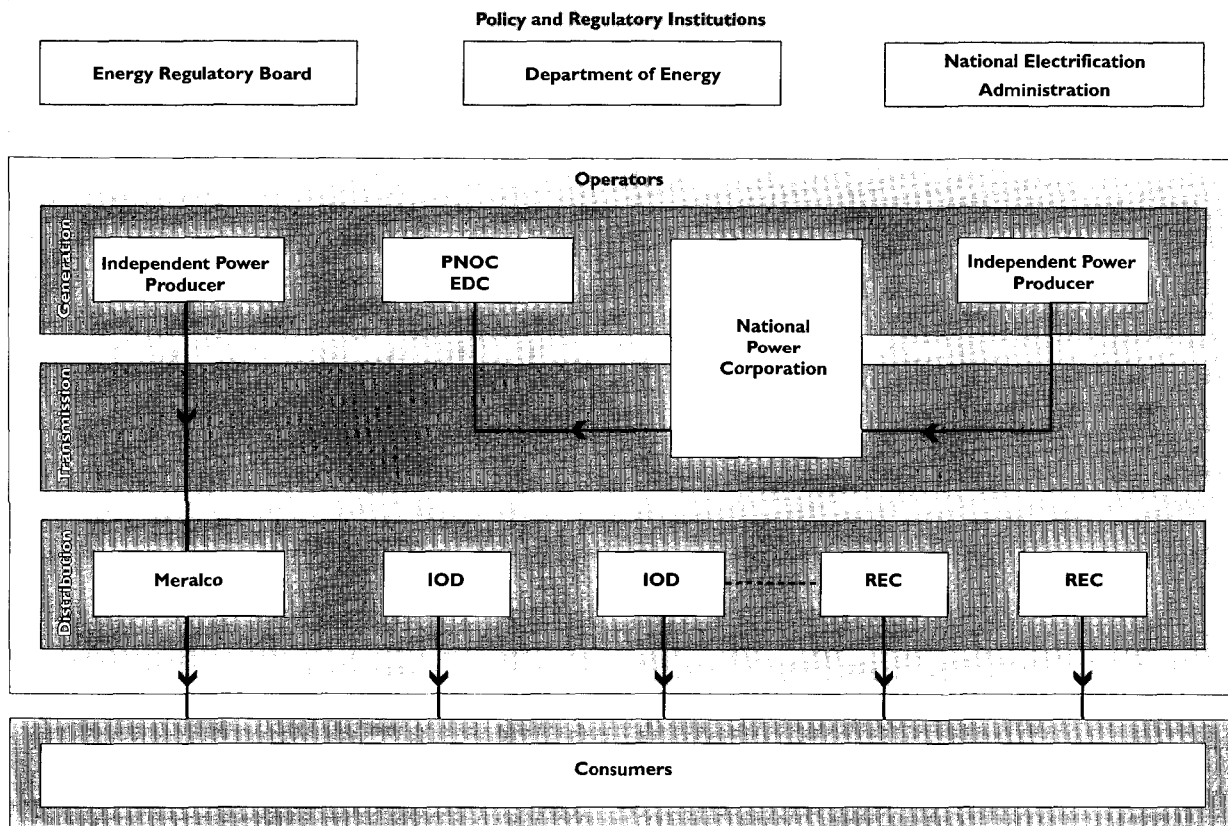
Electricity is sold wholesale to distributors and delivered through NPC's transmission network. Distributors supply retail customers. In addition to buying electricity from NPC, they also purchase power from independent power producers for sale to end users, such as households, industrial plants, and commercial establishments. Several industries are connected to the transmission network and purchase electricity directly from NPC. Other industrial users self-generate some or all of their electricity.

Physical Performance

Total generating capacity in 1998 was 11,988 megawatts, 8,619 megawatts of which (73 percent) was in Luzon. Visayas had 1,554 megawatts of generating capacity; Mindanao had a capacity of 1,552 megawatts. The remaining 263 megawatts of capacity, which is scattered throughout the archipelago, belongs

to the small island grid. Installed capacity was more than sufficient to meet peak demand in 1998 of 4,863 megawatts in Luzon, 706 megawatts in Visayas, and 852 megawatts in Mindanao, which together represented about half of installed capacity. Before 1993 NPC produced power solely from its own power plants. Between 1993 and 1998 the generation sector evolved from a monopoly to a monopsony of NPC to a de facto deregulated sector in which private power producers can sell electricity to distributors and large industrial users. In 1998 NPC sold 37,933 gigawatts and generated 40,941 gigawatts of power—equivalent to 94.5 percent of the country's electricity requirements. Half of its generation in 1998 was through power plants it owned and operated and half through purchases from independent power producers. In 1998 installed generating capacity of plants owned and operated by NPC was 6,455 megawatts and capacity by the independent power producers contracted by NPC was 5,533 megawatts, for a total generation base of 11,988 megawatts. In addition, some 518 megawatts of privately owned installed generation capacity served distributors or acted as self-generation.

The leading source of power in the Philippines is oil, which accounted for 40 percent of total generating capacity in 1998. Other sources of power include hydroelectric power, geothermal power, and coal and gas turbines (figures 6.2 and 6.3). Access to power and per capita energy consumption are higher in the Philippines than in Vietnam and Indonesia but lower than in Malaysia and Thailand (table 6.1).

Figure 6.1 Structure of the Philippines Electricity Supply Industry

Source: World Bank staff.

Tariffs and Financial Performance

The largest private distributor in the Philippines is Meralco, which covers Manila and the surrounding area. Its retail tariff is based on systems losses; operating and maintenance expenses; the cost of power purchased from NPC and its independent power producer, Dura-com; and the allowable return on its rate base. Embedded in the distributor's retail rates are cross-subsidies of residential and street lighting consumers by industrial and commercial customers (table 6.2).

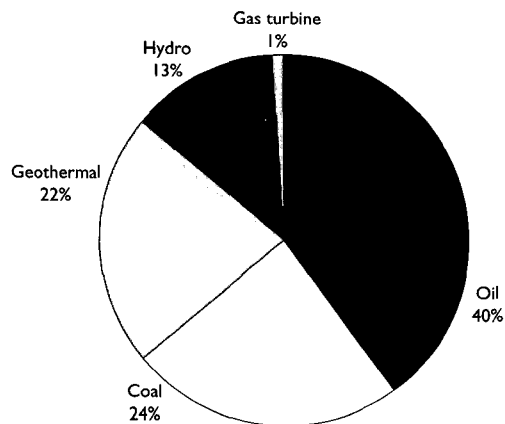
For electric cooperatives the retail tariff is based on system losses, operating and maintenance expenses, the cash required to cover power purchased from NPC, amortization of debt to the National Electrification Administration, and a provision for reinvestment. The markups of these rates, which ranged from 74 to 115 percent over the NPC rate, were much higher than those of Meralco, which averaged about 33 percent (table 6.3).

NPC, the main player in the sector, is the largest corporation in the Philippines. In 1998 it had sales of P86.6 billion and assets of P646 billion, on which it earned a 4 percent return (table 6.4). Between 1994 and 1997 NPC's net operating income averaged P12 billion, and its net income averaged P5 billion a year. In 1998 it posted a net loss of P3.6 billion and recorded total liabilities of P517 billion (figure 6.4). The Asian currency crisis highlighted NPC's heavy dependence on foreign loans.

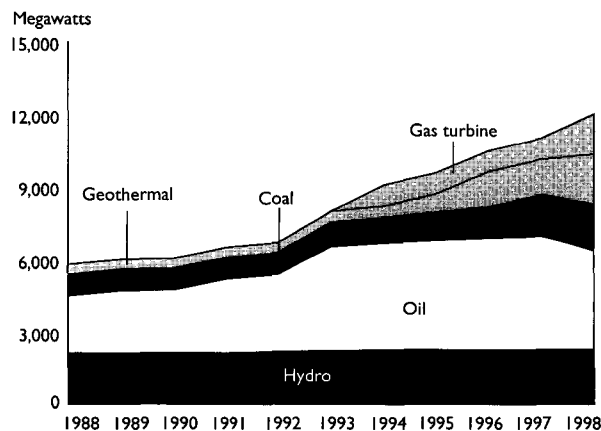
Meralco, which supplies about 60 percent of all electricity demand in the Philippines, is the other key player in the sector. A publicly listed corporation, it has been cited as one of the best-managed firms in Asia. It weathered the Asian crisis more successfully than NPC, albeit with difficulties (figure 6.5 and table 6.5).

Current Private Participation

Private sector participation in the generation sector began in 1988, when NPC signed its first BOT contract with

Figure 6.2 Sources of Generating Power, 1998

Source: Department of Energy, Philippine Energy Plan, 1998.

Figure 6.3 Generating Capacity by Type of Plant, 1988–98

Source: Department of Energy, Philippine Energy Plan, 1998.

Table 6.1 Power Sector Indicators for Selected East Asian Countries, 1997

Country	Percentage of households with access to power	Installed generation capacity (megawatts)	Electricity generation (gigawatts)	Annual per capita energy consumption (kilowatts)
Indonesia	39	14,327	61,199	315
Malaysia	92	7,319	45,453	2,032
Philippines	65	11,752	39,815	542
Thailand	87	13,003	80,068	1,294
Vietnam	15–50	4,890	19,151	161

Source: Asian Development Bank 1997.

Table 6.2 Average Power Rates Charged by National Power Corporation and Meralco, 1998 (pesos per kilowatt)

Type of customer	Rate
<i>Rates charged by NPC</i>	
Meralco	2.70
Industry	2.82
<i>Rates charged by Meralco</i>	
Residential	4.16
Commercial	4.16
Industrial	3.64
Streetlights	2.48
Average	4.00
Average markup	33 percent

Source: National Power Corporation and Meralco.

Hong Kong's Hopewell Energy Management, Ltd. for the construction of two 110-megawatt turbine power plants in Luzon, which became operational in 1991. To complete other power projects quickly, NPC looked to the private sector, which had the capital the Philippine public sector lacked. As of 1999 NPC had contracted with several independent power producers (table 6.6).

The master plan for the country's power development was based on this new thrust. NPC prepared a private power program, which became part of the Power Development Program. Eventually, a group of power projects totaling 1,016 megawatts was identified and packaged together. These fast track projects wiped out the 1,000-megawatt capacity deficit by the end of 1993. Still concerned about lack of adequate capacity, NPC embarked on the insurance capacity program. That program involved a five-year operating lease arrangement for power barges and skid-mounted generating facilities built under a build-own-operate (BOO) scheme. Almost all additional generation capacity has been undertaken through BOT and related schemes (the exception was the 600-megawatt coal-fired Masinloc power plant, the last plant to be constructed and funded by NPC). To date some 33 private power projects have been awarded, initially through negotiation but later through bidding procedures.

Table 6.3 Retail Power Rates of Electricity Cooperatives in Luzon, Visayas, and Mindana, January 1999

Rate	Luzon	Visayas	Mindanao
Average rate charged by NPC			
Electric cooperatives	2.82	2.58	1.55
Industries	0.94	2.34	1.82
Residential	5.13	4.53	3.34
Commercial	5.19	4.57	3.39
Industrial	5.20	4.63	3.38
Streetlights	5.05	4.50	3.33
Average	5.12	0.49	0.34
Difference			
Pesos per kilowatt	2.29	1.90	1.79
Percent	81	74	115

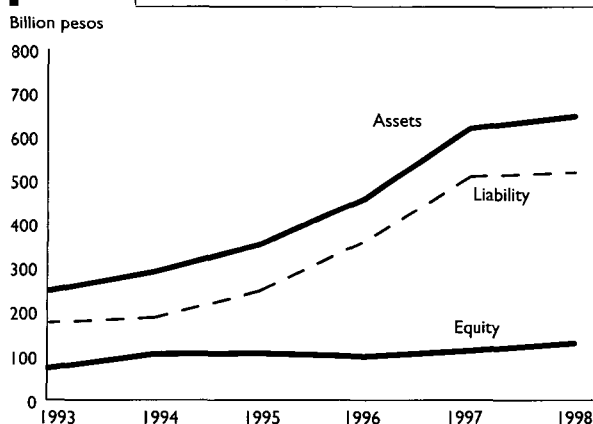
Source: National Electrification Administration.

Table 6.4 Financial Indicators for National Power Corporation, 1993–98

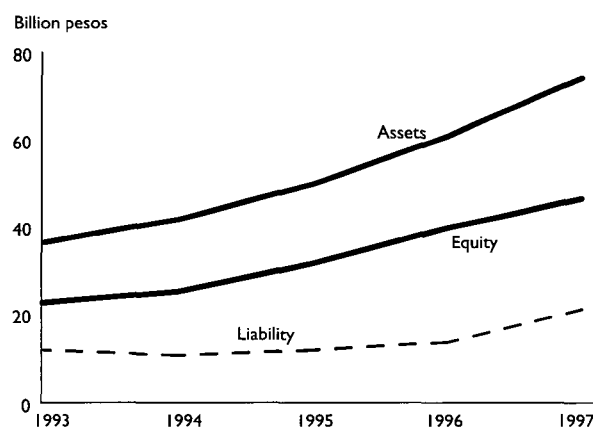
Indicator	1993	1994	1995	1996	1997	1998
Electricity sales (gigawatts)	24,805	28,746	31,031	33,381	36,442	38,067
Return on assets (percent)	5.91	8.32	7.26	8.2	7.3	4.0
Return on equity (percent)	1.89	7.16	3.69	16.7	8.0	-7.2
Debt service coverage ratio (percent)	89	126	127	120	90	92
Current assets to current liabilities (percent)	69	65	57	60	52	52
Ratio of debt to equity	86:14	78:22	84:16	90:10	93:7	94:6
Systems losses (percent)	6.8	6.1	6.8	6.3	5.9	6.4
Station use	4.0	3.4	3.4	3.5	3.5	3.5
Transmission loss	2.8	2.7	3.4	2.8	2.4	2.9

Note: Figures for 1993–97 are audited. Figures for 1998 are unaudited.

Source: National Power Corporation financial statements.

Figure 6.4 Changes in National Power Corporation's Balance Sheet, 1993–98

Source: National Power Corporation financial statements.

Figure 6.5 Changes in Meralco's Balance Sheet, 1993–98

Source: Audited financial statements of Meralco.

Future Demand and Private Participation

Opportunities for new private investment in the power sector depend heavily on how fast the economy grows. NPC's Power Development Program for 1998–2010 is based on the National Economic and Development Agency's (NEDA) GDP growth rate targets of 2.41 per-

cent in 1998, 4.46 percent in 1999, 5.2 percent in 2000, and 6.10 percent after 2000. Based on these growth rates, NPC has projected demand for electric energy and capacity through 2010 (table 6.7).

While systemwide demand for both energy and capacity is projected to grow at almost 9 percent a year, NPC's load is expected to grow at an annual rate of only

Table 6.5 Financial Indicators for Meralco, 1993–97

Indicator	1993	1994	1995	1996	1997
Electricity sales (gigawatts)	12.251	14.555	15.876	17.810	19.180
Return on equity (percent)	7.24	14.4	13.98	12.72	12.39
Ratio of current assets to current liabilities	1.50	1.86	2.01	1.89	1.45
Ratio of debt to equity	19.81	17.83	14.86	12.88	17.83
Return on rate base (percent)	7.60	13.31	13.40	12.80	—
System losses (percent)	15.60	14.80	13.02	12.39	12.40

Source: Audited financial statements of Meralco.

Table 6.6 National Power Corporation Projects under Implementation

Project	Operator	Type	Capacity (megawatts)	Project cost (US\$ millions)	Cooperation period (years)	Commercial operation date	Contract expiration date
Cascanan hydro electric plant	National Irrigation Administration	PPA	140	470	20	January 2000	January 2020
Natural gas project	KEPCO	BOT	1,200	960	20	January 2002	January 2022
Sual, Pangasinan coal fired power plant	Hopewell Holdings Ltd.	BOT	1,000	1,300	25	March 1999 (Phase I) June 1999 (Phase II)	June 2024
Mindanao II (Mt. Apo) Geo.	PNOC-EDC	PPA	48.25	152	25	July 1999	July 2024
Bakun A/B and C HEP	NMHC/Ever/AEV/ Pacific Hydro	BOT	65	83	25	January 2000	January 2025
San Pascual cogeneration plant	San Pascual Cogen Co. International	BOO	304	400	25	June 2001	June 2026
Pagbilao coal fired TPP	Hopewell Energy Ltd.	BOT	700	888	30	April 1996 (Phase I) June 1996 (Phase II)	June 2026
Caliraya-Botocan-Kalayaan HEP	IMPSA	BROT	640	450	25	January 2004	January 2029
Mindanao coal-fired plant I	State/Harbin	BOT	200	310	25	January 2004	January 2029
Timabanan	SALCON	BOT	29	39	25	January 2003	January 2028
Villa Siga	SALCON	BOT	32	37	25	January 2004	January 2029
Tagoloan II	HEDCOR	BOT	68	106	25	January 2004	January 2029
Bulanog-Batang	Under negotiation	BOT	132	205	25	January 2005	January 2030
Pulangui V	Under negotiation	BOT	225	363	25	January 2005	January 2030
San Roque multipurpose HEP	Marubeni/SIT HE/Italian-Thai	BOT	345	789	25	January 2005	January 2030

PPA—Power purchase agreement. BOT—Build-own-transfer. BOO—Build-own-operate. BROT—Build, rehabilitate, operated, and transfer.

Source: National Power Corporation.

5 percent. As market restructuring takes place and new players enter the market, NPC's market share is projected to fall from 94 percent in 1998 to 81 percent in 2000 and 58 percent in 2010.

These forecasts were based on the GDP growth rate targets issued by NEDA in January 1998. In September 1998 NEDA lowered medium-term projected growth rates to 3.5 percent in 1999, 4.5 percent in 2000, 5.5 percent in 2001, 5.6 percent in 2002, 6.3 percent in 2003, and 7.0 percent in 2004. In January 1999 it reduced its short-term GDP growth target to 2.6–3.1 percent for 1999. This decrease in GDP growth rates will have a significant affect on NPC's demand forecast.

In addition to projects under construction, NPC plans to add some 8,417 megawatts of generating capacity (table 6.8). About 5,460 megawatts, or 65 percent of the additional capacity, will be added between 1998 and 2005. About 4,100 megawatts of additional capacity is already under construction and bid evaluation. The 600-megawatt Masinloc coal-fired power plant will be the last NPC-owned plant to be put on stream. All subsequent capacity additions will be undertaken through BOT and related schemes.

Ilaguen B and Asiga's price negotiations have failed, and the bids have been rejected. The bid for Pugu was also rejected after the lone bid was found to be defec-

Table 6.7 Base-Case Forecast of Demand for Electric Energy and Capacity through 2010

Item	1998	2000	2005	2010	Average annual growth rate (percent)
<i>Energy (gigawatts) (GWh)</i>					
System	40,170	46,335	72,193	111,885	8.9
NPC	37,880	37,498	48,778	65,227	4.9
<i>Capacity (megawatts)</i>					
System	6,984	8,097	12,473	19,305	8.9
NPC	6,573	6,779	8,760	11,782	5.0

Source: National Power Corporation Power Development Program 1998.

tive. Addalam's price proposal was never opened after the technical evaluation because the project was deferred.

The only project still to be implemented is the 200-megawatt combined cycle plant for Mindanao. NPC has yet to identify 300 megawatts of additional capacity in Visayas. The remaining 2,957 megawatts for 2006–10 will consist of 257 megawatts of hydro plants, 1,350 megawatts of baseload plants, 550 megawatts of mid-range plants, and 800 megawatts of peaking plants. In addition, an annual allocation of 50 megawatts for new and renewable energy systems (solar, wind, tidal, and other renewable sources) has been provided on the condition that prices are reasonable.

Most recent contracts have been competitively bid (in contrast to some early contracts, which NPC negotiated with independent power producers). The standard NPC contract is an energy conversion agreement, under which NPC purchases all fuel and pays the generator for converting it into electricity at a predetermined heat rate. Although the industry is moving away from this type of agreement toward agreements in which plants accept some market risk, several energy conversion agreements are being planned (see table 6.8). The industry is also witnessing substantial natural gas development (box 6.1).

Policy and Regulation

Several institutions regulate the energy sector in the Philippines. The two most important institutions are the Energy Regulatory Board and the Department of Energy.

Energy Regulatory Board

Prices are regulated by the Energy Regulatory Board, which regulates both NPC's bulk supply tariff and the distributors' retail end-user tariff. Before the board was created, NPC was responsible for setting its own bulk supply tariff, the National Electrification Administration regulated the retail rates of the rural electric cooperatives, and the Energy Regulatory Board regulated the retail rates of private electric utilities.

The Energy Regulatory Board was established in 1987 under Executive Order 172. Its powers include fixing and regulating the rates of petroleum products, piped gas by franchised gas companies, pipeline concessionaires, and electric utilities and NPC. Since the oil industry was deregulated, the Energy Regulatory Board's primary responsibility has been to fix and regulate power rates. This role was enhanced under Exec-

Table 6.8 Planned and Deferred National Power Corporation Projects, as of 1998

Project	Type	Capacity (megawatts)	Fuel	Planned date for commercial operation
<i>Projects in the pipeline</i>				
Mindanao combined cycle plant	BOO	Single cycle—135 Combined cycle—200	Condensate	Single cycle—January 2001 Combined cycle—February 2002
Panay coal-fired plant	BOO	100	Coal	January 2004
Samar coal-fired plant	BOO	75	Coal	January 2005
Agus III HEP	BOT	225	Hydro	January 2005
<i>Deferred projects</i>				
Ilaguen B	BOT	88	Hydro	2008
Asiga	BOT	11.3	Hydro	2008
Pugu	BOT	52	Hydro	2008
Addalam	BOT	46	Hydro	January 20005

Source: National Power Corporation.

utive Order 215, which gave the board jurisdiction for reviewing and approving tariffs for wheeling, back-up, and maintenance power, incremental private sector generating facilities power, and reserve capacity fees; arbitrating disputes between NPC and private sector generating facilities over matters that have implications for power rates; and reviewing and approving interconnection agreements between private sector generating facilities and NPC or any electric utility.

The Energy Regulatory Board sets the bulk supply tariff so that NPC earns an 8–12 percent rate of return on its rate base. It also uses a return-on-rate-base pricing methodology to set end-user tariffs for private electric utilities. It uses a different methodology to set tariffs of the rural electric cooperatives, which are allowed to recover the costs of their annual cash flow. Acceptable expenses include the cost of purchased power from NPC as well as the nonpower costs of administration, billing, operation and maintenance, amortization of loans from the National Electrification Administration, and provision for reinvestment. Systems losses can be recovered through the tariff. For fiscal 1996 allowable system losses were capped at 22 percent. That ceiling was reduced by 2 percent a year until 2000.

Box 6.1 Development of Natural Gas in Malampaya

Shell is developing a new gas field at Malampaya at an estimated cost of \$4–\$5 billion. Reserves in the Malampaya gas field are estimated to be sufficient to provide a continuous supply of 400–450 million cubic feet per day of gas over 20 years with total reserves of about 3 trillion cubic feet. The exploration and exploitation service contract under which the field is being developed provides exemptions from many of the typical provisions included in a concession agreement. Gas production is based on contracted demand for power generation of about 3,000 megawatts. Production is expected to commence in 2002.

KEPCO, a Korean company, is building a 1,200-megawatt combined cycle plant, which it will sell directly to NPC through a power purchase agreement. First Gas Power Corporation, a joint venture between a Philippine firm and British Gas, will build a 1,020-megawatt and a 510-megawatt combined cycle plant. The output of both plants will be sold directly to Mer-alco through a power purchase agreement. First Gas is also planning to set up a local gas distribution and transmission network.

Source: World Bank 1997.

Department of Energy

The Department of Energy was established in 1992. Its functions are to prepare, integrate, coordinate, supervise, and control all plans, programs, projects, and activities of the government related to energy exploration, development, utilization, distribution, or conservation. The department's objective is to meet the sector's socio-economic and environmental goals while ensuring the reliability and security of an economic supply of energy through optimal use of indigenous resources, efficient and judicious consumption of energy, and encouragement of private sector participation in the sector.

Among the department's four bureaus, the Energy Planning and Monitoring Bureau and the Energy Industry Administration Bureau are most relevant to the electric power industry. The Energy Planning and Monitoring Bureau is responsible for preparing the annual Philippine energy plan. It requires the NPC and electric utilities to submit power development plans. The Energy Industry Administration Bureau is responsible for:

- Promoting competition in power generation.
- Accrediting private sector generating facilities, including those that will be used solely for self-generation by nonutilities.
- Monitoring private sector generating facilities' compliance with standards and revoking accreditation for noncompliance.
- Handling nonprice regulation of generators and distribution utilities.
- Resolving nonrate disputes between NPC and private sector generating facilities.
- Monitoring NPC direct connections.
- Ensuring that distributors comply with technical and financial operation standards.
- Determining power purchase rates. Together with the Energy Review Board the Energy Industry Administration Bureau is responsible for formulating a standard methodology for calculating the cost NPC avoids by purchasing power from a private sector generating facility or electric utility. For power produced from indigenous or renewable sources, the Energy Industry Administration Bureau need not use the avoided cost methodology to set tariffs.
- Collecting and disbursing funds to communities in which energy facilities are located (as required by energy regulation I-94). These funds are intended for rural electrification, environmental protection

and enhancement, and income-generating activities identified by the beneficiary communities.

Risk Allocation

Historically, the allocation of risks between private sector generators and the government was favorable to investors. With the exception of construction costs and some risks associated with the efficiency of operation and availability, the government has borne virtually all risks (table 6.9). Traditional BOT projects create liabilities for NPC and contingent liabilities for the government as the guarantor of NPC's obligations.

NPC's independent power producer program has increased generating capacity, and it has been cited as an example of successful cooperation between the government and the private sector. The program has put financial strain on NPC, however. In addition to transferring certain risks to private parties, the move from publicly to privately financed projects shifts liabilities off NPC's balance sheet. The capital lease value remains on the balance sheet, however, increasing NPC's liabilities by P230 million in 1998 (44 percent of total liabilities).

For most BOT contracts, the government negotiated the best terms it could given circumstances prevailing at the time. These contracts were negotiated under the assumption that NPC would continue to be a monopoly with the ability to pass on its costs to consumers.

The various BOT contracts have been reviewed by NPC, which found that none of them can be modified without incurring substantial penalties. A major weakness of independent power producer (IPP) contracts is the contractual buyout obligation, amounting to \$7.85 billion (based on consultant estimates assuming a total buyout of 45 executed contracts using a discount rate of 10 percent). Because in most cases NPC cannot exercise its buyout option, it has no choice but to wait for these contracts to expire unless the independent power producers voluntarily agree to NPC's request for renegotiation.

Nonetheless, several contract improvements have been undertaken by NPC in new contracts:

- Limitation of the government guarantee against fundamental risks, such as political risks. Phase-out or elimination of the government guarantee on project agreements and the guarantee on foreign

Table 6.9 Allocation of Risks in the Typical Energy Conservation Agreement

Category of risk	Risk borne by government	Risk borne by others
Construction cost		✓
Interest rate		✓
Operation and maintenance cost		✓
Plant efficiency		✓
Change in cost of equity		✓
Demand	✓	
Exchange rate	✓	
Fuel cost	✓	
Availability, convertibility, transferability	✓	
Retail tariff	✓	
Sovereign	✓	

Source: World Bank staff.

exchange convertibility if favorable investment grade ratings are sustained.

- Termination of the early completion bonus.
- Exclusion of change in law as a trigger for buyout.
- Shift of fuel supply risk to the concessionaire.
- Redefinition of political force majeure as force majeure beyond the reasonable control of parties if NPC is privatized.
- Replacement of unsolicited proposals with competitive bidding process.



Water and Sanitation

The water sector currently encompasses four main systems, each with its own legal basis and oversight responsibilities (figure 7.1). In metropolitan Manila the Metropolitan Waterworks and Sewerage System (MWSS) is responsible for water supply. In other urban areas, water utilities are operated and managed either by autonomous water districts financed by the Local Water Utilities Authority or as municipal departments of the mayor's office. In private housing developments and subdivisions, water supply systems are operated as private utilities under the supervision of the National Water Resources Board (NWRB).

Market Structure

Metropolitan Waterworks and Sewerage System

The Metropolitan Waterworks and Sewerage System Charter of 1971 (Republic Act 6234) mandates that MWSS operate and maintain water and sewerage services in metropolitan Manila as an autonomous government-owned and -controlled corporation. The system's service area covers 11.3 million people, 8 cities, and 29 municipalities, including the Rizal Province and parts of the Cavite Province. As of 1997 MWSS provided service to 7 million people, or about 10 percent of the country's population. In 1997 the government privatized MWSS by awarding two private concession contracts.

Water Districts

The Provincial Water Utilities Act of 1973 (Presidential Decree 198) allows local governments in urban

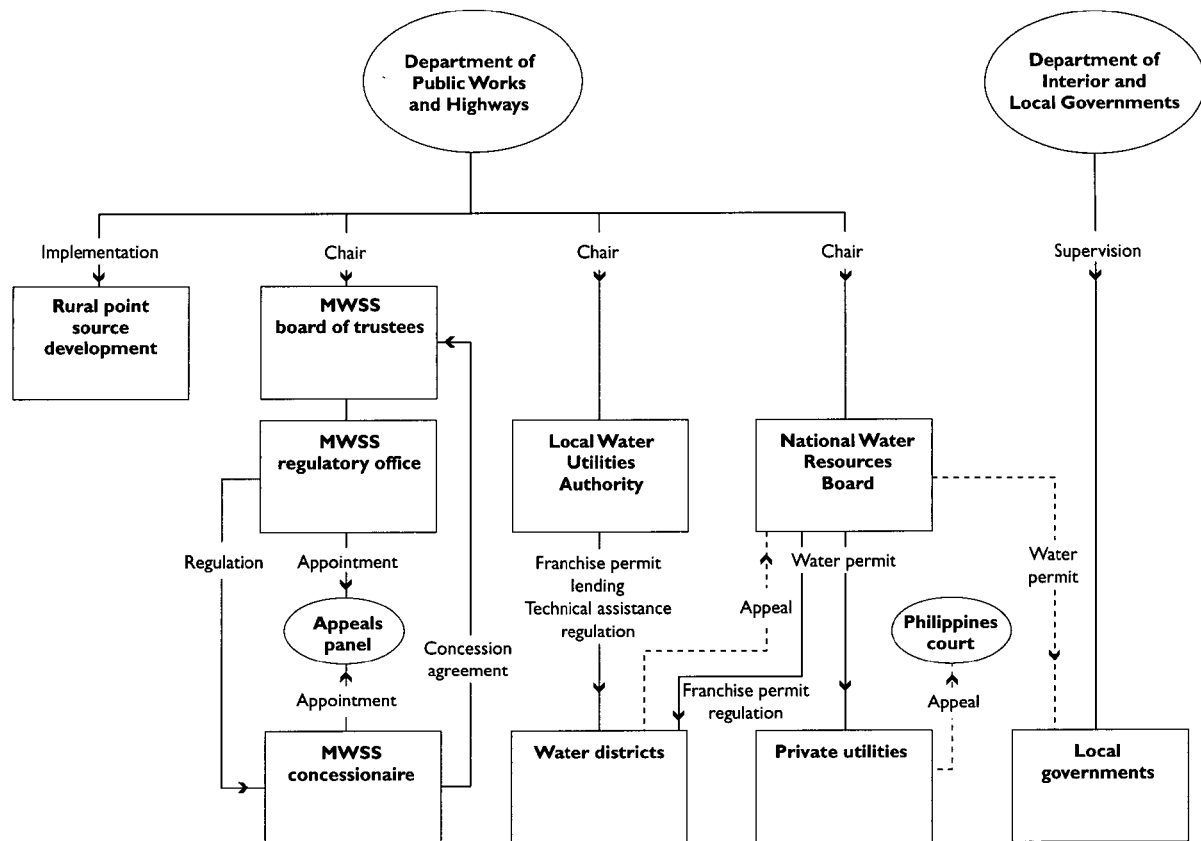
areas to establish water districts in order to source, operate, maintain, and expand water supply and waste water disposal systems. The Act also created the Local Water Utilities Authority as a special lending agency for the sector. As of February 1998 the Local Water Utilities Authority had granted concessional loans of P12.3 billion to about half of all water districts.

In the 1970s about 500 water districts were established in municipalities ranging from large secondary cities to towns with fewer than 100,000 residents. Water districts today range substantially by size. The smallest serve several hundred households. The large metropolitan water districts, such as the Cebu Water District, serve about 300,000 customers in three adjoining municipalities. Davao, Cagayan de Oro, and Baguio City are also large water districts.

Financial problems have continued to plague water districts. Fewer than 100 water districts are currently considered financially or economically viable, and most lack adequate financial capitalization for coverage expansion.

By law, board members of water districts are appointed by local mayors if more than 75 percent of the water service connections are within the jurisdiction of the municipality. In all other cases, the board is appointed by the provincial governor. Service areas of water districts generally coincide with the boundaries of municipalities, which makes it difficult for water districts to achieve economies of scale or be consistent with river basin boundaries.

Although local governments abdicate their powers when establishing the water districts, in practice they exercise a great deal of indirect influence through the

Figure 7.1 Organizations Involved in the Water Sector

Source: Authors' compilation.

appointment of board members. While the law is silent on who actually owns the assets, in 1991 the Supreme Court ruled that water districts are government-owned and -controlled corporations. The ruling has encouraged private investors to seek out national government guarantees for proposed investments, most of which have been in the form of bulk water supply BOTs. Most of the 100 pending Memoranda of Understanding for BOT projects in the water sector are within water districts, although very few are coming to closure.

In May 1999 the national government finalized a policy framework that specifies that national guarantees would be given only to cover force majeure and other sovereign risks. Since then the private sector has shown interest in participating in transactions other than BOT deals.

Systems Operated by Local Governments

Where water districts do not exist, water supply has been traditionally organized as a service function of the

municipality. Since the enactment of the Local Government Code (Republic Act 7160) in 1991, mayors have acquired the ability to finance water supply system expansions. About 1,000 local governments now operate vertically integrated water supply systems with 1,000–1,500 connections.

The Department of Interior and Local Governments encourages local governments to privatize the delivery of basic services, including water supply, through contracts between the private sector and the local government. Local government units have also been receiving unsolicited bids for BOT water projects by private sponsors.

Private Utilities

Private utilities, created on the basis of Presidential Decree 957, are typically established by developers during the construction of subdivisions. They are later transferred to homeowners associations, which assume

responsibility for their management. Close to 1 million people, or a little more than 1 percent of the population, are currently served by private utilities. These utilities typically cover 10–5,000 households, many from high-income groups. Eighty-one private utilities serve 40,000 households in metropolitan Manila and 109 private utilities serve 85,000 households in the provinces.

Private facilities often end up deteriorating because of lack of proper financial and technical support. Moreover, the proliferation of these utilities fragments an already highly fractionalized sector.

Physical Performance

Currently only a small percentage of the population is connected to piped water in the Philippines. Although the connection rate is higher in metropolitan Manila than in the provinces, the availability of piped water is uneven even within the MWSS supply area.

Overall, 83 percent of the population had access to safe water in 1996 (table 7.1). In systems managed by local governments, 63 percent of the population had access to safe drinking water and sanitation. These systems serve about 40 million people, or about 53 percent of the population. Where piped water is available, services are often restricted to less than one hour a day. Residents commonly resort to self-provisioning by investing in private wells or purchasing water from vendors at high prices to mitigate the risk of unreliable supply.

When MWSS was privatized in July 1997, targets were set to reach 100 percent coverage, achieve international quality and pressure standards within 10 years, and reach 83 percent coverage for sewerage and sanitation services by the end of the 25-year concession period. It is still too early to assess whether such standards will be met, but significant progress has already been made.

One indicator of operating efficiency, unaccounted for water, suggests that the water sector in the Philippines is suffering from significant physical losses (for example, losses from pipe breaks and overflows) and commercial loss (for example, losses from illegal connection and inadequate collection) (table 7.2). Between July 1997 and July 1998 the volume of unaccounted for water fell markedly as a result of an increase in leak repair efficiency from 45 percent to 36 percent in

Table 7.1 Access to Safe Water in the Philippines, Malaysia, and Thailand, 1995 (percent of population)

Population segment	Philippines	Malaysia	Thailand
Urban	91	100	94
Rural	81	86	88
Total	83	89	89

Note: Figures for Philippines are for 1996. Figures for Malaysia and Thailand are for 1995. Because “safe water” includes untreated but uncontaminated water, such as water from springs, sanitary wells, and protected boreholes, figures are higher than share of population served by water utilities.

Source: World Bank 1998.

the Eastern service area and from 66 percent to 57 percent in the Western service area. The increase in efficiency was also achieved through a reduction in total personnel to about 4,200 in March 1998, from 5,500 in July 1997.

Current Private Participation

With the exception of small-scale private utilities, private participation in the water sector is limited to just two cases, a joint venture in Subic Bay and the MWSS concession. The 1995 privatization of Subic Bay represented the first time the private sector participated in the Philippine water sector. Privatization of MWSS is worth reviewing in detail because of its relevance to other water districts and local governments that may be considering privatization options. Until an adequate national independent regulatory system is established, the arrangements for contractual regulation in MWSS privatization could be used as a model for water districts and local governments seeking to involve the private sector.

Subic Bay Privatization

The Subic Bay project is considered unique because it involved well-maintained and commercially operational infrastructure, which had been put in place by the U.S. Navy. It was also unique because the ability of local industrial customers to pay cost-recovering tariffs was relatively certain at the time of privatization. The service area combines the former U.S. Naval base, which had been operated by the Subic Bay Metropolitan Authority (SBMA), a government-owned and -controlled corporation, since the departure of the U.S. Navy, and the towns of Olongapo and Subic, which had been served by the Olongapo water district. Directed by a 15-member board appointed by the President of

Table 7.2 Service Quality and Efficiency across Cities, 1995

Indicator	Manila	Cebu	Davao	Kuala Lumpur	Bangkok
Production volume per capita per day (cubic meters) ^a	0.26	0.08	0.13	0.35	0.53
Consumption per capita per day (liters)	202	173	145	200	265
Water availability per day (hours)	17	18	24	24	24
Unaccounted for water (percent)	48 ^b	38	31	36	38
Staff per 1,000 connections	5 ^b	9.3	6.2	1.1	4.6

a. Based on total service population rather than population served by connections or public standpipes.

b. Figures are for 1998.

Source: Asian Development Bank 1997; Metropolitan Waterworks and Sewerage System.

the Philippines, the SBMA is the sole owner and developer of the former U.S. Navy base.

Subic Water & Sewerage Inc. is a joint venture among BiWater International (a U.K.-based water supply firm, which owns 30 percent); DMCI (a Philippine construction firm, which owns 40 percent); the Olongapo water district (which owns 10 percent); and the Subic Bay Metropolitan Authority (which owns 20 percent). The company was awarded a 25-year concession contract through competitive bidding that grants it the exclusive right to provide water supply services. The company took over the operation of the water system in April 1997 and is now responsible for water resource development, treatment, collection of tariffs, and distribution to industrial customers in the Subic Bay Free Port and to city residents in the adjacent municipality of Olongapo.

According to the agreement between the SBMA and Subic Water & Sewerage, the SBMA is to set up the regulatory office as part of its administration. This arrangement may cause a conflict of interests, because it will make the SBMA the implementing agency, operator, consumer, and regulator of water service all at the same time. Subic Water is contractually entitled to increase tariffs twice a year. After a year of private operation, however, the regulatory office has not been formed, and Subic Water & Sewerage has not been able to increase its tariff as originally planned.

Metropolitan Waterworks and Sewerage System Privatization

Before privatization MWSS faced several operational deficiencies. Nonrevenue water was as high as 60 percent. About 80 percent of these losses were estimated to be the result of leakage, with the remaining 20 percent caused by metering errors and unregistered or illegal connections. Billing and collection were poor, with gross accounts receivable equivalent to about six

month's sales. Water supply coverage was 65 percent and sewerage coverage only 7 percent for the 11 million people in the service area. Service was available 16 hours a day, and the system was heavily overstaffed. The objective of privatization was to improve the quality of services and expand coverage, increase operating efficiencies, and reduce government capital expenditure. (For a discussion of the privatization of MWSS, see MacLeod, Clamp, and Dejonckere 1997 and Kerr 1998).

Spurred by the privatization of the power sector, which ended brownouts, the Congress passed the National Water Crisis Act (Republic Act 8041) in 1995. The act established the legal framework for the privatization of MWSS and created the Executive-Legislative Water Crisis Commission, which undertook a nationwide review of the water sector. It also empowered the President to reorganize MWSS and to enter into negotiated contracts with private companies without providing financing or financing guarantees.

The MWSS service area was divided into east and west zones in order to establish independent benchmarking, even the balance of power between concessionaires and the regulator, and ensure competition in the bidding process. The privatization was done through competitive bidding in two stages, a technical bid and a financial bid for all bidders that submitted qualified technical bids. The company that offered the lowest coefficient to a predefined rate structure was to be awarded the 25-year concession, with no single company awarded the concession in both areas.

Concessionaires are required to meet predefined service targets and pay concession fees that cover the system's \$100 million a year debt repayment. The required total capital investment over the concession period is estimated to be about \$7 billion.

After privatization MWSS was split into a Regulatory Office and a Residual Office. The Regulatory

Office monitors and enforces the concession agreements and reviews water supply and sewerage rates. The Residual Office implements other MWSS projects and provides services or functions as assigned by the Regulatory Office following the concession commencement date. Both offices report to the MWSS board of trustees.

Demand Forecasts and Implications for Private Participation

Since 1994 the government has taken significant steps to restructure the country's water sector. The most recent Medium-Term Development Plan (1999–2004) aims to increase the percentage of the population with potable water supply from 78 percent to 90 percent by 2004 (table 7.3). The government estimates that expansion of coverage to an additional 17 million people will require about \$258 million of investment. This figure does not include the investment requirements for local government-operated systems or private utilities.

The water sector is currently unable to provide safe and reliable water to a majority of the population. Surveys of consumers consistently indicate that willingness to pay for safe and reliable water supply is high. Given the severe budgetary constraints faced by the national government, there is considerable potential for enhancing private sector participation in the sector.

The private sector will invest in the water sector, however, only if users are willing to support tariffs that will allow investors to earn an adequate return on their investment. In the absence of assurances that such tariffs will be supported, private operators will require guarantees for demand risk. Therefore, it is not surprising to find that private sector interest, reflected in the number of unsolicited bids, has focused on the provision of bulk water supply with off-take arrangements that allocate demand risks to the public sector.

The management and operation of existing assets in the Philippines do not reflect benchmark standards in the ASEAN region for either efficiency or cost recovery. Expansion and rehabilitation of networks has been financed on an ad hoc basis that depends on the availability of official development assistance concessionary financing through the national government. Local governments and small water districts considered nonviable have been neglected, because available resources have not been adequate to accommodate all needs. Yet studies indicate that the willingness to pay for improved services is often highest in small urban communities that have suffered decades of inadequate financing from the public sector.

Priorities for private participation in infrastructure should therefore focus on the transfer of existing assets (and the associated commercial risks) to a competitive private sector, in order to increase service efficiency and provide incentives for cost recovery. Expansion of networks should be based on willingness to pay and options for service delivery rather than on supply-driven approaches. Where those preconditions are met, private sector involvement might be sought to finance distribution assets as well as bulk supply services without providing government guarantees against market risks.

Proposed Private Participation

The sole legal basis for private participation in infrastructure in the water sector is the 1994 BOT law (Republic Act 7718). In addition to nine BOT variants specified in the law, the BOT law includes a catch-all provision that allows other contractual arrangements, including concessions and lease agreements.¹ The law distinguishes between solicited and unsolicited projects and specifies application processes for each type of project.

Table 7.3 Access to Safe Water under the Potable Water Development Program, 1998–2004

Service area	1998		2004	
	Population (million)	Population served (percent)	Population (million)	Population served (percent)
Metropolitan Waterworks and Sewerage System service area	12	63	16	90
Other urban areas	20	70	23	87
Rural areas ^a	41	87	44	93
Total	73	78	83	90

a. Water supply in rural areas includes point sources, communal faucet systems, and individual house connections.

Source: Medium-Term Development Plan 1999–2004.

Several private infrastructure projects are in preparation at the provincial level (table 7.4). With one exception in Baguio, all are unsolicited BOTs for bulk water supply. These unsolicited projects tend to remain in the pipeline for a long time, in some cases for years, for several reasons. First, unsolicited projects require substantial negotiation and review. Second, the government is less willing to commit to unsolicited than to solicited projects, because the initiative to privatize does not originate with the public sector. Third, and most important, laws and policies regarding provision of the guarantee to unsolicited projects are unclear, which substantially delays the negotiation of off-take agreements. The BOT law prohibits “direct” guarantees, or guarantees of the private company’s debt obligation for unsolicited projects, but it allows for indirect guarantees, or guarantees of minimum off-take. The government’s current policy aims to discourage increasing its fiscal exposure to private projects, however, making it reluctant to provide guarantees for unsolicited proposals.

Regulatory Framework

The government has been encouraging private sector participation in the water sector for several years. Together with the BOT law, NEDA Resolutions 4, 5, and 6 and the Water Crisis Act of 1995 create the legal framework for private involvement in the sector. NEDA Resolution 4 calls for the restructuring of water utilities so that services are provided based on consumers’ willingness to pay. It also advocates private sector participation in the water sector. This policy was reinforced by the Water Crisis Act, which vests the executive branch with special powers to reorganize sectoral agencies, induce greater private sector participation, and improve the overall institutional environment.

The government has finalized a policy paper outlining its policies for promoting private participation in water supply, including a framework under which national guarantees will be given. It is also seriously considering introducing legislation for establishing a water regulatory commission during the current session of Congress. A draft bill is expected to be ready by March 2000 for this purpose.

Sector Rules

Various rules govern the water sector, some of which limit foreign investment.

Limits on Foreign Ownership. Private corporations engaged in the extraction or sale of water to the public must be at least 60 percent Filipino owned. There are no nationality restrictions for companies that treat water in between these two stages. This policy has contributed to the proliferation of unsolicited proposals for BOT bulk water supply, which are not subject to nationality restrictions.

The following laws form the basis for these restrictions:

- *Philippines Constitution (Article XII, Section 2).* The Constitution stipulates that “water shall not be alienated” and sets a 40 percent limit on foreign ownership of any corporation that exploits or develops water sources. No agreement between the government and private corporations to use natural resources may exceed 25 years. Franchise certificates or authorization to operate public utilities can be granted only to corporations that are at least 60 percent owned by Filipinos.
- *Water Code.* The Water Code establishes the basic principles governing appropriation, control, and conservation of water resources. It gives the National Water Resources Board the authority to issue permits to source, use, and develop water. Applicants for permits must meet the 60 percent nationality requirement.
- *Department of Justice Opinion No. 100 (1994).* The Department of Justice opinion clarifies the nationality requirement by stating, “In view of the peremptory provision of the Constitution and the Water Code, a company not owned at least 60 percent by Filipino citizens may not be qualified to operate water supply facilities if it will take, divert, and pump water directly from its natural source because of the nationality requirement, but it may legally process or treat the water after it is removed from the source by a qualified person.” BOTs for bulk water supply are not covered by the nationality requirement.

Exclusivity. Water services in metropolitan Manila are provided by MWSS and small scale private utilities. The MWSS charter provides that the National Water Resources Board needs the consent of MWSS to issue a certificate of public convenience to private utilities operating within the MWSS service area. After privatization, concessionaires were granted the exclusive

Table 7.4 **Current and Proposed Private Sector Infrastructure Projects in the Water Sector**
(as of third quarter 1998)

Project	Agency	Remarks
<i>Current projects</i>		
Metropolitan Waterworks and Sewerage System privatization	Metropolitan Waterworks and Sewerage System	Western concession is held by Maynilad Water Services, Inc. Eastern concession is held by Manila Water Company Inc. Estimated project cost is \$7 billion.
Subic Water and Sewerage	Subic Bay Metropolitan Authority	Lease started in April 1997 for water system facilities of the Subic Bay and the city of Olongapo. Subic Water and Sewerage is held by joint venture of BiWater (30 percent), DMCI (40 percent), the Subic Bay Metropolitan Authority (20 percent), and Olongapo water district (10 percent). Estimated project cost is \$120 million. Contract is 100 percent peso financed through an Organisation for Economic Co-operation Fund loan arranged through the Development Bank of the Philippines. Regulatory office is not yet set up, but the Subic Bay Metropolitan Authority has tentatively established a three-member regulatory board. Request for tariff increase under review.
Clark Water Supply and Sewerage	Clark Development Corporation	Joint venture between Kemayan Corporation/Ciriaco Corporation Philippines and Clark Development Corporation took over operations of existing assets. The company failed to secure financing for \$55 million in new investments needed to expand water supply.
<i>Proposed projects</i>		
Mananga II Water Supply	Metropolitan Cebu water district	Johan Holding/G. Keng (Malaysia) proposed \$160 million build-and-transfer and BOT arrangement for bulk water supply at proposed tariff of P18 per cubic meter. Proposal received technical approval by Metropolitan Cebu water district and NEDA Investment Coordinating Council in early 1998. Concessionaire seeking Department of Finance approval for a guarantee provision in case of default by the water district. Both parties currently awaiting Department of Finance decision on the Bulacan Bulk Water Supply Project.
Bulacan Bulk Central Water Supply I	Local Water Utilities Authority	CGE/Aboitiz/SIG Construction & Industrial Corporation proposed \$165 million BOT.
Puerto Water Supply I Extension Project	Puerto Princesa water district	Lurgi Bamag GMBH/CAMS Asia, Inc. (Germany) proposed \$29 million joint venture for a bulk supply project.
Batangas Water Supply	Batangas Provincial Government	Montgomery-Watson proposed a \$5.75 million BOT project. Unsolicited proposal to establish a provincewide bulk water system.
Cavite Water Supply and Wastewater Treatment	Cavite provincial government	OMI conducting a feasibility study under a Trade Development Agency grant. Scheme for private participation in this \$412.3 million project has not been determined. Projected water tariff seen as too high by several water districts involved, and project encountered problems coordinating various municipalities.
Baguio City	Baguio water district	The only solicited project in province for a bulk water supply. Six private companies submitted financial bids, opened in December 1997. Nominal tariff required to be fixed for 25 years, with a ceiling of P11 per cubic meter (current price is P21 per cubic meter). Générale des Eaux was awarded the contract. Terms of the water purchase agreement have not been finalized.
Local Government Unit Urban Water and Sanitation Project	Department of Interior and Local Governments	First phase of project envisions construction of new water supply systems for 10 local governments with service populations of 3,000–17,000 customers. Networks to be operated by private sector under lease arrangements. Five operators prequalified, final bid documents are to be issued in May 1999.

Note: Other projects have not started the formal application process. Many Memoranda of Understanding have been signed between private companies and local governments or /water districts.

Source: BOT Center.

right to provide water and sewerage services, except in areas already served by private utilities at the time of privatization. The concession agreement stipulates that MWSS shall consent to grant a permit to third parties

only if concessionaires are either unwilling or unable to provide service at the standard rates and at substantially similar terms as set forth in the new third-party license. In addition, the duration of a new license to a

new third-party service provider cannot exceed 10 years, and it can be terminated with a minimum 60 days notice if concessionaires notify MWSS and the National Water Resources Board in writing that they are now in a position to provide the service. In effect, this provision allows concessionaires to retain an indefinite right to supply any new customer in the MWSS service area.

Once a water district is established, no other organization can supply water within its service area without the water district's consent and the Local Water Utilities Authority's approval. The Provincial Water Utilities Act provides that "no franchise shall be granted to any other agency for domestic industrial or commercial water services within the district or any portion thereof unless and except to the extent that the Board of Directors of said district consents thereto by resolution duly adopted, such resolution, however, shall be subject to review by the Administration."

Although not explicitly stated by any legislation, local governments have the de facto exclusive right to provide water services in their service areas. New entrants must obtain approval from the mayor's office to start water supply services in their jurisdictions.

Tariff-Setting Rules. Section 12 of the MWSS charter provides that rates and fees fixed by the board of trustees of the metropolitan system and by local governments for local systems "shall be of such magnitude that the system's rate or net return shall not exceed 12 percent, on a rate base composed of the sum of its assets in operation as revalued from time to time plus two months' operating capital." The concession agreement states that "subject to the limitation of Section 12, standard rates may be adjusted in the following three cases, namely, annual inflation, extraordinary price adjustment, and rebasing." The Regulatory Office is responsible for reviewing the tariff adjustment proposed by the concessionaires.

Under the concession agreement, tariffs can be adjusted annually for inflation, based on the Philippine consumer price index. Either the concessionaires or MWSS can seek an annual adjustment based on extraordinary circumstances. The concession contract enumerates 11 grounds for extraordinary price adjustments, including changes in the concessionaires' service obligations, changes in the laws that affect the concessionaires' cash flows, and foreign exchange losses (or gains)

if the foreign currency in which the concessionaires borrow appreciates (depreciates) against the peso by more than 2 percent since the debt was incurred.

Tariffs can be rebased if certain forecasts that influence the financial performance of the concessionaire—such as forecasts of demand growth, per capita consumption, operating efficiencies, or technological improvements—turn out to be grossly inaccurate. Tariffs can be rebased every five years if other tariff adjustment mechanism in the concession contracts fail to provide reasonable rates of return to concessionaires or if their rates become excessive.

There is a concern over the growing gap between tariffs charged by the concessionaires in the eastern and western zones of metropolitan Manila as a result of annual tariff adjustment. Based on different assumptions regarding the cost of borrowing and forecasts of demand, the two concessionaires started with very different average water rates (P2.32 per cubic meter in the eastern zone, P4.96 in the western zone). Because these tariffs will be adjusted by the same rate over the years, the disparity of tariff rates in absolute terms between the two concessionaires will continue to grow.

The Provincial Water Utilities Act establishes the right of the board of the water district to determine rates and charges to customers of water services according to the following principles:

- New water customers have to cover expenses for installing new services and meters.
- Revenues should recover costs of all service provided by the water district, including operating expenses, maintenance and repairs, and a reasonable surplus for replacement, extension, and improvement.
- Tariffs should cover payment of interest and principal of debt as well as establishment of "a fund for reasonable reserves."

Letter of Instruction 700 (1978) requires the Local Water Utilities Authority to "ensure that the water rates are not abruptly increased beyond the water users ability to pay" and that tariff increases not exceed 60 percent of any current rate. It also requires water districts to conduct public hearings before any proposed rate increase.

The National Water Resources Board has adopted the policy of allowing private utilities to earn no more than 12 percent on invested capital. Since Presidential Decree 957 requires subdivisions to develop their own

water supply system, it is assumed that capital expenditures for such facilities are reflected in the pricing of the lots. A private utility in any given subdivision is therefore required to initially operate on a break-even basis. The tariff is reviewed every six months. After the subdivision is fully occupied, the rate structure may change to reflect the return on investment. One of the most significant components of the tariff adjustment is the power cost adjustment, which can be passed on to water consumers. The power tariff has a currency adjustment clause, but the rate increase cannot exceed 80 percent of current rates.

The National Water Resources Board needs the consent of MWSS to grant a certificate of public conformance to a private utility operating within metropolitan Manila. As a part of the process, MWSS reviews and approves private utilities' tariff structures. According to the National Water Resources Board, private utilities' rates are currently about 10–20 percent higher than those charged by MWSS.

Access to Raw Water. The Water Code stipulates that all who wish to appropriate water, including government entities or government-owned and -controlled corporations, need to obtain water permits from the National Water Resources Board. Eligible applicants for water permits include government-owned and -controlled corporations, citizens of the Philippines, and organizations that are at least 60 percent Filipino owned. In determining whether to grant the permit, the National Water Resources Board considers the availability of water, the necessary water supply to be allocated, prior permits granted, possible adverse effects, land use issues, and any protests filed or other relevant factors.

Franchise Permit. Outside the MWSS service area, all water suppliers must obtain franchise permits to operate water facilities. Authority to grant these permits is shared by the Local Water Utilities Authority, which issues certificates of convenience to water districts, and the National Water Resources Board, which issues certificates of public conformance to private utilities. Both certificates of convenience and certificates of public conformance are issued for 10 years and establish the right of a system operator to supply water. They also fix the maximum permissible tariff. In reviewing applications for certificates of convenience, the Local

Water Utilities Authority considers various factors, including water quality, equipment, procedure of operation, and organization.

Types of Water System and Regulatory Arrangements

Different regulatory arrangements exist for each of four types of water supply systems in the Philippines.

Metropolitan Waterworks and Sewerage System. The concession agreements for the MWSS service area established the MWSS Regulatory Office. The office is responsible for regulating all aspects of water supply operation, including tariff setting, water quality, and environment standards. The concession agreements recognize that the Regulatory Office is under the jurisdiction of the board of trustees, but they vest the Regulatory Office with certain powers without specifying the degree of control by the board of trustees.

A three-member appeals panel is created to resolve disagreements arising out of the concession agreement. The Regulatory Office and each concessionaire appoint one panel member for each rebasing period. All panel members must be residents of the Philippines. In case of major disputes between the concessionaires and MWSS, the concessionaires jointly agree on the appointment of one member to an appeals panel. The President of the International Chamber of Commerce designates a third member, who chairs the panel. (Major disputes include appeals over rebasing, determinations of grounds for extraordinary price adjustments, the calculation of the termination amount or the amount and price of bulk water transported from west to east, the delegation of responsibilities between the two concessionaires in the joint venture, and notices of termination.) The panel renders a binding decision within 90 days. Concessionaires waive further appeals and MWSS waives its sovereign immunity.

To improve the regulatory framework for future concessions in the sector, several issues need to be addressed:

- *Legal foundation for regulation and autonomy.* The current framework does not establish regulatory oversight outside the contract; by consent of MWSS and the concessionaires, the Regulatory Office could simply be disbanded. Moreover, the legal basis for the creation of a regulatory office cannot be used for future concessions in water districts and local governments. The Regulatory Office is not autonomous

of the parties to the contract. The concession fee is set to cover the cost of the Regulatory Office, salaries for 60 professional staff, staff training, and hiring of outside consultants to help the office with the frequent and resource-intensive tariff review process. The board of trustees is responsible for allocating the budget, however, and appointing regulators. It remains to be seen whether the Regulatory Office can maintain an arm's-length relationship with MWSS.

- *Terms of appointment.* The concession agreement provides that the Regulatory Office be composed of five members with fixed five-year terms. The term of appointment of two of the four initial members is three years, however. If the regulators are entitled to the same job security as employees of the old MWSS and the MWSS Residual Office, they may be entitled to hold their positions until they reach retirement age or resign.
- *Structure of the Regulatory Office and decisionmaking among regulators.* The Regulatory Office comprises the chief regulator and four other regulators, who are organized along technical rather than functional lines (legal, technical, customer service, financial). Multidimensional regulatory issues therefore become the responsibility of more than one regulator. Although regulators might promote possibly conflicting interests, they must reach consensus in order for the office to make a decision.

Systems Operated by Local Governments. As the agency responsible for coordinating the water resource development, the National Water Resources Board is supposed to issue water permits and certificates of public conformance to local governments operating water supply systems. In practice, most local governments started developing water resources and operating water supply systems without obtaining permits or certificates of public conformance. Many systems operated by local governments were created during the water crisis in the early 1990s, when the government supported the establishment of water systems whether or not local governments held certificates of public conformance.

Regulatory responsibilities over local government-supplied services are not clear. Presidential Decree 1206 gives the National Water Resources Board the mandate to regulate and control the oper-

ation of public water supply services outside the jurisdiction of MWSS, the Local Water Utilities Authority and water districts. The Local Government Code, however, lists water supply systems as one of the responsibilities of autonomous and self-regulating local governments.

Water Districts. The Provincial Water Utilities Act created the Local Water Utilities Authority and the water districts. The Local Water Utilities Authority is attached to the Office of the President and administratively reports to the Department of Public Works and Highways. With about 800 personnel, it is mandated to act primarily as the specialized lending institution to the water districts. It is also responsible for issuing certificates of conformance; regulating water tariffs, water quality, and customer services; and providing technical assistance to water districts. Water districts need to obtain water rights from the National Water Resources Board, which arbitrates disputes between the water districts and the Local Water Utilities Authority.

Since the enactment of the Local Government Unit Code in 1991, water districts have been given the option to self-regulate their water tariffs and to design, construct, and operate and maintain standards once they repay all obligations to the Local Water Utilities Authority. Section 530 of the Local Government Code provides that "all powers, functions, and attributes granted by Presidential Decree 198, otherwise known as the Provincial Water Utility Act of 1973, to the Local Water Utilities Authority may be devolved in total to the existing local water district should they opt or choose to exercise, in writing, such powers, functions, and attributes: "Provided that all obligations of the local water district concerned to the Local Water Utilities Authority shall first be settled before said devolution." This language impedes privatization of the water districts, because it is difficult to settle all existing debt before a transaction. No water district has become self-regulating.

Private Utilities. As mandated under Presidential Decree 1206, the National Water Resources Board regulates and controls the operation of public water supply services outside the jurisdiction of MWSS and the Local Water Utilities Authority and water districts. Within the MWSS service area, the National Water Resources Board can

issue certificates of public convenience to private utilities with the approval of MWSS. In addition to granting the relevant water rights, the board issues certificates of public conformance to private utilities. In practice, because of staff shortages, the National Water Resources Board does not actively enforce standards, especially outside Manila, where it relies on employees of the Department of Public Works and Highways and National Irrigation Administration for on-site inspection.

Regulatory Agencies

Three institutions have primary responsibility to regulate the water sector in the Philippines. These include:

- National Water Resources Board.
- Local Water Utilities Authority.
- Metropolitan Waterworks and Sewerage System.

In addition, Department of Interior and Local Governments and Department of Public Works and Highways have some oversight responsibilities (see figure 7.1).

National Water Resources Board. The National Water Resources Board coordinates water resource development and management. It issues water rights to all water suppliers and certificates of public conformance to local private utilities. It also regulates private utilities' tariffs and water quality.

The 10-member board is chaired by the Secretary of the Department of Public Works and Highways. The nine other board members are the Secretaries of the Departments of Agriculture, Environment and Natural Resources, Health, and Trade and Industry; the director general of the National Economic and Development Authority; the president of the National Power Corporation; and administrators of the National Irrigation Administration, MWSS, and the Local Water Utilities Authority.

The National Water Resources Board is divided into five divisions:

- Policy and Program Division, which formulates policies on water resources development.
- Water Rights Division, which grants water rights.
- Water Utilities Division, which grants waterworks franchise permits and evaluates rates applied by private utilities.
- Monitoring and Enforcement Division, which monitors compliance with water rights and certificates of conformance.
- Administrative and Financial Division.

Local Water Utilities Administration. The Local Water Utilities Authority functions as the creditor, consultant, regulator, and procurement agency for water districts. Up to 80 staff members work in a regulatory capacity, with personnel sent to water districts to validate the data submitted by the districts.

The Local Water Utilities Authority has faced severe financial difficulties. Its loan portfolio is highly concentrated, with the 20 largest water districts accounting for 80 percent of its outstanding loans. Despite the continuing government subsidy, the agency faces an extreme liquidity squeeze and working capital shortage. It has also been heavily dependant on external financing, although it is currently unable to provide the needed counterpart funds to mobilize new financing, seriously constraining its ability to expand its investment lending and fulfill its mandate.

With the exception of the general manager of the Local Water Utilities Authority, who is appointed by the board of trustees, the five-member board is appointed by the President. The members elect a chair. One trustee must have at least 10 years experience in banking, finance, or business; one trustee must have a background in economics; and one must have experience in managing systems operations. Two trustees must be civil or sanitary engineers, and no more than one trustee may represent a utility owned by private investors. At least three of the trustees must be government employees. Trustees are appointed for five years, and their appointments are staggered.

Metropolitan Waterworks and Sewerage System Regulatory Office

The Regulatory Office is established by the concession contracts for the MWSS service area and comprises the chief regulator and four regulators. One regulator each is responsible for financial, technical, legal, and customer services issues. The Regulatory Office reports to the MWSS board of trustees, which appoints regulators and allocates the budget to the Regulatory Office. The board of trustees is chaired by the Secretary of the Department of Public Works and Highways. The vice chair is the MWSS system administrator. Six other board members are appointed by the President of the Philippines. The government's corporate counsel serves as the board's legal advisor. All board members hold office for five years and may be suspended or removed by the President upon the rec-

ommendation of the Secretary of Justice after due notice and hearing. Salaries of all regulators are comparable to those of other civil servants with similar positions. Regulators can be removed from office by a majority of the members of the appeals panel; any proposed removal of a regulator shall be treated as a major dispute.

The salaries of the agency's 60 professionals and other expenses are financed indirectly through a concession fee. Each concessionaire paid P50 million to MWSS, which was allocated as the annual budget of the Regulatory Office in 1997. In subsequent years, each concessionaire will pay half of the Regulatory Office's annual budget, provided the annual budget does not exceed P200 million (subject to CPI adjustment).

Note

1. These variants include build-operate-transfer (BOT), build-and-transfer (BT), build-own-and-operate (BOO), build-lease-and-transfer (BLT), build-transfer-and-operate (BTO), contract-add-and-operate (CAO), develop-operate-and-transfer (DOT), rehabilitate-operate-and-transfer (ROT), rehabilitate-own-and-operate (ROO). For a definition of each scheme, see Section 2 of the BOT Law.



Telecommunications

Historically, the telecommunications sector has been dominated by the Philippines Long-Distance Telephone Company (PLDT), a private company that provided about 95 percent of telephone service in the Philippines until 1993. Until competition was allowed, PLDT provided poor service, and investment was uneven and inadequate. Investment in the sector did not exceed 1 percent of GDP—about a fourth the level of investment of other Asian countries. Unmet demand was about 700,000 in 1990, with a three- to five-year wait for telephones. In 1991 about 700,000 telephone lines were in service, about 1.1 phone lines per 100 people.

Market Structure

In response to these problems, the government of Fidel Ramos decided to liberalize the sector to improve performance and expand service into unserved areas. This policy objective was put into practice with the passage of two Executive Orders in 1993. It was strengthened with the enactment of the Public Telecommunications Policy Act of 1995 (Republic Act 7925), which rapidly opened up the sector. Today a large number of operators compete, ensuring at least a duopoly in every major market. PLDT still remains a dominant operator in the sector, however, controlling about 80 percent of the land lines.

Executive Order 59 mandated PLDT to interconnect with other operators, thereby forcing it to share the profitable long-distance revenue stream and providing other operators access to its subscribers. Executive Order 109 awarded local telephone exchange licenses to operators.

Companies granted cellular or international gateway licenses were required to build local telephone lines in specific regions of the country (tables 8.1). The government's objective was to rapidly increase national telephone penetration using the incentive of potentially attractive cellular and international gateway licenses to try to ensure rapid line build-out. In return for the licenses, each cellular company was required to build 400,000 lines in its service area by mid-1998; each international gateway operator was required to build 300,000 lines. Eleven licenses were awarded, creating at least a duopoly in each region. In the Luzon area (which encompasses five regions, including region IV-A but excluding metropolitan Manila), a third licensee, Digitel, operates. In 1993 Digitel won the mandate that had previously been awarded to the Department of Transport and Communications to build and operate local telephone lines in these five regions.

Physical Performance

The liberalization program has been a major success in terms of attracting new investment into the sector and rapidly expanding the number of telephone subscribers in the country (table 8.2). Not all operators have complied with the targets set out at the beginning of the program, however. How these operators will be sanctioned remains to be seen.

Since liberalization investment in the telecommunications sector has increased significantly (figure 8.1). In 1998 the level of investment was about 1 percent of GDP (World Bank 1994). The program is expected to

Table 8.1 Number of Telephone Lines Committed under Basic Telephone Program, 1996–98

Carrier	Total lines required under Executive Order 109	Total lines committed under revised rollout plans	Cumulative lines committed under revised rollout plans		
			1996	1997	1998
Digitel	300,000	337,932	203,976	337,932	337,932
Globe Telecom	700,000	705,205	88,000	705,205	705,205
ICC/Bayantel	300,000	341,410	332,640	341,410	341,410
Islacom	700,000	701,330	26,554	474,978	701,330
Major/Philcom	300,000	305,706	84,362	201,618	305,706
PILTEL	400,000	417,858	0	417,858	417,858
PLDT	0	1,254,372	400,522	716,372	1,254,372
PT&T/Capwire	300,000	300,000	90,500	168,200	300,000
SMART	700,000	700,310	200,000	437,000	700,310
ETPI	300,000	300,497	0	69,982	200,050
All carriers	4,000,000	5,364,620	1,426,554	3,870,555	5,264,173

Source: National Telecommunications Council Annual Report 1997.

Table 8.2 Number of Operators in Each Business Segment, 1992–97

Type of service	1992	1993	1994	1995	1996	1997
Local exchange carrier service	45	49	60	67	74	76
Cellular mobile telephone service	2	5	5	5	5	5
Paging service	6	6	10	11	14	15
Public trunk repeater service	7	8	8	10	10	10
International gateway facility	3	5	9	9	9	11
Satellite service	3	3	3	3	3	3
International record carrier	4	4	5	5	5	5
Domestic record carrier	6	6	6	6	6	6
Very small aperture terminal	4	4	3	3	3	4
Public coastal station	13	13	13	12	12	12
Radio telephone	4	6	6	5	5	5
Internet service providers	0		1		113	130

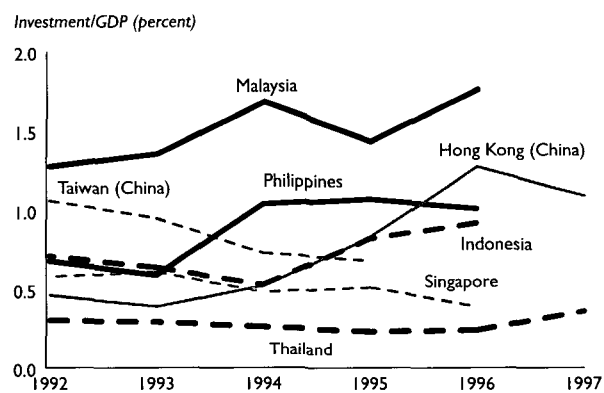
Source: National Telecommunications Commission Annual Report 1997.

attract \$4.5 billion in investments. As a result of the rapid expansion of service following deregulation, the waiting list for telephone service has virtually disappeared and the Philippines now significantly outpaces its near neighbors in terms of system expansion. There were 3.8 million installed lines in 1997, which should increase to 7 million by the end of 1999 (table 8.3).

PLDT launched a zero backlog program and is in the process of installing 1 million new lines. Between 1992 and 1997 telephone density increased from 1.17 lines to 8.07 lines per 100 people. The number of main stations also rose (table 8.4). Telephone density increased from 1.17 lines per 100 people in 1992 to 4.66 lines in early 1997 and 8.07 lines per 100 by the end of 1997.

Financial Performance

Despite the Asian financial crisis—and unlike other operators—PLDT enjoyed strong financial performance

Figure 8.1 Investment in Telecommunications as a Share of GDP, 1992–97

Source: International Telecommunications Union.

in recent years (tables 8.5). The company earned 5 percent on assets and had a current assets to liabilities ratio

Table 8.3 Equipped and Installed Telephone Lines, 1997

Carrier	Lines built		Percent of equipped lines installed		
	Equipped	Installed	1996	1997	1998
Digitel	374,638	343,786	101.7	101.7	114.6
Globe Telecom	730,036	705,288	100	100.0	100.8
ICC/Bayantel	375,647	355,174	104	104.0	118.4
Islacom	315,922	332,420	70	47.4	47.5
Major/Philcom	50,155	70,834	35.1	23.2	23.6
PILTEL	299,165	299,165	71.6	71.6	74.8
PLDT	1,413,870	930,913	129.9	74.2	—
PT&T/Capwire	182,926	182,926	108.8	61.0	61.0
SMART	778,586	562,584	128.7	80.3	80.4
ETPI	15,000	15,000	21.0	5	5
All carriers combined	4,535,945	3,798,090	98.1	69.3	93

— Not available.

Source: National Telecommunications Commission 1997.

Table 8.4 Telephone Density by Area, 1998

Area	Number of towns	Population	Main stations per 100 inhabitants
Philippines	1,565	57,928	1.03
Major cities	58	13,598	4.03
Metropolitan Manila	17	7,494	5.51
Luzon	744	24,076	0.36
Visayas	402	12,989	0.46
Mindanao	402	13,366	0.27
Smaller towns			
With telephones	225	13,380	0.37
Without telephones	1,282	30,950	0.00

Source: National Economic and Development Authority Development Plan 1991–2010; Department of Transport and Communications.

of 1.11; its debt to equity ratio was 1.73:1. In part, PLDT's profitability stems from the fact that 78 percent of its revenues are linked to the U.S. dollar. The depreciation of the peso thus had a net beneficial impact on the company's earnings.

Traditionally, local telephone tariffs have been set at \$12–\$15 a month (depending on the area) for unlimited local calls. These low rates have been subsidized by international and long-distance tariffs. Long-distance tariffs have been about \$0.17 a minute. International tariffs have been falling, but they remain high at an average rate of about \$1.70 a minute. The Philippine international gateway operator receives about \$0.50 a minute for incoming international calls. Since November 1997 local subscription rates have increased and long-distance and international rates have declined.

Legal Environment

This section reviews the legal and regulatory framework of the telecommunications sector and describes the

roles of the Department of Transport and Communications and the National Telecommunications Council.

Entry Requirements

The main barrier to entry is the license requirement. Licenses are periodically issued by the National Telecommunications Council, particularly for new technologies, such as personal communication systems

Table 8.5 Financial Indicators for the Philippines Long-Distance Telephone Company, 1997

Item	Millions of pesos	Millions of U.S. dollars
<i>Income statement</i>		
Revenues	35,709	916
Operating income	15,071	386
Net income	7,649	196
<i>Balance sheet</i>		
Current assets	34,324	880
Current liabilities	31,042	796
Fixed assets	152,267	3,904
Total assets	194,435	4,986
Debt and other liabilities	107,072	2,745
Equity	56,321	1,444

Source: Philippines Long-Distance Telephone Company Annual Report 1997.

or satellite cellular telephone service. Most basic licenses have been issued to establish at least a duopoly in every major market. In return for a cellular or international gateway license, licensees are required to install a certain number of lines in metropolitan and rural areas, with a required 1:10 minimum ratio between the two areas.

Tariff Setting and Modification

The key regulatory issue in the sector is the determination of interconnection rates. Republic Act 7925 allows for negotiated settlement between operators wishing to interconnect and intervention by the National Telecommunications Council if such agreement is not reached.

The Department of Transport and Communications recently recommended that the National Telecommunication Council strictly enforce its role as regulator in resolving the issue of interconnection among local exchange carriers. To execute Executive Order 59, the National Telecommunication Council should issue settlement rules and more detailed technical and operational rules shortly to guide carriers in negotiating an interconnection agreement. The Department of Transport and Communications recommended that the National Telecommunications Council:

- Require interconnecting operators to notify the National Telecommunications Council of the date of the first day of the 90-day negotiation period.
- Monitor the progress of negotiations to determine their progress.
- Initiate arbitration if needed, even if neither of the parties involved complains.
- Adhere strictly to the 30-day period for the resolution of disagreements.
- Monitor the implementation of interconnection agreements and apply appropriate sanctions for non-compliance with the provisions of the agreement.

The National Telecommunication Council is in the process of implementing these rules. In the meantime, it has left it up to carriers to negotiate interconnection agreements themselves. There are no set interconnection formulas, but some standards have emerged. For local interconnection, each operator pays PLDT a fixed sum for the availability of trunk lines to connect to its network. For domestic long-distance calls, there seems to be a consensus on a 30:40:30 share of the call rate

paid by the subscriber between the originating local carrier, the long-distance carrier, and the terminating carrier. For international calls there is considerable uncertainty over charges because the international accounting rate system is currently being dismantled.

Regulatory and Policy Institutions

The Public Telecommunications Policy Act of 1995 formalized the role of the two entities responsible for regulating the telecommunications sector in the country, the Department of Transport and Communications and the National Telecommunications Council. The Department of Transport and Communications is responsible for policy formulation; the National Telecommunications Council is charged with implementing policy, supervising the sector, issuing licenses, and regulating tariffs. While both the Department of Transport and Communications and the National Telecommunications Council are autonomous bodies, they come under the ultimate authority of the Department of Telecommunications.

The National Telecommunications Council is responsible for:

- Granting certificates of public convenience and necessity and provisional authority to install, operate, and maintain telecommunications, broadcast, and cable and television services.
- Granting licenses to install, operate, and maintain radio stations.
- Allocating, suballocating, and assigning the use of radio frequencies.
- Approving and accepting all types of radio communications and broadcast equipment.
- Conducting radio communication examinations and issuing radio operator certificates.
- Preparing, planning, and conducting studies for policy and regulatory purposes.
- Monitoring the operation of all telecommunications and broadcast activities.
- Enforcing applicable domestic and international laws, rules, and regulations; prosecuting violations; and imposing appropriate penalties or sanctions.
- Issuing licenses to operate land, maritime, aeronautical, and safety services.
- Performing other telecommunications- or broadcast-related activities as necessary in the interest of public service.

- Fostering a healthy competitive environment in the telecommunications sector.
- Establishing a stable, transparent, speedy, and fair administrative process that observes due process.
- Managing and administering the radio frequency spectrum and imposing reasonable spectrum usage fees.
- Deregulating rates when the market is highly competitive and moving toward cost-based rates.
- Democratizing ownership of telecommunications and broadcast services.
- Registering value-added service providers.

Current and Potential Private Participation

With the exception of a few small government projects and a small government equity stake in ETPI, virtually all players in the sector are privately owned. The government is planning to sell its 2.65 million shares in ETPI (a 10.2 percent stake), at a price of P282 a share. It is also planning to privatize the national, regional, and municipal telephone program Public Calling Office facilities.

The government has initiated several programs to increase the number of telephone lines. Most of these initiatives have been superceded by the actions taken by the new operators under Executive Order 109.

9

Transportation

This chapter addresses the institutional, regulatory, and investment environment in the Philippines' transport sector as a whole. Chapters 10–14 examine each of the subsectors that have attracted or are likely to attract private investment: ports, airports, railroads, and toll roads and bridges.

Institutional and Regulatory Framework

Separate agencies handle each mode of transport in the Philippines, with an interagency body coordinating activities among the various agencies. The port, airport, railroad, and light rail sectors are regulated by the same institutions that own them. In contrast, the nation's toll roads have been regulated by a separate Toll Regulatory Board since 1977.

Policymaking lies with the Infrastructure Committee of NEDA's. Investment decisionmaking lies with the various implementing agencies (except for final approval of government guarantees). Concession agreements for BOT projects are approved by NEDA's Investment Coordination Committee.

Decentralization

Although national agencies retain ultimate control over the privatization process in all sectors of transport, several local governments have introduced legislation to sever their ties with the controlling agencies. The resulting independent authorities include the airports and ports in Cebu, Davao, and General Santos. In the road sector the Toll Regulatory Board retains responsibility

for approval and tariff negotiation for all toll roads in the Philippines.

Legal Basis for Private Sector Involvement in Transport

The 1990 BOT law (Republic Act 6957) and the 1993 amendment to the law (Republic Act 7718) and their implementing rules and regulations define the way in which the private sector can participate in infrastructure investment in the Philippines, including the transport sector. The amendment to the BOT law allowed greater private participation in infrastructure schemes and strengthened and clarified the approval process. Recent amendments to the implementing rules and regulations of the law have been issued and will be published before they take effect. These amendments cover the following:

- Clarification of rules for local government projects, including approval by local councils, minimum standards and economic parameters, and authority to provide tax incentives, exemptions, or relief.
- New qualification rules on citizenship and proof of ability to provide minimum equity.
- New rules on "simultaneous qualification," or three-envelope bidding, in which the first envelope is for qualification documents, the second for the technical proposal, and the third for the financial proposal.
- Clarification of rules on unsolicited proposals, including the submission of a full feasibility study, and the authority of the Investment Coordination Committee of the National Economic and Development Authority to determine the scope and forms of government undertakings that may be granted.

- Clarifications of credit enhancements as government undertakings defining indirect guarantees, direct government subsidies, and government equity.

Investment Issues

As part of its 1999–2004 Development Plan, the government forecast its transportation investment requirements by sector (table 9.1). Under this investment plan, which allocates about \$1 billion at current exchange rates to the transport sector in 2000, road investments will require about 75 percent of all nationally budgeted transport allocations. The government recognizes that to support private investments it will need to allocate public funds for right-of-way acquisition and clearing, particularly for the Central and Northern Skyway, the Metropolitan Manila Expressway, and the C-6 Tollway.

Two studies have presented their own conclusions about the sector's financing requirements. The "Philippine Transport Strategy Study" (Halcrow Fox 1997) recommended investment of about P148 billion between 1998 and 2003 for national roads and bridges, P20 billion for railways, P20 billion for ports, and P20 billion for airports.

The "Metropolitan Manila Transport Integration Study" (World Bank 1998) estimated the investment needs of metropolitan Manila, where it identified the need for 630 kilometers of road improvements, 117

kilometers of elevated expressways, and 230 kilometers of urban rail lines at an estimated cost of \$10.7 billion through 2015. The government's plan does not include private sector BOT contributions for these projects, which may represent about 50 percent of the government's estimated contribution. Meeting the demands of the economy for private participation in infrastructure in metropolitan Manila between 1999 and 2004 would therefore require about P30 billion a year, with a 50–50 sharing between the public and private sectors. Between 1999 and 2004 investment in transport infrastructure would thus require about P295 billion (\$7.3 billion) from the public sector (national government plus metropolitan Manila requirements) and about P85 billion (\$2.1 billion) from the private sector for metropolitan Manila alone.

Transparency and Competition for Private Investment

Different government corporations are authorized by their charters to enter into contracts with the private sector to provide services in partnership with them. The BOT law defines the rules and regulations governing these partnerships, increasing the transparency of the processes and procurement procedures. These procedures are meant to be as similar as possible to those followed when procuring contracts for regular government projects.

Competition in the selection of contractors is required, although unsolicited proposals have been

Table 9.1 Estimated Investment Required by Transportation Sector, 1999–2004
(billions of pesos)

Sector	1999	2000	2001	2002	2003	2004	Total
<i>Road</i>							
Government							
National	24,277	23,239	29,934	34,090	37,622	41,006	190,168
Local ^a	9,250	11,200	13,150	15,100	17,675	21,625	88,000
Private (BOT)	24,794	29,712	40,667	25,283	20,032	13,807	154,295
<i>Ports</i>							
Department of Transportation and Communications ^b	355	306	420	287	369	5	1,742
Philippines Ports Authority	588	1,069	1,379	1,240	665	581	5,522
<i>Airports</i>							
Department of Transportation and Communications	175	668	707	671	484	12	2,717
<i>Rail transport</i>							
Urban rail	668	1,116	20,179	14,871	8,212	393	55,492
Philippine National Railroad National Railroad	30	0	0	184	550	524	1,288
<i>Total</i>							
Government	35,343	47,651	65,769	66,443	65,577	64,146	344,929
Private	24,794	29,712	40,667	25,283	20,032	13,807	154,295

a. Farm-to-market roads.

b. Feeder ports only.

Source: Midterm-Philippine Development Plan, 1999–2004

allowed, with competitive bidding simulated through “Swiss challenge,” or price challenge, procedures. In practice, however, it is very difficult to mount a successful challenge to an awarded contract. It is at the line ministry’s discretion whether to publish the financial terms of the initial bid. Moreover, challengers know that they may be sued if they beat the original bidder, since it is unlikely that both bidders followed the same set of assumptions in preparing their proposal or that the second bidder, who rushed to put together a proposal, has firm commitments from all financiers. To date, only Passenger Terminal 3 at the Ninoy Aquino International Airport was awarded to a challenger, and that project has yet to reach financial closure.

Coordination between the BOT and Privatization Processes

The BOT approach to investment has played an important role in the transport sector. The BOT Center—a centralized information office that helps guide potential investors through the bidding process and investment laws—is admired and copied overseas. Although the BOT Center maintains an impressive stock of data and information on existing or planned initiatives, it does not coordinate those initiatives in implementing the bidding process or selecting the bids.

Privatization or concessioning of existing assets has often been secondary to BOT initiatives. Although the Ministry of Finance maintains a privatization office that values and disseminates potential privatization projects, these initiatives are generally not coordinated with greenfield developments. The lack of coordination between greenfield development and the privatization of existing assets is commonplace in all areas of private participation in infrastructure in the Philippines. The problem manifests itself most dramatically in the rail sector, where private efforts to use the rail system are proceeding in an uncoordinated fashion.

Right-of-Way and Resettlement Issues

Right-of-way concerns, particularly involving resettlement of squatters, affect the feasibility and ability to obtain financing of many projects. Commuter rail development, light rail development, the privatization of the Philippine National Railroad, land-side expansion of Manila’s port terminals, and almost all toll road projects require significant resources and commitment from the

government to provide adequate alternative living arrangements for displaced families.

Although right-of-way acquisition and clearing are the responsibility of the implementing agencies, some agencies require the concessionaire to bear this responsibility. Right-of-way funds, which are allocated by Congress every year, are easy targets for reduction through the budgeting process. To reduce their impact on project costs, some policymakers have suggested that squatter relocation should not be charged to the project but considered separately as part of the housing program—a concept applied in the light rail line 3 project, LRT3.

Private Participation

The government has involved the private sector in transportation in several ways, including BOT projects, franchises and joint ventures, build-lease-transfer contracts, and a few concessions or long-term leases (table 9.2). Although the program appears comprehensive, few initiatives have been implemented. Among projects that are underway, the relationship between the government and the private sector does not necessarily represent an optimal division of risk and responsibility. Moreover, no significant private sector transport projects have been implemented outside of the metropolitan Manila area.

Private participation in infrastructure has a long and erratic history in the Philippines. In metropolitan Manila toll roads (built by the Construction and Development Corporation of the Philippines, now the Philippine National Construction Company) and light rails (formerly operated by the Metropolitan Rail Transit) were once run by private operators. Both sectors were nationalized during periods of financial failure; both are currently being reprivatized. The Philippine National Construction Company is being privatized through franchising and joint ventures with private investors for toll road development and operation in the Manila metropolitan area. Privatization of the Light Rail Transit Authority has also been proposed.

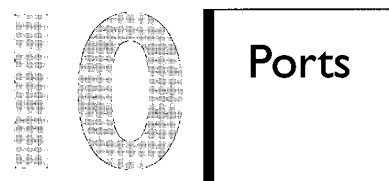
Table 9.2 Private Participation in Transport, by Sector and Form of Participation

Sector	Management contract	Lease	Concession	BOT	Privatization or franchise
Port	None	Asian Terminals, Inc.—Manila	International Container Terminal Services Inc.—Manila	Under consideration for Subic container facility ^a	Under consideration by Philippine Ports Authority ^a
Toll road	None	None	None	Skyway Phase I operational; Manila-Cavite under construction	Public Estates Authority and the Philippine National Construction Corporation
Road				North Luzon project approved by the National Economic and Development Authority; several other projects under consideration	Franchises signed
Heavy rail	None	International Container Terminal Services Inc.—container service	None	MCX (commuter line) proposed over the Philippine National Railroad line	Under consideration for the Philippine National Railroad
Light rail	None	Build-lease-transfer for LRT3 under construction ^b	None	LRT4 and LRT6 proposed	Franchising of Metropolitan Rail Transit (Light Rail Transit operator) under consideration
Airport	None	None	Cargo terminals at Ninoy Aquino International Airport and General Santos ^b under consideration	PT3-Manila signed but not closed	None

a. Outside the Manila metropolitan area.

b. The government will operate the light rail system. Over a 25-year period it will reimburse the owners for the cost of construction and provide a guaranteed 15 percent return on equity.

Source: Philippine government agencies.



The Philippine Ports Authority has legal jurisdiction over all ports in the Philippines. It operates as a commercial entity and has assumed jurisdiction over about 120 ports with commercial traffic. The Cebu Port Authority was created by law to manage the ports of Cebu Province. Both corporations are authorized by their charters to enter into whatever contracts are necessary to fulfill their corporate objectives. Ports outside of the Philippine and Cebu Port Authority systems are developed by the Department of Transport and Communications, although local governments, under the Local Government Code, may take over the operation and development of these ports. Under its own charter, the independent Subic Bay Metropolitan Authority can undertake facility improvements at the Subic free port with the private sector.

Market Structure

The Philippine Ports Authority is one of the largest revenue-earning agencies in the Philippines, thus freeing the national Treasury from directly contributing to its operating budget. In contrast, the Cebu Port Authority, a start-up corporation, still relies on national government assistance. Both agencies are authorized to borrow in order to finance development projects. For the Department of Transport and Communications and local governments, any counterpart funds for private participation in infrastructure projects must be taken up in the annual budgets. The Subic Bay Metropolitan Authority is also autonomous in fiscal matters.

Responsibility for rate setting remains with the respective authorities. Rates other than rates for the Subic Bay Metropolitan Authority can be appealed before the Secretary of Transportation and Communications.

Physical and Financial Performance

The Philippine Ports Authority has been profitable (table 10.1). A large portion of its revenues, however, come from the transfer of operating revenues as part of the lease and concession agreements with Asian Terminals Inc. and International Container Terminal Services Inc. (ICTSI).

Financial indicators for one of Manila's two private terminal operators, Asian Terminal Inc., indicate that 1998 was a difficult year for port operators (table 10.2). Profitability should increase once the region recovers economically.

Current and Potential Private Participation

Many of the ports owned by the Philippine Ports Authority are operated by private companies through short-term lease agreements. Warehousing, storage, and cargo handling are provided by both the Philippine Ports Authority and private operators. The main international container terminals in Manila are managed, operated, and maintained by two competing private operators—Asian Terminals Inc., a consortium based in Australia, and ICTSI, a Philippine company. Outside the Philippine Ports Authority system, private operators

Table 10.1 Financial and Operating Performance of the Philippine Ports Authority, 1996 and 1997
(millions of pesos, except as indicated)

	1996	1997	Compounded annual growth rate (percent)
Revenues	3,388	3,644	8
Port	3,166	3,354	6
Nonoperating	221	290	31
Expenses	2,199	2,624	19
Operating	1,786	2,069	8
Nonoperating	414	555	16
Profits	1,188	1,019	-14
Total tonnage (millions)	139.1	143.6	3
Foreign tonnage	67.5	68.3	1
Domestic tonnage	71.6	75.2	5
Total 20-foot equivalency unit (millions)	2.7	2.9	10
Foreign 20-foot equivalency unit	1.4	1.5	8
Domestic 20-foot equivalency unit	1.3	1.5	12

Source: Philippine Ports Authority.

continue to own and run terminals associated with industry-specific captured cargo.

The Philippine Ports Authority has announced its intention to privatize its dredging fleets and its cargo facilities in Manila and many secondary ports, including Tabaco, Pasacao, General Santos, Zamboanga, and Cotabato Wharf. The Cebu port has broken off from the Philippine Ports Authority and may pursue its own privatization. BOT projects are also allowed, but no major port constructed has the potential to become a competitor with the Manila Port. Construction and operation of private greenfield facilities require the approval of the Philippine Ports Authority through construction permits or operating clearances. In 1997 the Philippine Ports Authority issued 11 permits and 12 clearances, mostly for bulk terminals and other commodities-handling facilities.

The largest privately owned shipping lines are now merging and are likely to dominate coastal trade as a single force. It is believed that they will invest in terminal operations, such as the domestic general cargo facilities in Manila, thus extending their control over domestic trade to waterfront operations.

At the country's main container port in Manila, Asian Terminals Inc. and ICTSI compete for international cargo. In 1997 the two operators were responsible for nearly all international container shipping in Luzon and 95 percent of the nation's foreign container

Table 10.2 Financial Performance by Asian Terminals, Inc., 1996-98
(millions of pesos)

	1996	1997	1998
Revenues	1,527	2,116	2,085
Operating expenses	1,128	1,456	1,605
Operating income	399	660	480
Other income	99	21	—
Earnings before income taxes	498	681	—
Interest expense	106	207	—
Provision of income tax	113	120	—
Net income	279	354	142
Revenue growth (percent)	25	39	-1
Net income growth (percent)	82	27	-60

— Not available.

shipping. Most domestic containers in and out of Manila were moved by the Philippine Ports Authority facility in North Harbor.

Asian Terminals Inc. has been operating under a 15-year lease, signed in 1986. The agreement was recently extended to 2013, providing the operator with sufficient time to recover the cost of its investment in gantry cranes and other yard equipment. Asian Terminals Inc. also runs a grain terminal in Mariveles and has invested in Aries Arrastre Services, the operator of the Port of Batangas.

ICTSI was awarded a 25-year concession that has required it to purchase several gantry cranes, transtainers, and other heavy superstructure. ICTSI has also invested in a new berth and paid for its own maintenance dredging.

The Philippine Ports Authority has managed to remain profitable through 1997. Its investment in port modernization, however, has been limited. In order to finance much-needed capital improvements, it has borrowed from multilateral institutions and turned to private operators to assume a greater role in port infrastructure capital expenditures. As of December 31, 1997, the Philippine Ports Authority held outstanding foreign loans of P5.6 billion (\$140 million), with about 40 percent owed to the Overseas Economic Cooperation Fund, 40 percent to the Asian Development Bank, and 20 percent to the World Bank.

The board of the Philippine Ports Authority is currently discussing its own privatization. Although the results of their discussions have not been made fully public, interviews with officials suggest that the board is considering expanding the leasing and concessioning of its

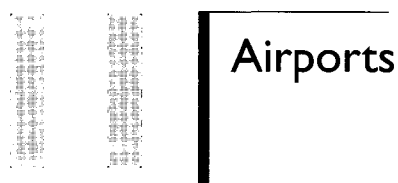
terminal operations without ceding its tariff setting or regulatory powers. In order to avoid lawsuits and conflicts among domestic investors, the Philippine Ports Authority has also recently considered granting a sole-sourced concession to a consortium of shippers and carriers for the domestic container terminal operations of Manila. Terminal operators, domestic carriers, and port labor are jointly funding a study to analyze the effects of full privatization of the port of Manila, since it is unlikely that the Philippine Ports Authority will be able to find financing for the \$150 million required for renovation and modernization.

Although the Philippine Ports Authority has announced no plans to decentralize the port system, private specialized terminals continue to evolve, particularly for bulk commodities, such as grains and coal. Cebu has recently declared itself independent of the Philippine Ports Authority and is considering privatizing its terminal operations.

The Subic Bay Port Authority operates with considerable autonomy, but it is currently restricted to small volumes of break-bulk and heavy lift shipments used by Subic's industrial sites and to some refined product bulk distribution by a regional petroleum company, Coastal Corporation. Attempts to convert a portion of Subic Bay into a private container trans-shipment center are floundering because of lawsuits brought by the losing bidder against Hutchinson Holdings of Hong Kong (China). As part of an initiative to rejuvenate interest in Subic, the Japan International Cooperation Agency (JICA) has funded a comprehensive master plan for the port that considers the optimal use of general cargo, liquid bulk, and container and cruise terminals given the area's evolving industrial, commercial, and tourism plans. To minimize the overlap between the shipping business and commercial and tourism facilities, JICA's interim report recommends reclaiming and constructing an entirely new two-berth container terminal. The Subic Bay Port Authority seems to favor this alternative. In the current investment climate, it is unclear whether investors will return to Subic with new construction requirements for a facility with such limited capacity or whether that capacity is sufficient to justify improved land connections to Manila.

In 1997 public investment in ports totaled P2.395 billion (P837 million by the Philippine Ports Authority and the Department of Transport and Communi-

cations and P1.558 billion in official development assistance). Private sector expenditures (by ICTSI) were P1.676 billion.



Airports

The airport sector is managed, operated, and regulated by the Air Transport Office, which is under the direct supervision of the Department of Transport and Communications. Of the 89 airports in the Philippines, 4 are designated international airports (Ninoy Aquino International Airport, Subic, Clark, and Cebu); 4 as alternate international airports (Zamboanga, Davao, General Santos/Tambler, and Laoag); 12 as trunk-link airports; 36 as secondary airports; and 33 as feeder airports.

Market Structure

No airports have been sold, concessioned, leased, or built on a BOT basis in the Philippines. There are no definite plans for the decentralization of the country's airports or the restructuring of the Air Transport Office, although Manila's main airport, Ninoy Aquino International Airport, is independently managed, and the Mactan International Airport at Cebu has, through legislative initiative, declared itself independent of the nation's Air Transport Office.

The two independent airport authorities—the Manila International Airport Authority and the Mactan-Cebu International Airport Authority—may enter into contracts for their airport services and infrastructure development, subject to approval by their boards. The Air Transport Office enters into contracts through and upon approval of the Department of Transport and Communications. Another corporation under the Department of Transport and Communications, the Philippine Aerospace Development Corporation, is

authorized by its charter to form subsidiaries in air transport services (passenger or cargo, domestic or international) with up to 49 percent private capital. Once airports are transferred to local governments, they may pursue development projects with the private sector. The Subic Bay Metropolitan Authority also has an airport that is independently run (except for air traffic services, which are provided by the Air Transport Office). Another independent entity is the Clark International Airport Corporation, a subsidiary of the Bases Conversion Development Authority. Clark International Airport has been declared the successor to the Ninoy Aquino International Airport as the premier international gateway, but the date of the changeover has not been made definite. The corporation has prepared a master plan for private participation in infrastructure for the airport.

The Manila International Airport Authority generates its own funds, with some assistance on debt servicing from the national government. The Air Transport Office and the Philippine Aerospace Development Corporation rely on the annual budget of the Department of Transport and Communications for support. The Department of Transport and Communications also provides infrastructure funding to the Mactan-Cebu International Airport Authority. Local government units rely on their annual budgets for aviation-related commitments.

Physical Performance

Air traffic in the Philippines increased steadily between 1985 and 1996, although it did not keep up with eco-

Table 11.1 Traffic at Ninoy Aquino International Airport, 1985–97

	1985	1990	1994	1995	1996	1997	Componded annual growth rate (percent)		
							1985–96	1990–96	1996–97
Aircraft	81,500	56,559	67,969	74,755	94,592	114,867	1	9	21
Passengers	5,754,000	7,241,718	9,975,138	10,574,839	11,938,454	13,603,374	7	9	14
Domestic Pax	2,583,000	2,874,361	3,831,215	4,014,831	4,641,346	5,876,892	5	8	27
International Pax	3,171,000	4,367,357	6,143,923	6,560,008	7,297,108	7,726,482	8	9	6
Freight tons	183,000	236,505	301,153	354,527	393,344	488,341	7	9	24
Average Pax/plane	71	128	147	141	126	118	5	0	-6
GDP (billions of dollars)	30,716	44,331	64,139	74,176	83,840	83,125	10	11	-1

Source: Nino Aquino International Airport.

nomic growth. In contrast, air traffic levels in Indonesia, Malaysia, Singapore, and Thailand all outpaced economic growth during the same period. Airport traffic levels did experience a dramatic jump in 1997, perhaps compensating for the slow growth of the previous decade. Data from 1998 from Ninoy Aquino International Airport reveal a slight drop in landings as well as passenger and freight traffic as a result of the regional economic crisis (table 11.1). Cost recovery by the two largest airport authority remains poor, however (table 11.2).

Current and Potential Private Participation

The only major private investment in Philippine's airport infrastructure currently under serious consideration is a BOT terminal for international passengers in Manila. While the Air Transport Office has reportedly presented the legislature with a plan for its own privatization, no plan has been announced and no action has been taken. In the meantime, the Air Transport Office is considering concessioning new international cargo terminals at Ninoy Aquino International Airport and General Santos, and the Mactan International Airport at Cebu has unilaterally separated itself from the Air Transport Office.

Table 11.2 Recovery of Operations and Maintenance and Capital Costs by Airport Authorities, 1997 and 1998 (percent)

Airport authority	1997	1998
Manila International Airport Authority	37	54
Mactan-Cebu International Airport Authority	39	39

Source: Manila International and Mactan-Cebu International Airport Authorities.

The country's main international gateway and hub for domestic flights is Ninoy Aquino International Airport in Manila. In 1997 the government approved an unsolicited bid from local developers to build, on a BOT basis, a new passenger terminal, PT3, at the airport to serve international flights. The government then allowed challengers to attempt to beat the closed bid it received. PIATCO, a consortium of Philippine banks and Lufthansa's air cargo group, submitted a higher bid and was awarded the right to build.

More than two years after the contract was awarded, financial closure has not been reached, although it appears to be near. Closure of the deal has been stalled by a series of problems:

- The original bidder challenged the validity of PIATCO's bid in court, holding up the government's final commitment. The case was recently dismissed.
- PIATCO was initially concerned about the government's willingness to live up to its original commitment to postpone Clark Airbase's expansion as a commercial airport until PT3 had reached 10 million passengers a year for three years. The new administration has reconfirmed its commitment.
- The consortium has had to reorganize to meet the demands of its financiers.
- The military has yet to evacuate or dismantle its buildings on the site of the new terminal.

The awarding of PT3 to PIATCO represents the only successful "Swiss" challenge to an unsolicited bid in the Philippines. While the delays are indicative of the problems associated with unsolicited bidding procedures and the vagaries of Swiss challenges, the likelihood of success suggests that this is a robust project that will meet real demand.

As with port terminal operations, private participation in the airport sector has been limited to international traffic and to Manila. The pattern may reflect the significant benefits of hard currency earnings associated with international passenger fees and international container handling fees, as well as the visibility of Manila to investors. Subsequent private sector participation initiatives in both airports and ports—which will involve domestic traffic and secondary municipalities, which cannot offer as high a percentage of hard currency earnings or as high a level of demand for service—will provide a better test of interest in the Philippine market and the sustainability and credibility of the Philippine approach to private participation in infrastructure.

Total public investment in the airport sector was P3.686 billion in 1997 (P2.045 billion provided by the Department of Transport and Communications, the Air Transport Office, Mactan-Cebu International Airport Authority, and the Manila International Airport Authority and P1.641 in official development assistance). Private sector investment was estimated at P1 billion, including engineering design work but not construction on Terminal 3 at Ninoy Aquino International Airport.

12

Heavy Rail

The Philippine National Railroad (PNR) is a publicly owned and operated railway that runs through much of Luzon. Track, rolling stock, freight, and passenger operations are the responsibility of the Philippines National Railroad. ICTSI, a private consortium, runs a twice-a-day service that moves modest amounts of container traffic out of the port of Manila.

Market Structure

Although future capital development projects will be with the private sector, PNR currently invests in such projects itself. The railways' charter allows it to "own and/or operate hotels, restaurants, terminals, warehouses . . . and to manufacture rolling stock, equipment, tools, and other appliances . . . to construct and operate in con-

nection with its railroad lines, toll viaducts and toll tunnels." Operation of a hospital constitutes a large portion of the financial obligations of PNR.

PNR determines its own fares and rates, subject to approval by the Secretary of Transportation and Communications. Two other government agencies—the Public Estates Authority and the Bases Conversion Development Authority—are authorized by their charters to invest in light or heavy railway development projects within their areas of jurisdiction.

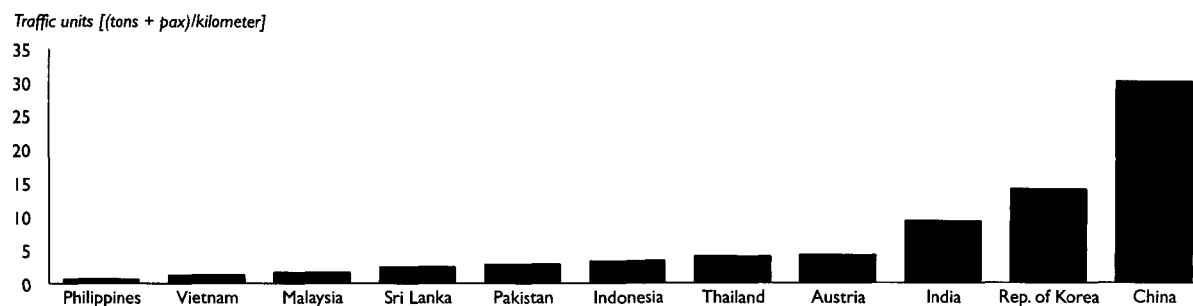
Physical and Financial Performance

PNR relies heavily on assistance from the national government to finance its capital expenditures, debt servicing, and operations. It meets less than half of operating

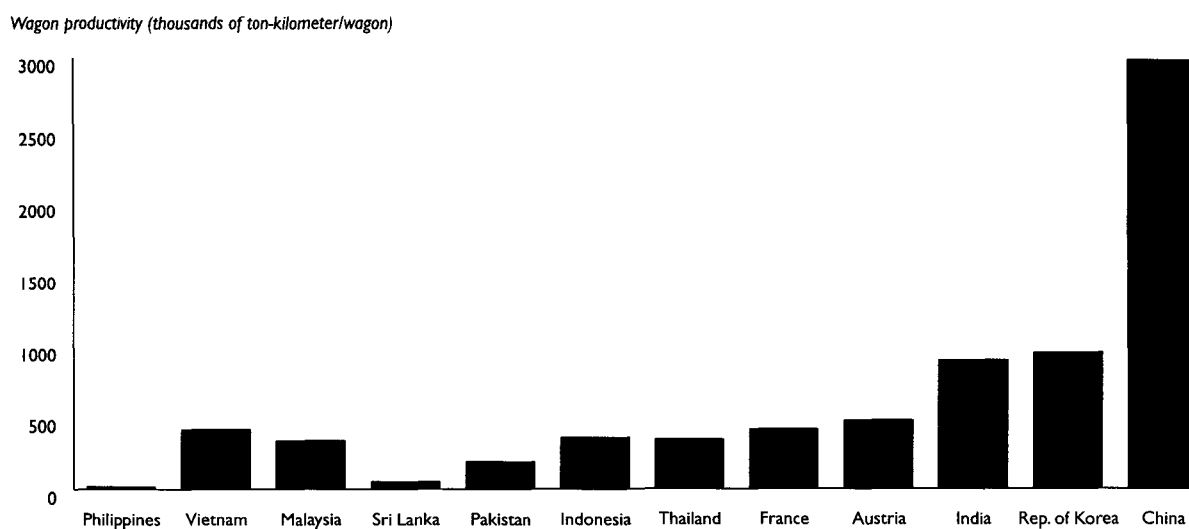
Table 12.1 Financial and Operating Performance by the Philippine National Railroad, 1990–97
(millions of pesos, except as indicated)

	1990	1991	1992	1993	1994	1995	1996	1997	Compounded annual growth rate (percent)
Revenues	184	150	197	95	153	168	164	186	0
Rail	104	91	60	59	64	85	85	106	0
Nonoperating	81	60	138	36	89	82	79	80	0
Expenses	395	425	368	400	395	771	311	806	11
Rail	265	281	215	187	232	292	311	360	4
Nonoperating	130	144	153	213	163	479	—	445	19
Profits or losses	-211	-274	-171	-305	-242	-604	-147	-620	17
Commuters (thousands)	5,561	4,315	2,226	4,639	5,007	4,055	—	—	-6
Tons (thousands)	32	12	5	18	12	14	—	—	-15
Tons-kilometers (thousands)	7,075	2,236	929	4,912	3,083	3,997	—	—	-11

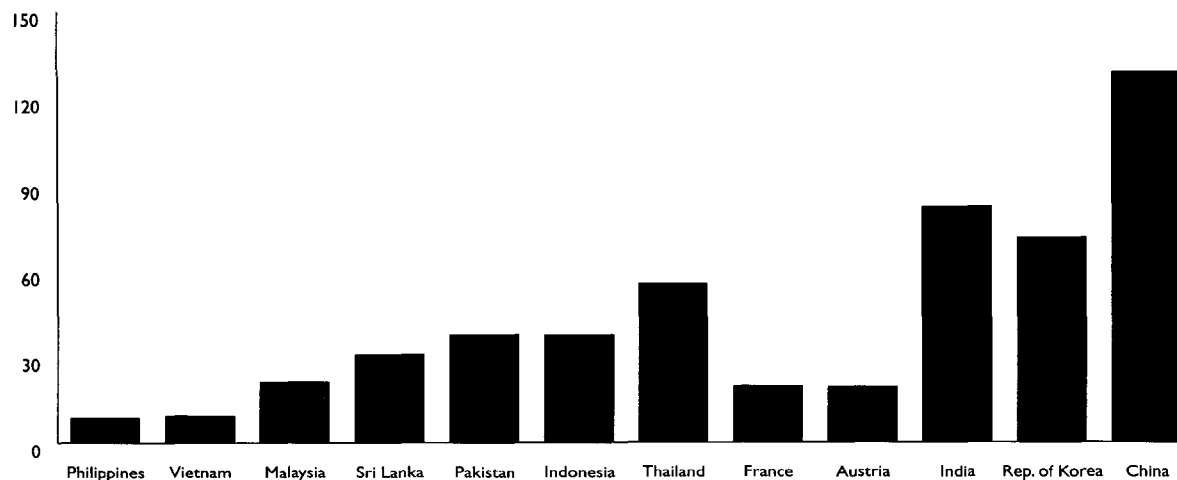
Source: Philippine National Railroad.

Figure 12.1 Railroad Traffic Density for Selected Countries, Most Recent Years Available (1994-97)

Source: World Bank Railroad Database.

Figure 12.2 Productivity of Rolling Stock in Selected Countries, Most Recent Years Available (1994-97)

Locomotive productivity (millions of TU/locomotive plus MU/Mu factor)



Source: World Bank Railroad Database.

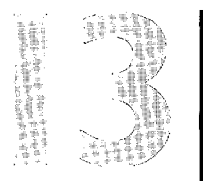
costs from its operating revenues. Although commuter and cargo volumes dropped, revenues remained steady through modest tariff increases. However, expenses rose dramatically, resulting in a tripling of annual losses between 1990 and 1997 (table 12.1).

Compared with other regional railroad systems, PNR is underutilized (figure 12.1). This is a result of several factors, including the importance of coastal shipping in a country made up of islands and the slowness and unreliability of rail service, which makes it an unattractive commuting alternative.

Poor utilization contributes to unusually high levels of inefficiency in the use of the system's rolling stock. Utilization is far lower than in other countries, including countries in the region (figure 12.2).

Current and Potential Private Participation

The Privatization Office of the Department of Finance had planned to privatize the PNR in 1999. Nothing, however, has been done to date. In the meantime, different private groups are trying to use the rail system in an uncoordinated fashion. ICTSI, the Manila port container terminal operator, is operating a twice-a-day freight rail service out of the port under a lease agreement that has required it to invest in rolling stock. This lease may be in conflict with three possible longer-term plans for PNR, including those of the Privatization Office of the Department of Finance; a group of domestic investors, which is pursuing a joint venture with the government; and a major real estate developer, which presented an unsolicited bid to the Department of Transport and Communications for BOT development of urban commuter rail services to be operated over PNR tracks. It is unclear which, if any, of these methods of transferring the railroad to the private sector will be implemented.



Light Rail

In 1980 the Philippines established the Light Rail Transit Authority (LRTA) in an attempt to find a long-term solution to congestion in and around Manila. Until 1996 the private sector played a limited role in the development and operations of Manila's light rail system, except for a brief period in which the Metropolitan Rail Transit (MRT), the operating arm of the LRTA, was privately owned. Since 1985 the LRTA has operated a single-line rail—known as LRT1—up the western corridor of Manila between Pasay City and Caloocan.

Physical and Financial Performance

The LRTA relies heavily on national government assistance for its capital budget and debt servicing. It more than covers its operating expenses with fare revenues. Revenues have grown by less than 3 percent a year over the past several years, while costs have risen at a rate of 14 percent a year (table 13.1). Although the system is running at full capacity with 143 million people a year, or just under 400,000 riders a day, average revenue per passenger of just over P5 has not been sufficient to cover growing operating and capital costs, leaving LRTA in a precarious financial situation.

Current and Potential Private Participation

Two major projects are proposed or ongoing. The first is the concessioning of MRT to private operators. The

second is construction of the LRT3, which is being built on a build-lease-transfer (BLT) basis.

Metropolitan Rail Transit Lease

LRTA has proposed privatizing its operating subsidiary, MRT. Although MRT was originally a private entity owned by Meralco; it was returned to LRTA because of Meralco's inability to maintain the tracks at acceptable standards.

The LRT1 system is currently undergoing extensive renovations, including realignment of the track, refurbishing and air conditioning of the cars, and procurement of new cars. The renovation program, financed with loans from Belgium, France, and the Overseas Economic Cooperation Fund, will be completed before LRTA is privatized.

Under the proposed privatization scheme, a private company would purchase the existing MRT shares for P30 million. MRT would then be given a management contract to operate and maintain the system for 25 years. The contract would be bid out. The winner would agree to purchase the outstanding shares and provide LRTA with P2 billion, to be used to improve infrastructure. The contract payments would amortize this up-front payment and would include payments based on the size of the fleet and the period of operation. The contract would include performance standards relating to system availability and quality of service. Five years after the sale of shares, LRTA would become a regulatory body as well as the owner of the infrastructure. The P10 fare is expected to provide suffi-

Table 13.1 Financial and Operating Performance by the Light Rail Transit Authority, 1993-96
(millions of pesos, except as indicated)

	1993	1994	1995	1996	Componded annual growth rate (percent)
Revenue	717	808	757	780	2.8
Rail	702	790	735	753	2.4
Nonrail	15	18	22	27	21.6
Expenses	858	974	972	1,282	14.3
Operating	412	461	480	589	12.7
Capital	446	513	492	693	15.8
Profits or losses	-141	-166	-215	-502	52.7
LTRI ridership	129	146	136	143	3.5
Average rate per ride	5.4	5.4	5.4	5.3	-1.1

Source: Philippine Light Rail Transit Authority.

cient cash flow to cover all operating and maintenance costs. Debt service would remain the responsibility of the government.

Light Rail Line 3

In September 1996 a private consortium of Philippine real estate and retail interests began constructing an additional light rail line known as LRT3. Sumitomo, the turnkey contractor overseeing construction of the line for the consortium, will operate and maintain the line for the duration of the agreement.

The new line loops around Manila alongside EDSA from Baclaran in the south through Makati, Ortigas, and Cubao in the north. The project is being financed on a BLT basis in which the consortium assumes the cost of construction and the government leases back the finished system from the consortium. The lease payments, indexed to the dollar, are based on the assumption that 600,000 passengers a day will ride the LRT3 and that the tariff will be P25 a ride. Both assumptions are backed with sovereign guarantees. These figures were used to guarantee that the six consortium members receive a 15 percent return on their equity investments from ridership alone. Since the total capacity of the system is 600,000 riders, the lease represents a take-or-pay agreement of 100 percent. The consortium has also been given air rights over the terminal and station sites for the development of retail and office space. Planning of the system—driven by the investors—is designed to maximize the value of property controlled by key members of the consortium.

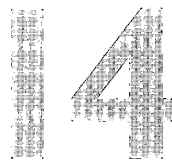
Some doubts have been raised about passengers' willingness or ability to pay P25 pesos to ride the LRT3.

Whether or not the 600,000 rider a day target is reached, the government has guaranteed a yearly lease payment of about P5.5 billion. The risk of under-performance is thus being fully assumed by the government. In contrast, if tariffs are raised and additional revenues are generated, they will be split evenly between the consortium and the government.

As with the planned privatization of MRT, the LRT3 approach uses the private sector to construct, operate, and maintain the system without shifting any commercial risk associated with ridership, revenues, or currency to the private sector. The LRT3 leaseback agreement provides Philippine real estate interests with a risk-free opportunity to develop major retail sites throughout Manila and to support the value of their key landholdings by making them accessible by light rail.

Cebu Light Rail

Only one local government, the city government of Cebu, has initiated a study for a light railway line. Cebu expects to negotiate a BOT arrangement to implement the project.



Roads

The agencies that own the national port network, airport system, railroad, and light rail line fall under the jurisdiction of the Department of Transportation and Communication. In contrast, the national road network falls under the jurisdiction of the Department of Public Works and Highways. The investment program of national roads is funded through the department's capital outlay budget; the annual maintenance program is appropriated separately using an established formula. A dedicated road fund was abolished in the mid-1970s. The investment and maintenance programs for provincial and local or Barangay roads are funded by local governments through a mix of tax revenues and government grants.

Market Structure

Recently, the road sector has been receiving enhanced support from the government. Between 1993 and 1998 the budget of the Department of Public Works and Highways has increased steadily, more than doubling in current prices. Historically, the road sector has been allocated 70–75 percent of the department's infrastructure budget. Government allocations for basic road maintenance—additional support based on an equivalent maintenance kilometer formula—more than doubled between 1993 and 1998. The main elements of the department's 1998 highway program include upgrading 1,078 kilometers of unpaved national arterial roads and 483 kilometers of secondary roads, reconstructing and upgrading 80 bridges totaling 3,035 kilometers along the national network, and rehabilitating or reconstructing paved but damaged roads.

Physical Performance

In terms of road density, the Philippines' network of about 161,000 kilometers of roads compares favorably with other East Asian countries and is considered adequate for the country's needs. In terms of road standards and quality of maintenance, however, the system is grossly inadequate. Only about 17 percent of the total network is paved (table 14.1). Except in metropolitan Manila and other rapidly growing urban areas, where new road construction is needed, upgrading, rehabilitation, and improved maintenance are the main challenges for the road sector.

Traffic on the North and South Luzon Expressway rose in 1997 (table 14.2). Toll rates are P26 per kilometer for cars and jeepneys (jeeps converted into jitney buses), P52 per kilometer for buses and trucks, and P77 per kilometer for trailers and large trucks.

Current and Potential Private Participation

Contracts for toll road and bridge development are entered into with the Department of Public Works and Highways' BOT Project Management Office and its regulatory agency, the Toll Regulatory Board. Other specialized agencies—including the Philippine National Construction Corporation, an existing tollway operator, and the Public Estates Authority—are authorized to develop toll roads within or adjacent to their areas of operation. Local governments are also authorized to develop toll facilities in their jurisdictions. All toll

Table 14.1 Philippine Road Network, by Type of Road

Type of road	Size		Type	
	Length (kilometers)	Percent of total	Percent paved	Percent all-weather
National	26,659	17	52	76
Arterial	15,848	10	59	82
Secondary	10,811	7	41	67
Provincial	29,157	18	12	61
City	3,949	2	67	96
Municipal	12,820	8	26	61
Barangay	88,363	55	4	52
Total	160,948	100	17	59

Source: Department of Public Works and Highways and Communications.

Table 14.2 Average Daily Traffic Levels for Selected North and South Luzon Expressways, 1996–97

Tollway	1996	1997
North Luzon	131,000	146,058
South Luzon	235,044	239,214

Source: Toll Regulatory Board.

rates, however, are approved by the Toll Regulatory Board.

Fund commitments for toll road development (such as expenditures for right-of-way or feasibility studies) by the Department of Public Works and Highways, the Toll Regulatory Board, and local governments are drawn from the annual budgets of those agencies. Commitments by the Philippine National Construction Corporation and the Public Estates Authority are approved as part of their internally generated budgets or borrowed externally.

Most projects proposed or received by the government are pursued under joint ventures with the state-owned Philippine National Construction Corporation or the Philippine Estates Authority. Only two appear to have reached financial closure, including the Metropolitan Manila Skyway and the first phase of the Manila-Cavite Expressway. Several projects are stalled because of dependence on East Asian financing and massive government right-of-way obligations that have not been escrowed.

The Asian Development Bank's most recent study of transport sector technical assistance (Halcrow 1997) describes the toll road process as one with several apparent problems: lack of overall plan or strategy results in each project being pursued separately, not as a part of an integrated network; the government has taken a passive approach toward preparing plans, identifying or prepar-

ing rights of way, or inviting solicited bids; the regulatory framework—in which the Philippine National Construction Corporation (PNCC) holds franchise and its supervising agency, the Toll regulatory Board, issues Tollway Operating Certificates—encourages negotiated bidding in joint venture with PNCC, rather than use of the BOT law.

Some P22.9 billion in public funds, including P19.7 billion in government funds and P3.3 billion in official development assistance, was spent on roads in 1997. Private investment in the sector (by the PNCC and the Skyway Project) is estimated to have been about P1 billion.

Skyway (CITRA)

The Skyway is being constructed under the PNCC concession for toll roads within metropolitan Manila. The consortium undertaking the project is a joint venture between a local developer and an Indonesian company that has constructed Indonesian expressways using a novel technology for rotating the support beams.

The first phase of the project was opened in December 1998. Users of the upper deck pay a flat rate; users of the lower level (formerly a free road) pay P1.66 per kilometer. The toll for the first section was determined based on a financial model prepared in 1995. The permitted maximum tariff was computed to provide the consortium with an internal rate of return of 20 percent. The second phase of the project, which extended the road to Alabang, opened in February 1999. It also has the provision for tolling the at-grade roadway as well as the skyway. The consortium also built the elevated portion of the road from Magallanes to Buendia and rehabilitated the at-grade section of the road from Bicutan to Magallanes. That phase of the project was opened to the public in July 1999 on a promotional basis, with

the new toll rates implemented in October 1999. Completion of the second phase of the project is expected by the end of May 2000. Once completed the system will connect with the Northern Luzon Expressway, following a route that runs parallel in some places to the Philippine National Railroad right of way.

Tariffs at the system's three block tolls will be increased every few years based on a parametric formula that incorporates the consumer price index and the exchange rate of the peso. There are no other government guarantees.

The consortium obtained a guarantee from the Philippine National Bank. In the event of cancellation, the government will pay liquidated damages for sections under construction to cover expenditures plus 10 percent. If the tollway is operating, the government will pay liquidated damages equal to the income stream projected by the financial model over the period of the agreement.

The concession agreement was originally limited to \$500 million. However, as a result of the devaluation of the peso, the project will exceed this limit. For this reason, the section from Bicutan to Alabang is being treated as a separate project. The toll for that part of the tollway will be computed based on the 1998 estimate of costs.

Manila-Cavite Toll Expressway

The Manila-Cavite Toll Expressway is being constructed by a Malaysian firm, Renong, in joint venture with the Public Estates Authority. The tollway will extend from Highway C-5 to the Noveleta-Rosario Road, a total distance of 21.1 kilometers. Only the 6.6-kilometer middle section of the expressway has been completed (by converting the existing road into a toll road). Following a temporary injunction as the result of a lawsuit that challenged the right to charge a toll on what had been a free road, the toll road is now operational. The extension to the south, which is to be built on reclaimed land, has been delayed by right-of-way negotiations.

The right-of-way for the section to C-5 is now being acquired by the Toll Regulatory Board. Half of the right-of-way is across land owned by the Ninoy Aquino International Airport. Negotiations with the airport to relocate squatters along the route are underway. The extension to the south is part of a larger reclama-

tion effort to construct a new city, which will be served by the expressway.

Each section of the expressway has a separate financial rationale. The first section of the road involved simple upgrading of an existing road to create a toll road. The extension to C-5 is three times as expensive per kilometer as the first section, but it will generate considerably more traffic. The southern extension will have less traffic and will cost almost twice as much as the first section per kilometer, but it will allow the developer to develop the reclaimed land.

Northern Luzon Expressway

The Northern Luzon Expressway will be operated by Benpress in a joint venture with the PNCC. This project involves three phases. In the first phase, the existing 82.5-kilometer expressway will be rehabilitated and an access road to Subic Bay free port will be built. The second phase will involve construction of 28.5 kilometers of C-5. The third phase will involve construction of a 58.5-kilometer extension of the express to Subic.

Although the Northern Luzon concession was one of the earliest toll road concessions, progress has been delayed because of problematic negotiations with the Toll Regulatory Board. The toll agreement was finally signed during the summer of 1998, but the agreement requires that the concessionaire complete the rehabilitation of the existing expressway before taking over operation of the road. Until the rehabilitation is completed—expected to take until the end of 2000—PNCC will continue to operate and maintain the expressway.

Each phase of the concession has a separate financial rationale. The existing expressway—the oldest toll road in Asia—has a substantial volume of traffic and generates a significant revenue stream. After the PNCC concession ended, the road was operated briefly as a free road. The road deteriorated rapidly and was reconcessioned. The C-5 extension was originally intended as a public road but could not be completed because of problems securing the right of way. With the completion of other sections, this extension should generate substantial traffic. The extension to Subic is unlikely to be financially viable because of its high cost and low traffic volumes. The 8-kilometer section to the free port was built with a guarantee that the concessionaire would be compensated for the cost of construction if

the connecting road to the Northern Luzon expressway was not constructed.

Cebu Bridge

The bridge connecting the Cebu Airport with the city will be rehabilitated under a concession agreement. The Toll Regulatory Board plans to define the scope of the concession and tender it in 2000.

Pasig Highway

The Toll Regulatory Board has also proposed to tender a concession for construction of a 15.2-kilometer expressway that would run parallel to the Pasig River and connect the Northern Luzon Expressway and Ortigas.

PART 3. POLICY RECOMMENDATIONS

15

Proposed Action Program

The Philippine government has demonstrated a clear commitment to expanding the role of the private sector in infrastructure. It can build on that record and take advantage of the window of opportunity opened by the East Asian financial crisis by pushing forward with important sectoral reforms and the privatization of infrastructure assets.

The government will need to clarify many cross-sectoral policy and institutional issues, and implement needed reforms uniformly across sectors. The investment and financing communities are likely to respond rapidly to sound policy and institutional reforms, which they will interpret as clear and credible evidence of the government's commitment to privatization.

The proposed action program includes three main recommendations: reducing dependence on government financial resources, rationalizing institutional and legal processes, and strengthening and deepening sectoral reforms (figure 15.1). Each of these recommendations is described below.

Reduce Dependence on Government Financial Resources

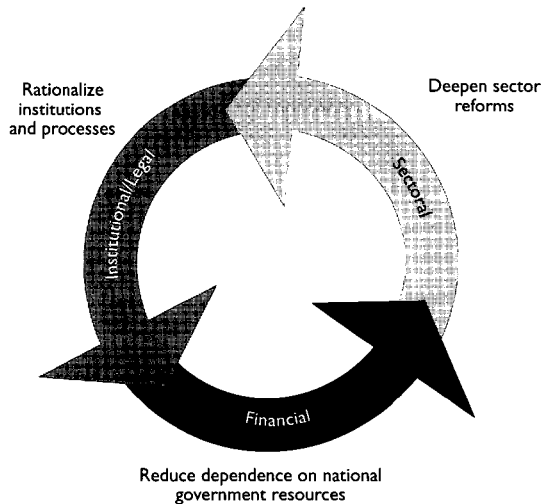
Private participation in infrastructure has successfully addressed the immediate problems of the infrastructure sectors, particularly the power sector. In its first wave of projects in the early 1990s, however, the government assumed heavy contingent liabilities. The government's justifiable efforts to resolve the power shortage resulted in a number of lucrative transactions for inde-

pendent power producers and ultimately raised tariffs for consumers. The contingent liabilities assumed by the government through sovereign guarantees represent a heavy burden on an already difficult fiscal condition. Under the proposed Electricity Industry Reform Act the government would absorb \$2.5–\$3.75 billion of stranded costs as part of the move to a market-oriented sector structure.

Future efforts must recognize that the government can no longer assume similar financial commitments. Indeed, it is fruitless for the government to commit to a policy of private sector participation and subsequently provide broad guarantees for market risks. The government can minimize the need for financial support through the adoption of the following financial policies:

- *Support the privatization of existing assets over green-field investment.* Supporting the privatization of existing assets makes strategic sense for a number of reasons. First, privatization or long-term concessions may not initially require new capital investment. This is particularly important in the current environment because investors and creditors are extremely cautious about new investment in East Asia. As the operation is privatized and confidence is established, the new private owners can finance new investments off their balance sheets rather than on a project finance basis. These transactions would be between private parties and would therefore not require national government support. Some of these benefits can be achieved through mechanisms other than outright sale. For instance,

Figure 15.1 Proposed Three-Point Strategy for Increasing Private Participation in Infrastructure



Source: World Bank staff.

in most cases, the mechanism that gives an entire operation to a private operator under a concession does not require the government to guarantee the revenue stream, since the private sponsor has control of the consumer base. Other guarantees may be needed to assure private sponsors that the government will comply with its commitments. But these guarantees would be substantially different from the market risks the government assumed to promote bulk supply BOT schemes through off-take agreements.

- *Structure greenfield transactions to reduce the requirement for sovereign guarantees.* Greenfield projects—such as provision of bulk water or provision of power by independent power producers to state-owned distribution service companies—often require guarantees of revenue streams because the concessionaires have no means of controlling the market for their products. Before entering into greenfield agreements, the government needs to weigh the pros and cons of such projects very carefully. Where privatization is not possible because of the lack of investor willingness to commit equity capital, capital leases with direct financial support by the public sector entity may be preferable to open-ended guarantees for market risks.
- *Introduce greater public-private partnerships where cost sharing is explicit, transparent, and not open-ended.* With

the introduction of the Local Government Code of 1991, local governments have been given the opportunity to be financially autonomous and raise resources for their own investment needs. Several projects in the water and sanitation sector are currently underway that should be used as models for greater public-private involvement in the development of infrastructure. To the extent that cost sharing is undertaken, it is recommended that local governments rather than the national government participate in these projects unless the projects are truly of national significance.

- *Enact transparent economic regulation to reduce the requirement for other types of sovereign guarantees.* Sponsors normally ask for other forms of guarantees to protect them against noncompliance and foreign exchange risk. The need for such guarantees normally declines once sponsors and creditors become convinced that a regulatory environment is in place that sets and modifies tariffs that allows concessionaires to generate the cash flows necessary to justify their investment.
- *Where guarantees are required, the government should price and manage them on a commercial basis.* In the near term it may not be possible to eliminate sovereign guarantees in all cases. Where such guarantees are needed, the prudent policy is to manage them professionally. Such management would require the government to establish a separate fund that would operate commercially.
- *Explore ways to expand and deepen local capital markets.* The principal financing issue for private participation in infrastructure is the currency mismatch between revenues and costs, thus creating problems of financial management and cost recovery. Accounting rules, which are not set up to accommodate the tremendous fluctuations that have resulted from the recent financial crisis, have exacerbated the problem. The government can substantially eliminate this problem by increasing opportunities to finance private participation in infrastructure locally. The government should recognize the importance of instituting measures to expand and deepen the mobilization of local sources of funding that can be earmarked for financing infrastructure. It could institute a funded social security program, review the preference for local capital sources to finance housing

mortgages, and review the current practices of the Social Security System and Government Social Insurance System in using scarce long-term domestic funds to finance consumer loans for their members. In addition, to help develop a local finance market, the government could reduce distortions by eliminating the interest rate subsidies and exceptional concessional terms provided by the Local Water Utilities Authority and the National Electrification Administration.

- *Build the capacity of local governments to borrow and transact private projects.* The Local Government Code of 1991 fundamentally shifted the manner in which resources are administratively and financially managed at the state, territorial, and political subdivisions. Local governments are given substantial financial autonomy to undertake important investment transactions previously handled by the national government. In addition, local governments can now raise revenue and assume debt as a means of leveraging their own financial resources to expand their investment envelope. This shift provides a significant opportunity to expand infrastructure development throughout the country, as local governments enter into partnerships with private companies, particularly for water and sanitation, municipal waste, and transport projects.

Severe constraints, however, limit local governments' credibility as borrowers and business partners. The shift in accountability to local governments requires a commensurate adjustment in the overall philosophy that governs the management of resources and the accurate assessment of financial performance. In essence, local governments should adopt commercial financial management practices and reporting principles and shift away from accounting principles that measure performance as a control on spending. This is particularly important if local governments will be seeking to enter into third-party transactions, such as debt financing, where their creditworthiness will be measured in large part by the accuracy, interpretation, and strength of their financial statements. In addition, as decentralization continues, local governments will be called on to provide guarantees of their own to private sponsors and financiers. Their ability to do so will rest heavily on their financial standing and creditworthiness.

- *Use equity markets to widen the distribution of ownership.* More privatization transactions could be structured through the stock exchanges to achieve a broader distribution of ownership that includes investors such as pension funds and insurance companies. This approach could help broaden the equity markets for infrastructure. Policymakers could also consider other means of financing these transactions, such as securitizing assets.
- *Eliminate the subsidy mentality.* One of the key long-term factors inhibiting development of a financing market for infrastructure projects is the fact that many public infrastructure projects are currently heavily subsidized. The National Electrification Administration and the Local Water Utilities Authority are extending pricing terms and conditions that would not be possible under commercial market conditions. These terms do not encourage the financial discipline essential to promote private participation. Instead, they have created a subsidy mentality among rural electric cooperatives and water districts. This mentality severely retards the development of an infrastructure financing market, as local banks, including government financial institutions, cannot compete on such soft terms. To restore some discipline in the financing market for infrastructure, the government should ensure that these financial institutions can recover the cost of their operations, given the terms and conditions provided to them through official development assistance from multilateral and bilateral donors. To do so, all costs, including foreign exchange risks, must be appropriately accounted for and transferred to borrowers. In turn, electric cooperatives and water districts need to charge tariffs that allow all costs associated with the financing and operation of infrastructure assets to be recovered.

Rationalize Institutional and Legal Processes

The government should strengthen the institutions and legal process for promoting private participation in infrastructure by taking the following actions:

- *Strengthen the role of the Committee on Privatization.* If the cornerstone of the government's agenda is to privatize existing assets rather than pursue new green-field projects, it will need to manage the process

carefully. An effective privatization process requires timely management that is not shaped by the self-interest of line agencies. International experience in countries with successful private participation in infrastructure programs, such as Australia, Chile, Mexico, and the United Kingdom, has highlighted the importance of allowing units with direct access to key decisionmakers to drive the process rather than allowing line ministries or other bodies to determine the pace and scale of privatization. In the Philippines the Committee on Privatization can play a crucial role in this process, as it did in the privatization of most of the country's government-owned and -controlled corporations in the early 1990s. The capacity of the Committee of Privatization to value and disseminate information on potential privatization projects should be strengthened and redirected to the infrastructure sectors. The committee's impressive record of privatizing the metal, oil, airline, and banking industries should be replicated in the infrastructure sectors. Creating an infrastructure unit within the committee could facilitate privatization of existing infrastructure assets, which in the past have been secondary to BOT initiatives.

A similar assessment should be made on the future role of the BOT Center. The BOT Center should focus primarily on the "buy" side of the privatization process, acting as a promotion agency to potential investors. The Committee on Privatization, which comprises key cabinet-level officials, should be the main entity responsible for disposing of the government's assets and for setting policy. Coordination between privatization and sectoral reforms with new greenfield investments also needs to be improved.

- *Consistently apply competitive bidding procedures.* A competitive and transparent bidding process should be used to privatize infrastructure assets and enterprises. To promote fair competition, the project selection process should be clearer and more transparent than it currently is. The process for soliciting, evaluating, and awarding projects should also be simplified and standardized by sector.
- *Establish arm's-length regulatory agencies.* Although the broad sector policy framework has become more hospitable to private participation in infrastructure, the current transactional policy and regulatory frame-

work does not accommodate the needs of private investors. When competition in the market is not possible, arm's-length regulatory agencies should be established to protect both investors' and consumers' interests. The regulator should maintain arm's-length relationships with regulated firms, consumers, and other private interest on the one hand and with the political authorities on the other. Investors are aware of political pressures that regulators face and of the vulnerability of their large, long-term, immobile investments. Unless the government makes a credible commitment to respect regulators' independence and autonomy and clarifies the rules of the game, private investment in infrastructure is unlikely to increase.

Strengthen and Deepen Sectoral Reforms

In addition to implementing institutional, legal, and financial reforms, the government needs to strengthen and deepen sectoral reforms. Specific recommendations for each sector are outlined below.

Power

Reforms are needed to ensure the viability of the sector and reduce costs. Proposed reforms include the following:

- *Restructure the sector.* Thirty-three power projects have been developed under the government's program, providing about 5,000 megawatts of capacity to the National Power Company (NPC). Although these projects have allowed the government to overcome the capacity shortage, they threaten to obstruct the government's even more ambitious plans to completely privatize and liberalize the sector. The current reform program, set forth in the draft Electricity Industry Reform Act, calls for the privatization of NPC's generation assets, creation of a wholesale market for power, and promotion of competition in the sector by allowing customers, starting with the largest customers, to choose their suppliers.

Obstacles to this ambitious reform program include NPC's liabilities (both its own debt and the liabilities associated with the independent power projects), political opposition from those benefiting from the status quo, and potential consumer discontent with higher prices in the short run to pay off liabilities

and the elimination of cross-subsidies between consumers and grids. Well-defined plans exist to cover most of the technical issues associated with the reform, such as bundling profitable independent power project contracts with the successor generation companies and allowing a charge or long-term contracts to cover the cost of stranded assets. Technical solutions can be found to potential obstacles to reform, but political opposition may be strong.

- *Support reform of the electricity cooperatives.* To improve the performance of the electricity cooperatives and the weaker investor-owned distributors, policy-makers could tighten regulation, allow or encourage smaller and weaker distributors to merge, and encourage the transformation of cooperatives into stockholding cooperatives whose shares can be traded.
- *Strengthen the Energy Regulatory Board.* Restructuring of the sector will require the Energy Regulatory Board to perform new roles, such as encouraging competition in generation and supply; establishing new forms of price control, such as price caps on the remaining “wires” businesses; and playing a more active role in establishing new market arrangements. The Energy Regulatory Board will need to be strengthened and its staff trained and supported.
- *Reassess the role of the National Electrification Administration.* The National Electrification Administration’s role has been that of policymaker, technical advisor, creditor, and regulator. Although its regulatory role has diminished through the transfer of some powers to the Energy Regulatory Board, if greater consolidation is to occur, its role is likely to have to change. Particularly if fewer soft loans are made to the electricity cooperatives, the financing pattern will have to change. Greater involvement in non-grid-related electrification and policymaking issues will also be appropriate in the new environment.
- *Eliminate cross-subsidies.* Maintaining cross-subsidies between regional grids and between customer classes becomes increasingly difficult as the grids become integrated and competition is introduced in generation and supply. International best practices suggest that there are better ways to ensure affordable services, such as providing subsidies to poor customers. The government should start to reduce cross-subsidies before competition is introduced.

Water

Although the concessioning of the Metropolitan Water and Sewerage System is regarded throughout the world as a model for successful water privatization, additional reforms may be required to overcome remaining obstacles and to replicate success in private participation in the water sector. These reforms include the following:

- *Shift emphasis from BOTs to privatization of existing assets.* Although BOT projects being pursued outside metropolitan Manila will enhance supply capacity, they fail to address fundamental problems associated with those water systems—namely, inadequate investment; inefficient operations, maintenance, and management of the distribution system; and deficiencies in billing and collection. Privatization of existing assets—which the Medium-Term Development Plan (1999–2004) supports—addresses these issues while removing the gap between bulk and retail tariffs. It also eliminates contingent liabilities that the government might assume through take-or-pay agreements, which private investors continue to pursue, despite the opposition of the Department of Finance.
- *Shift emphasis from unsolicited to solicited bids.* All but one of the bulk water projects currently under negotiation have been unsolicited. Like independent power producers, private developers pursue bulk water BOTs that offer guaranteed returns under low-risk conditions. The proliferation of unsolicited BOT schemes in the Philippines is not a result of careful public planning to solve operational inefficiency but reflects instead the private sector’s initiative in defining an investment strategy for the sector. To signal that the government has taken control of the planning process, the emphasis should shift from unsolicited to solicited bids.
- *Use technical assistance to solve capacity constraints of water districts and local governments.* The heavy reliance on unsolicited projects in the water sector partly reflects the lack of resources and capacity at the provincial level. Water districts and local governments should be encouraged to use technical assistance to identify projects and develop transparent and standardized bidding and contract evaluation procedures.
- *Separate regulatory functions and establish an independent regulator.* Currently, several government agencies

are involved in the water sector, sometimes with multiple and conflicting tasks (operating, regulating, consulting, financing). In the long run, it is best to separate regulatory, policymaking, and operational functions and establish an independent national utility regulator.

- *Develop model contractual regulatory arrangements.* A model contractual regulatory arrangement for concession and lease schemes could be developed and implemented in the interim period before an independent regulator is established. The World Bank's Local Government Unit Urban Water and Sanitation project is developing a lease contract that could be used as a model for privatization in the provinces.
- *Reassess the role of the Local Water Utilities Authority.* Currently, the Local Water Utilities Authority suffers from a severe working capital shortage as a result of poor collections, inefficient operations, and a mismatch of repayment periods. Unless changes are made, it will continue to require large subsidies well into the future. A second problem is the fact that the lending portfolio is highly concentrated among a few large water districts, leaving many water districts without access to funding. The government should consider restructuring the Local Water Utilities Authority so that it can play a more effective role in the sector.
- *Achieve positive net revenue at individual utility level.* The prices charged by water utilities are generally too low and their costs too high to generate sufficient positive net cash flow. Public utilities should be encouraged to achieve positive net revenues in order to attract private sector participation.
- *Establish a revolving fund for feasibility studies to solve resource constraints of water districts and local governments.* The World Bank's Local Government Unit Urban Water and Sanitation project proposes creation of a preinvestment fund, whose component costs would be recovered through success fees.

Telecommunications

Liberalization of the telecommunications sector has expanded service and reduced tariffs. More work still needs to be done, however, to fully liberalize the sector. The government needs to standardize interconnection agreements and ensure that new services are introduced on a timely basis.

- *Continue current deregulation plan.* Despite the government's ambitious liberalization program, the Philippines Long-Distance Telephone Company remains the dominant operator in the sector, controlling about 80 percent of the land lines in the country. The company's competitors are weak and divided, lacking the financial resources to meet their obligations to build-out lines or increase their competitive position. A likely market trend, therefore, and one that the government should manage with a light touch, is the potential consolidation of the sector. The government should not unduly discourage consolidation since it is likely to lead to a smaller number of more viable competitors.
- *Standardize interconnection agreements.* The stated goal of standardizing the interconnection regime may become a less pressing issue with the development of a competing national backbone and the growth of cellular traffic.
- *Auction remaining spectrum rights.* Where there is excess demand for spectrum rights, auctioning the rights would ensure that they are allocated to their highest value use.
- *License competitors for new services.* New technologies should be licensed promptly to allow new forms of competition and high-quality services to emerge. The new generation of satellite cellular phones and other new services should be licensed as soon as possible to allow a highly competitive and flourishing sector to develop.

Transportation

The Philippines has moved farther than most countries in inviting the private sector to play a key role in its transportation infrastructure. The country's major port terminals in Manila are operated by competing private companies, a group of private investors is on the verge of financial closure on a deal to build Manila's new international airport terminal, one privately financed toll road is operational and at least two others are under construction. Portions of all modes of transport, including railroads, airports, and regional ports, are under consideration for privatization, concessioning, or green-field private development.

This progress notwithstanding, private sector participation in the sector may be stalling because of weak macroeconomic conditions, legal conflicts, and unclear

government policies. Private investment in the sector is driven by local investor interests rather than a clear government strategy. The lack of proactive and coordinated initiatives, exacerbated by the regional lack of financing, resulted in an 18-month period in which no significant transport projects have come to financial closure.

In response to these challenges, the recommended action program focuses on the following themes:

- *Assess the feasibility of private participation in regional airports and ports.* Given the importance of inter-land transport to the Philippine economy, ports and airports function much like network industries. While centralized aviation and maritime policies are necessary in order to integrate and sustain these networks, regional or local communities should have the right to seek efficiencies in the operation of their ports and airports and to maximize available private capital by inviting private participation in those sectors. The Philippines Port Authority has pursued the leasing of terminal operations for more than 10 years and has allowed BOT contracts since 1990, when the port of San Fernando was rebuilt. The process, however, has been largely driven by the central office in Manila. The feasibility of future port privatization initiatives as well as Air Transport Offices' use of private investors in transport should be assessed as independent decentralized initiatives conducted by local governments for the benefit of local and regional economic development.
- *Strengthen local governments' ability to manage private participation in infrastructure.* As the Philippines Port Authority and Air Transport Offices are decentralized and traffic growth leads to more potential toll road development outside Manila, local and foreign investors will continue to approach local governments about investment opportunities. Municipalities and provinces must have the technical and financial capacity to assess unsolicited bids or solicit and evaluate bids on a competitive basis.
- *Encourage solicited, competitive, and transparent bids.* Like other infrastructure sectors in the Philippines, the transport sector uses a bidding process that involves submission of unsolicited bids, typically from consortia of local retailers, real estate developers, and banks. In light rail, commuter rail, and toll roads, investors seek to maximize the value of their land

and property holdings and to secure air rights to the space over and around stations and terminals for commercial and retail development. Proposed airport investments are also driven by local investors seeking to capitalize on the retail potential of the terminals. While it is natural and desirable that the private sector pursue these opportunities, the lack of government strategy driving the process results in uncoordinated development and project designs that may not optimize consumer benefits.

The government, through the Department of Transport and Communications or its line agencies, evaluates each project, but it may not have the resources to challenge the assumptions about demand and willingness and ability to pay under proposed tariffs. By opening up the bidding process to competition on a solicited basis, the government would protect itself from the accusation that it is held captive by domestic cartels. Competitive award of contracts is also likely to survive court appeals.

- *Improve coordination between greenfield and privatization projects.* Before decisions are made to allow new facilities to be built, analyses of the potential capacity gained by improving the efficiency of existing facilities through privatization or concessioning should be performed. Private sector participation in the Philippines National Railroad has involved BOT and privatization procedures. The fact that both approaches are being pursued simultaneously by different investor groups for overlapping assets means that the bids will not be comparable. Providing one agency with the authority to implement both greenfield and privatization schemes would allow the government to coordinate feasibility studies and bidding criteria and proposals. It would also protect it against lawsuits and accusations of favoritism.
- *Separate the regulatory, policy, and operational functions of the Philippines Port Authority, the Air Transport Offices, and the Department of Public Works and Highways.* Transport agencies in the Philippines perform multiple, sometimes contradictory, functions. For example, the Philippines Ports Authority operates several ports, negotiates and manages concessions and leases with private terminal operators, owns the assets of the nation's public ports, determines overall port policies, sets tariffs for public facilities and approves tariffs for private facilities. Perhaps as a result of

these contradictory responsibilities, tariffs do not align with the actual usage of port facilities, and vessels engaged in international trade are forced to cross-subsidize domestic activity to a far greater degree than elsewhere in the world.

As the Asian Development Bank has recommended, the regulatory functions of the Philippines Port Authority and the other line agencies need to be separated from agencies responsible for policy-making and operations. This is particularly important as more and more private operators compete with or cross-subsidize public facilities.

- *Help projects reach financial closure.* Since the Asian financial crisis, achieving financial closure has become much more difficult, even for projects with proven demand and limited currency mismatch. Traditional providers of debt are reluctant to accept the risks associated with off-balance sheet infrastructure investments. Even apparently viable projects, such as International Container Terminal Services Inc.'s new terminal and the Manila North Tollway, are unable to find financing because of the lack of affordable financing flowing into the Philippines and the absence of peso-denominated long-term financing. Creditors are requiring unaffordable spreads over Libor or revenue guarantees from the equity partners of projects. Local equity investors are unable to offer these guarantees; after its experience with independent power producers, the government is reluctant to assume more contingent liabilities or guarantee-based obligations. As a result, no significant transport projects have come to financial closure in the Philippines for a period of 18 months.

Finding long-term peso-denominated financing will be a key part of attracting sustainable investments in transport infrastructure. Currency mismatches—typical in rail and light rail projects but present in all modes of transport—highlight the need to create bond markets or other local currency financing mechanisms.

- *Clarify the commitment to financing right-of-way obligations.* Right-of-way commitments for transport projects require significant resources to provide adequate alternative living arrangements for displaced families. Initial feasibility studies must consider the ability of the project to absorb the cost of resettle-

ment through revenue earnings or determine if government financing is required to prepare the project free of settlement. If the government assumes responsibility for right-of-way obligations, its commitment and ability to finance resettlement should be strengthened if doing so is needed to make the project bankable. Putting earmarked government funds in escrow to demonstrate commitment and using public-private partnerships in which landowners speculating on real estate appreciation contribute to right-of-way costs should be considered.

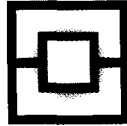
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