

The IFC Review of Private Investment in Developing Countries

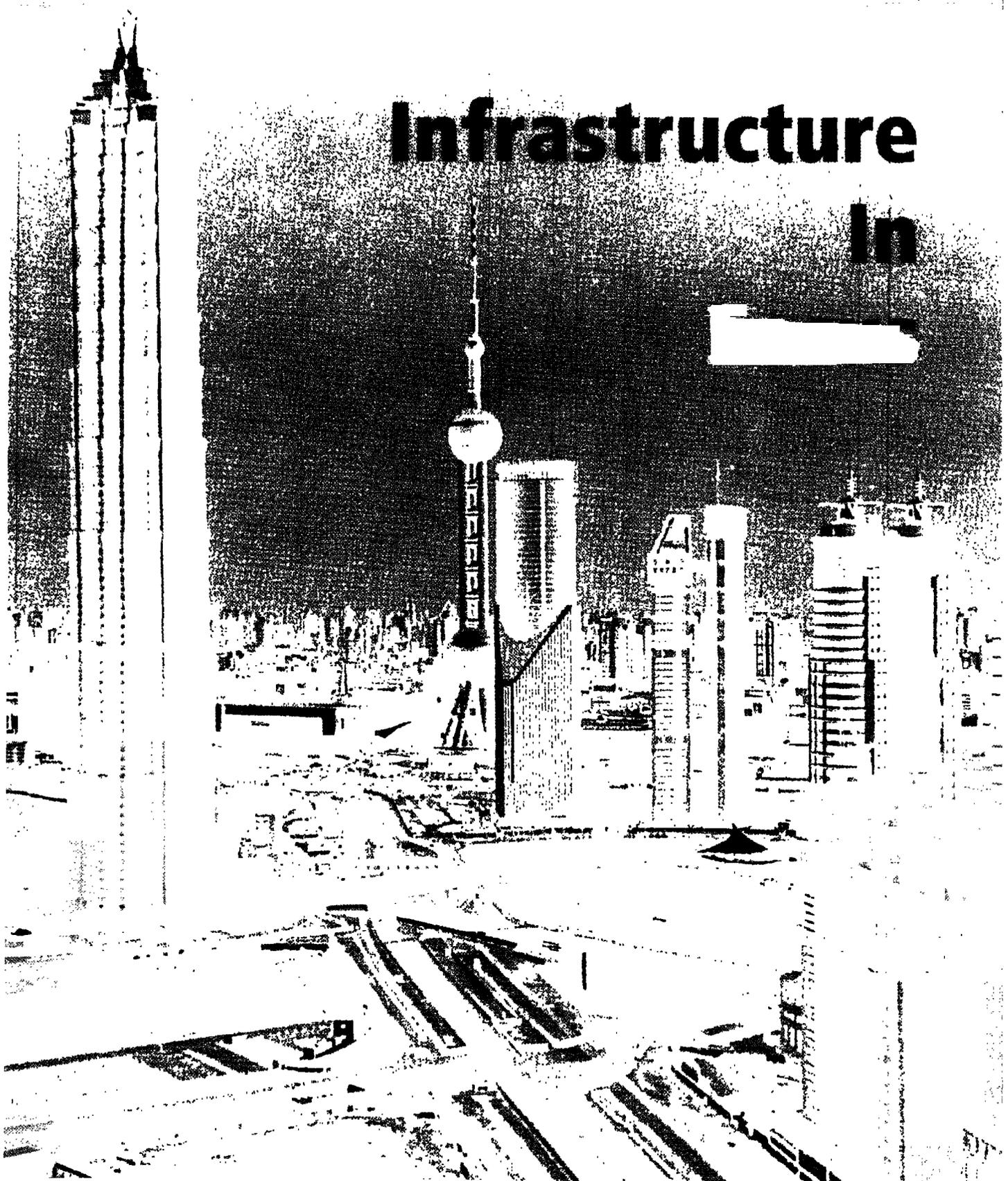
impact

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Infrastructure In



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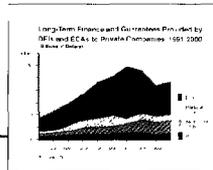
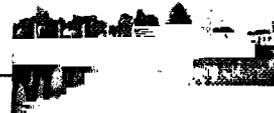
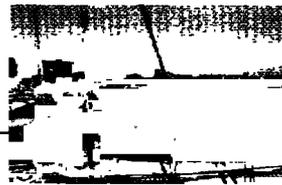
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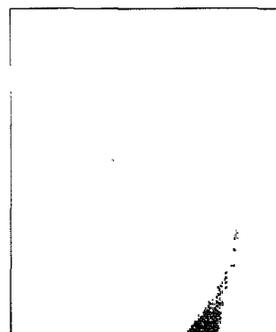
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Dear Readers:

We are pleased to present "Focus on Infrastructure," our new issue of *Impact—Private Sector Partners*, which we have launched with our publishing partners, the Creative Base Publishing from the United Kingdom.



This issue features articles on various infrastructure-related topics and is timed to coincide with the Projects International conference in Paris, in March 2002.

The articles in this issue address a number of specific topics, beginning with Declan Duff's article describing the context in which today's financiers must make their investment decisions. Afshin Molavi's article on insurance and Desmond Dodd's piece on niche investments explore some of the particular problems—and opportunities—facing investors. Ann Moline's essay highlights successful infrastructure projects in which IFC has participated, illustrating the wide range of investments in developing countries.

We also feature a discussion with Sir Alastair Morton, former head of the Strategic Rail Authority in Britain and former cochairman of the Eurotunnel, on topics ranging from the best time to commit to massive projects to what makes for successful public-private partnerships. The interview with Edward Nassim, director of IFC's Central and Eastern Europe Department, focuses on opportunities for investment in Russian infrastructure projects.

Angela Gentile-Blackwell writes about an electric utility in Rio that is using MIGA's risk insurance to meet the demands of the poor for electricity, while Danny Leipziger and Vivien Foster look at the evidence to determine whether infrastructure privatization is good for the poor.

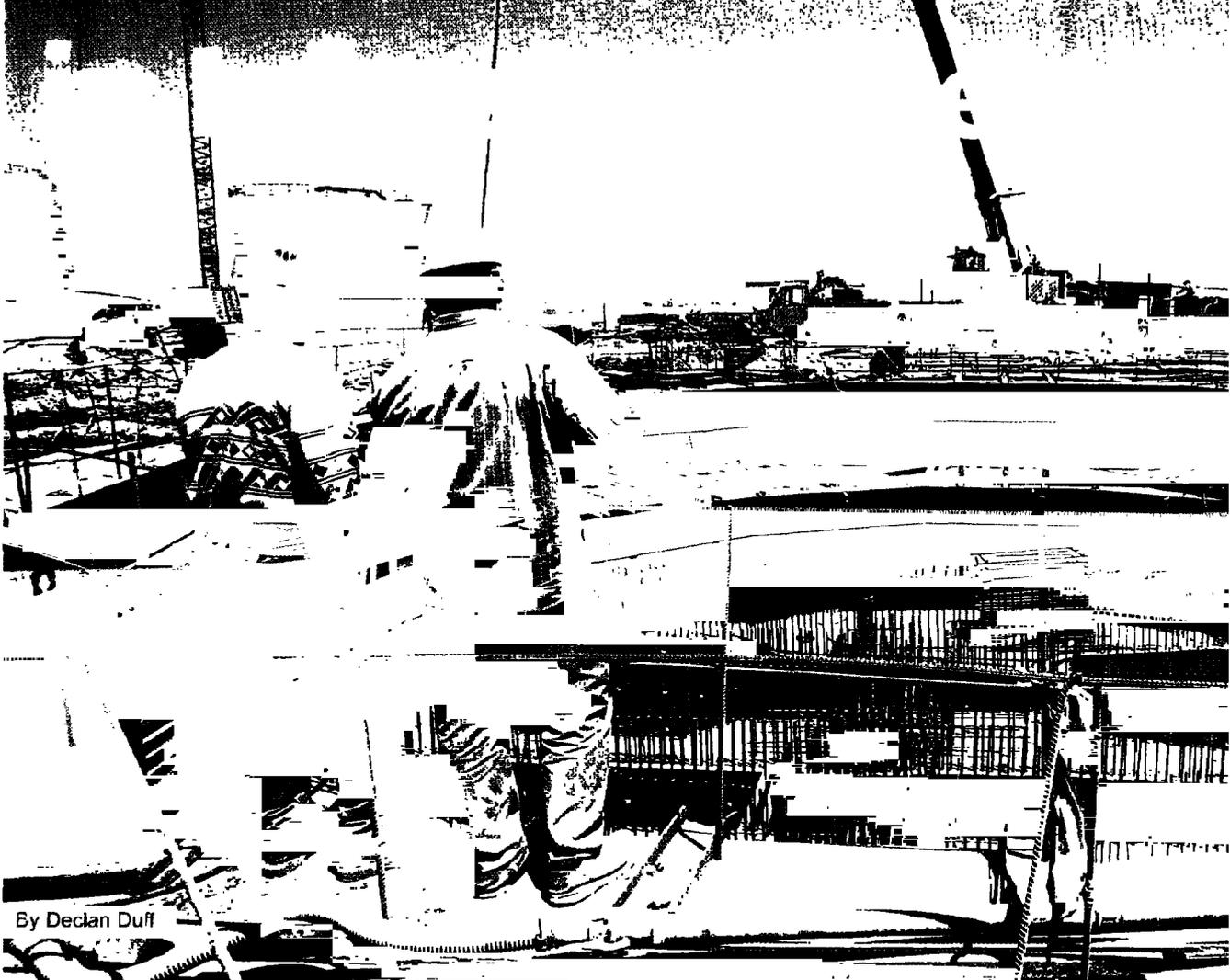
Although most of these articles explore the theme of private sector investment in infrastructure, we draw your attention to two articles that take up other topics. In "Assessing the Business Environment in East Asia," Javed Hamid and Dileep Wagle explain a new tool for analyzing barriers to a well-functioning private sector in developing countries. And in "Trends in Private Sector Finance," Arthur Karlin offers a quantitative analysis of private investment in developing countries, with interesting statistics on regional investment flows and financing provided by development finance institutions and export credit agencies, with a glance at infrastructure investment as well.

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Peter Woicke

*Executive Vice President
International Finance Corporation*

Private Investment



By Declan Duff

With concerns about worldwide recession, as well as the September 11 tragedies in the United States and their aftermath, ordinary workers and world leaders, lenders and borrowers, planners and builders, government officials and business owners must all assess both the immediate and the long-term implications for their economic future. The challenges to conducting the work of the world with a measure of confidence—and with some predictability of result—seem formidable indeed.

Many people recognize the challenges—they are clear enough—but are there also opportunities? Can investors and entrepreneurs regain the sense of security necessary to take some risks?

What will it take to make them willing to move forward despite uncertainty? Can they commit to the future?

Perceptions of risk and tolerance of ambiguity differ, of course. At IFC, we remain focused on our bedrock mission of promoting sustainable private sector investment. And that means addressing challenges to investment, even in especially difficult times.

We recognize that investment in infrastructure is fundamental to our mission, for to progress modern economies must have functioning, efficient power plants, roads, ports, telecom systems, railroads, and water and sewerage facilities. We are committed to seeking profitable and environmentally and socially sound opportunities. We intend to help ensure

the success of those ventures by investing in them and providing crucial advisory services—even as we face up to the mettle-testing challenges to project finance in today's environment.

As one of the major financiers of private projects in the developing world, IFC makes gross commitments of some \$5 billion a year in project financing and plays an active role in promoting greater private participation. Through FY 2001 IFC has arranged financing of \$12 billion in support of infrastructure projects worth \$42 billion. Since the early 1990s when we first became active in infrastructure financing, private infrastructure deals worth nearly \$600 billion have been arranged in developing countries. Investment in infrastructure projects forms a key part of our institutional

IFC supported two of the first private power projects in Egypt, including one at the Gulf of Suez and one in Port Said. Photo: IFC archives



Opportunities

and

Challenges

growth in such conditions are severely limited. Population growth and demands for an expanding array of services continue to exceed the capacity of public sector providers of infrastructure to respond effectively. The need for more private sector participation in infrastructure is clear, and the past ten years have seen a significant shift in that direction. Examples range from railroads to ports and from toll roads to airports.

During the 1990s some 60 new rail companies, for instance, began operating around 80,000 kilometers of private rail track in developing countries. In fact, private rail services now carry virtually all of Latin America's rail shipments and about half of Africa's. About two-thirds of new expressways in the developing world are run by private concessions on a toll basis. International financiers have invested in new port terminals, thereby spurring containerization in shipping. Private container transshipment facilities in Latin America and Asia are transforming world shipping patterns and thus lowering the costs of world trading.

Most airlines around the world are now privately owned, and governments are increasingly turning over airport handling operations to the private sector.

Over this period, policy changes have come quickly but unevenly. Rapid, positive shifts have taken place in some countries that have effected major policy breakthroughs. In other countries—those with political and other constraints—such shifts have come much more slowly or not at all. In fact, some 85 countries, mostly in Africa and Asia, have yet to embark seriously on infrastructure privatization.

The potential for profitable investment in developing countries is there—the real question is how to

identify potentially profitable projects and how to abate the risks in a climate of uncertainty.

Investing in Potentially Profitable Projects

Nothing can ensure a successful infrastructure project—there are simply too many variables that cannot be controlled and too many possibilities, however remote, that cannot be predicted. But with certain critical elements in place, a project stands a much better chance of success.

A Business-Friendly Legal and Regulatory Environment

Infrastructure projects in countries with sound legal and regulatory structures start off on a sounder footing. Transparency, efficiency, enforceable contracts, equitable bankruptcy laws, provision for international arbitration, and strong environmental and social standards provide project sponsors with some assurance that the playing field is level and that the risk of being blindsided by unanticipated legal obstacles is minimized.

The best insurance for long-run stability in infrastructure investment is an independent, fair regulator. Little remains constant for 30 years, and even the most tightly written concession contract will need adjustment as circumstances change. The regulator is central to achieving a balance of interests among investors, users, and the government. Investors want fair returns, users want low tariffs, and the governments want affordable services and the benefits that flow from a well-functioning infrastructure. The trade-offs needed to satisfy all parties must be made openly and fairly according to a transparent set of rules. Newcomers and incumbents should be treated equally. Most important, the regulation process and the regulator should be apolitical—outside the civil service structure and independent of the party in power. Independence in regulating private utilities has three main benefits:

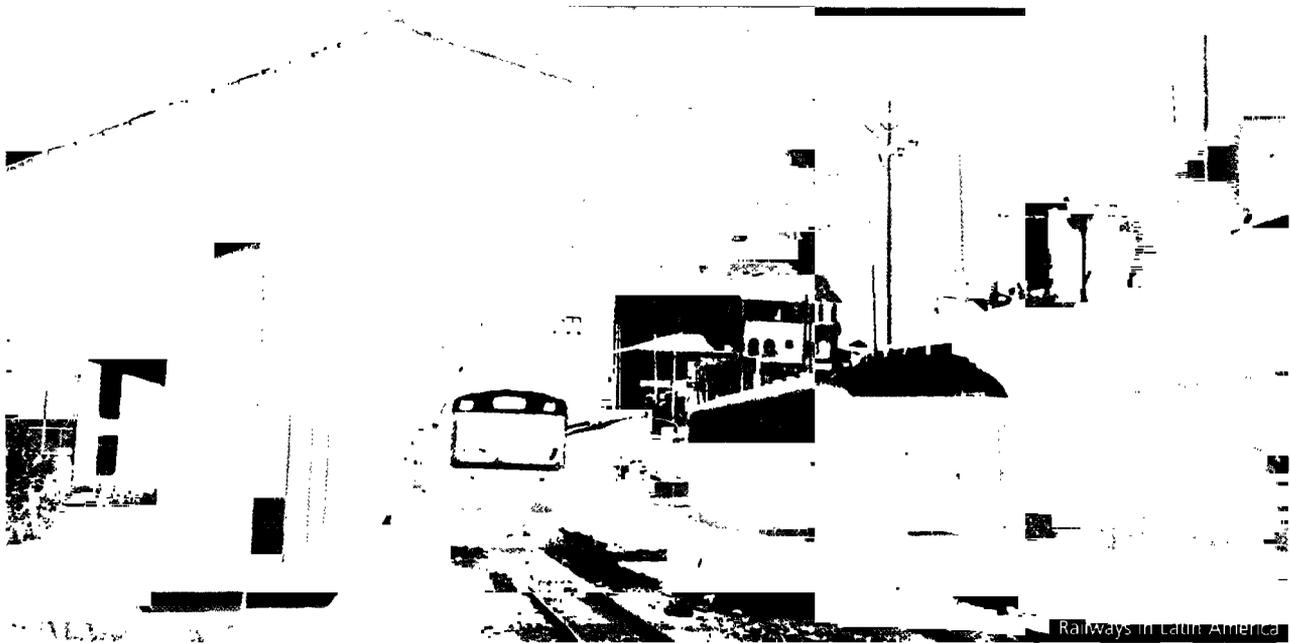
- It builds public trust and widespread support by demonstrating that the switch from government-subsidized to profit-oriented utilities will not mean high prices and excess profits but will lead to genuine improvements in service and quality.

- Governments can trust that consumers' interests as well as investors' claims are considered in tariff review and that the egregious claims for high tariffs will be squeezed out.

strategy. In FY 2001, for example, infrastructure and telecommunications accounted for almost 40 percent of all projects to which we committed financing.

The Need for Private Participation in Infrastructure

Current financial strains in the global economy have not changed the obvious need for infrastructure projects: without them, industrial inputs cannot reach factories; goods languish en route to market; unpredictable communications undermine commercial transactions; power shortages reduce productivity; education and health needs go unmet; and lack of clean water and sewerage facilities pose health problems for communities. The prospects for economic



• New investors can be confident of fair treatment in the sector, thus lowering the risk premium in the costs of system rehabilitation and expansion.

Strong Project Economics

While questions of cash flow, market potential, the financial health of the sponsors, ability of local capital markets to sustain the project, and exit strategy must all be satisfactorily answered, fundamental to the economic success of the project is a solid, demonstrated need for services.

Once that need is established, the appropriate financial structure is the next critical issue. IFC's considerable experience suggests that infrastructure investors should begin with the basics: a solid financial structure as a first defense against future threats to a project. That is, a project must have built-in financial slack to cushion foreseeable and sometimes unforeseeable problems. In addition to a solid financial architecture, the buffer should also include committed sponsors, broad popular support, and access to financial markets.

Certain intangibles are also crucial. Projects that clearly fit into national development priorities are more likely to gain the support vital to long-term prosperity. Consultation with stakeholders at an early stage can also help explain the benefits and lower the risk that minor problems will become insurmountable obstacles. Risks and rewards must be shared as well, and investors, consumers, and politicians must perceive that the deal is fair.

An equitable deal assigns risks fairly. Investors, for example, must be willing to accept a large share of the project's risk through a sizable equity stake, in addition to taking responsibility for completing the project and bringing it to its revenue-earning stage. This usually requires the sponsor to provide support to the project company until the project is physically completed. Over time, lenders have also become sensitive to the front-loaded risk structure of infrastructure projects and have developed various risk-mitigating mechanisms, including stretched maturities, back-dated capital repayments, mortgage-style amortization, tiered pricing, and partial credit guarantees that can lower burdens in the early years. Sometimes those risks are difficult to calculate, of course. Two new features of infrastructure projects, competition and paying for service, for example, complicate the assessment of market risk. Without a performance history of similar projects, there is no way to gauge demand at the planned selling price.

Likewise, start-up firms facing strong competition on price and quality of service may need financial structures that allow longer grace periods and provide longer loan tenors, which will lower initial repayment rates. When market-priced utilities, for example, replace subsidized service, careful assessments are needed of both the willingness and the ability of users to pay.

Managing Currency Mismatches

While currency mismatches cannot be avoided any time that foreign investment

is involved in the deal, successful investors will find ways to manage those mismatches. Even with perfect local capital markets, there would be high rates of foreign investment in infrastructure because governments want the technology transfer that comes with foreign management and technical practices.

Currency indexing alone does not protect against serious problems caused by mismatches. Because of thin capital markets in developing countries, the most common method of privatization is the sale of the facility to a foreign strategic investor. Many privatizations and infrastructure concessions include terms that link tariffs to a hard currency and allow automatic pass-through of local currency price variations arising from currency fluctuations. When very large changes in exchange rates occur, the social distress that follows often makes governments reluctant to honor pass-through arrangements. Nor could consumers likely afford the massive increases in utility bills that a pass-through would cause. Indexation is clearly an insufficient remedy for the problems of currency mismatches.

Countries that have combined pension reform (which allows long-term savings to be invested in private infrastructure) with the privatization of utilities have seen higher rates of project success. The financing of Hidro Boliviana, a hydroelectric plant near La Paz, offers an interesting example of how the financial structure built on those reforms. Although the financing was denominated in dollars,

it was placed in the Bolivian capital markets to a largely Bolivian group of institutions. It was the first project bond to be completed in Bolivia and is equivalent in size to 0.8 percent of the country's GDP. The deal was made possible by the deregulation of the domestic electric industry and by the reform and privatization of Bolivia's pension system. In this case, currency mismatch is not an issue.

Market Access

Market risk in infrastructure sectors is generally much lower than the default risk of the publicly owned utilities in the sector. Public utilities in the developing countries are among the worst-run companies in the world. Many cannot meet their basic operating costs from revenues. Most have inadequate investment resources to maintain their existing assets in good order or to expand to meet growing demand. In developed countries, for example, where demand for infrastructure services of all kinds is growing at about 1 percent a year, utilities reinvest about half their cash in system improvements and expansion; in the developing world, where demand is growing at about 8 percent per year, investment is barely half that amount. It follows that a build-operate-transfer (BOT) project that can sell only to an uncreditworthy public utility is itself implicitly uncreditworthy.

Until now, the most common remedy for this situation has been to ask for a take-or-pay clause and government backup of the performance of the utility under the BOT contract. But that remedy is being turned to less and less, for several reasons:

- The governments responsible for the poor performance of the utilities are

looking to the private sector as a catalyst of change and are expecting that their financial responsibilities in utility sectors will decline as private investors move in.

- Without additional resources to expand and modernize distribution and delivery networks, utilities may not have the means to deliver service to retail customers. Thus the final costs of private supply become prohibitive

- Those governments that are privatizing local delivery markets may find that the generous BOT contract terms are unattractive to potential buyers of the utilities, and they may lose some of the value of their assets when sold. Moreover, the preferred position of the BOT companies may hinder the development of true competition in the sectors.

For these reasons, fewer and fewer governments appear to be offering these kinds of terms, and those that do will soon be renegotiating in favor of more competitive marketlike structures.

Ending Monopolies

A far better protection for investors is direct access to the market, ending the utility's monopoly. Coincidentally, this is also the best method of protection of consumers' interests. Users of infrastructure services in developing countries are willing to pay for them. In fact, because of the unreliable supply from the public utilities, most residents and businesses are paying much more for private emergency services than what a modern utility would charge.

To guard against service interruptions in many countries, for example, new industrial and commercial plants have

installed private generating facilities that produce electricity for about twice the notional industrial tariffs; many households have private water storage tanks or purchase water from tank truck vendors for many times the piped-water tariff. Connections to reliable utility services have the effect of raising poor families' living standards by 50 percent or more. World Bank studies have shown. Direct access to users is also important in generating public support. Users who see service improvements from private suppliers are likely to become advocates for a wider private sector role in the utilities.

Strengthening Local Capital Markets

Encouraging infrastructure investment provides unique opportunities to help deepen capital markets and maximize the local financing, thus preventing consumers from being held hostage to currency fluctuations. Countries that have used privatization for developing local savings have seen those savings rates grow impressively. Privatizing infrastructure and seeking local funding also serve to expand local opportunities to supply equipment and services to infrastructure companies. Recognizing that potential for business expansion, a number of countries are actively developing local capital markets for infrastructure services. In addition, local investors can join infrastructure consortiums and are often invaluable advisors on local conditions.

In the End, Manageable Risks

While we must face up to the difficulties posed by our current investment climate, good projects in developing countries still offer opportunities for investors. And if careful structuring and a conducive business environment are important in better economic times, they are vital now. Our challenge is to find effective ways to tame the risks and get on with the business of investing in projects that produce benefits for investors, sponsors, and consumers and that help governments meet the growing needs of their citizens.



Photo by N. Schiller

Declan Duff is director of the Infrastructure Department at the International Finance Corporation. This article is an updated and expanded version of "After the Storm," which appeared in Global Infrastructure Development, World Markets in 1999, published by the World Markets Research Centre, in 1998. Cited with permission.

Capstone

Coming of Age

By Dr. Åke Almgren
 President and CEO
 Capstone Turbine Corporation — USA



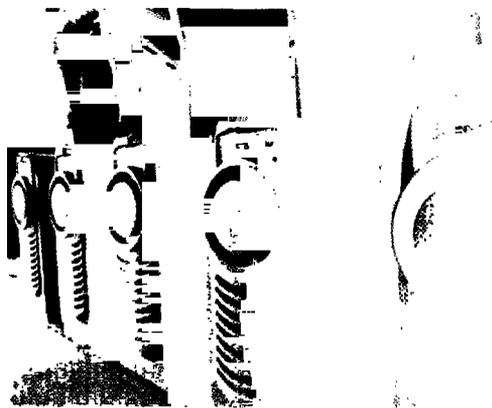
"Think Globally, Act Locally". Dr. Rene Dubos, a French-born Pulitzer Prize winning bacteriologist, pioneering environmentalist and author gave mankind this phrase in 1972 firm in the belief that global environmental problems could turn into action only by considering ecological, economic, and cultural differences of local surroundings. Three decades later, that mantra is central to the challenges in melding the environmental movement with international economic development, coupled by a more realistic understanding of forces such as energy demand that contribute to the world's problems.

Fueled by emerging demand for higher levels of reliability during the decade of the Nineties, a quiet transformation called **Distributed Generation (DG)** began to change the way power is delivered. While serving as a supplement to the large scale centralized power plants and transmission and distribution infrastructures in the industrialized world, DG offers a number of particular advantages when building infrastructure in the towns and villages of developing countries.

DG is quickly deployed. Because DG projects can be sited, installed and operating in a matter of months rather than years, faster speed of deployment means more flexibility — serving loads

from a few kilowatts to a few megawatts — and a reduced financial risk for investors.

DG does not require a complete electric transmission and distribution (T&D) infrastructure to operate. In that respect, it is a paradigm shift from large centralized power plants, which do require a T&D infrastructure for the delivery of power to the consumer.



DG can better utilize locally available fuels. Also, DG can serve local demand for power as well as heating and cooling.

There are a number of DG technologies. The reciprocating engine has, so far, been the dominating DG technology, but several new technologies are emerging including photovoltaics, microturbines, fuel cells, and potentially, stirling

engines. In these new technologies, the common denominator is the environmentally friendly focus. The microturbine, in many cases, offers the best value for clean, small-scale on-site generation.

At the forefront of this revolution is **Capstone Turbine Corporation**, leading global producer of low-emission commercial power products utilizing microturbine technology. First-to-market in 1998, following ten years of strategic research and development in real-world environments, Capstone systems can operate on a variety of fuels including natural gas, methane gas and propane as well as diesel and kerosene. The 30kW and 60kW units can be aggregated into so-called "multipacks" and thus serve loads up to several megawatts (MW). The system is completely air-cooled, which makes installation and maintenance much easier than most other alternatives.

Collectively, over one million hours of operation have been logged in five primary applications: as an on-board generator for hybrid electric vehicles (HEV), converting waste gases in resource recovery, capturing the benefits of electricity and exhaust heat for heating and or cooling in micro-cogeneration, ensuring power quality and reliability, and protecting end-users from

Village

price spikes in a sophisticated electric power market through peak shaving.

While 70 to 90 percent efficiencies have been demonstrated when utilizing microturbines in combined heat and power (CHP) applications in industrialized communities, the Capstone value proposition for small and remote villages of Asia and Africa is best expressed in resource recovery ("free fuel") applications. Sustainable development programs, by definition, can benefit from the simplicity of design, scalability, fuel flexibility and a stated ultra-low emissions profile of less than 9ppm NOx. Microturbines can be placed in operation even when only modest amounts of underutilized oil, gas, or biogas are readily available.

Biogas:

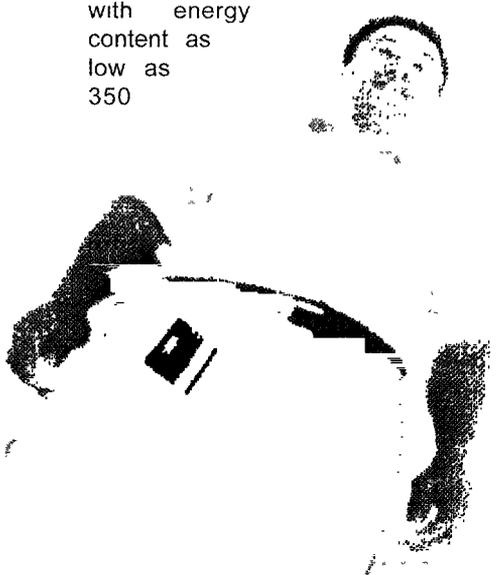
In the face of continued population growth, increasingly taxed ecosystems and more stringent environmental regulations, mitigating human, agricultural and animal wastes using advanced technology solutions is critical. The Capstone system is proving ideal for converting landfill and digester gases to electricity because it operates on fuels with energy content as low as 350

Btu/scf. Independent testing of a microturbine system deployed on one Southern California landfill serving the Los Angeles region showed remarkably low NOx emissions of 1.3 ppm, one hundred times cleaner than regular natural gas reciprocating engine generators.

In August 2001, Los Angeles Department of Water and Power, the largest municipal utility in the United States, dedicated a groundbreaking green energy project at a full-to-capacity landfill: 50 microturbines at Lopez Canyon will convert enough free methane gas at the closed refuse dump to generate 1.5 megawatts of power, enough to power 1500 homes in the region. By using gas that would have been flared off into the atmosphere, the turbines will eliminate 10,000 pounds of NOx emissions, or the equivalent of removing 500 automobiles from the roadways.

More can be done. Noticeably, the value proposition utilizing microturbines in wastewater operations is gaining momentum. Currently, over 46 systems are operating at ten U.S. wastewater treatment plants. Serving as both the source of combustion power and thermal energy for the digester, initial results show the system offers a methane destruction efficiency of 99.999%.

These microturbines, in many cases, work by recapturing exhaust heat to generate hot water, ensuring the digester environment remains at an optimum operating level to produce stable and environmentally safe biosolids. The modular design and



Capstone

small footprint of the microturbine system means ultimate configuration flexibility, better energy utilization and reduced electricity demands on the treatment plant.

Significant experience and positive results are also underway utilizing Capstone systems in a variety of animal digester applications from dairy operations to hog and poultry farms.

Oil & Gas Recovery:

Annually, it is estimated that over 4 trillion cubic feet of energy-containing gas is flared worldwide, most because it has no economic use. Utilizing a microturbine generator, this "waste gas" is transformed into valuable electricity, cleanly and efficiently. Microturbines applied to generate remote prime power can eliminate or defer the need for transmission and distribution (T&D) systems, produce a gas commodity by-product from oil production, and make the most of previously "uneconomic" natural resources.

Real-world experience with the Capstone system includes operating in the remote oil patches of Canada, powering unmanned satellite offshore platforms in the Gulf of Mexico, generating from coalbed methane wells in the Rocky Mountains and Wyoming's Powder River Basin, and validating methods to reduce operating costs and emissions in California. The end result gives Capstone a leadership position in transferring this experience to developing nations building an economic base with similar unexplored resources.

Further offshore well developments, oil and gas exploration in Africa, and coalbed methane retrieval opportunities on the Asian continent are just some of the projects underway.

In practice, the microturbine offers an option to flaring gases during oil and gas exploration, given the solution, or casing gas can be diverted at once as fuel for the microturbine. The result: grid-quality power can be used onsite to power small equipment or in other cases, be redirected to the power pool. In remote locations without access to grid power, the value includes eliminated T&D costs, increased equipment reliability and decreased maintenance. With more effective combustion than incineration, ultra-clean exhaust emissions improve the community's air quality and reduce overall environmental impact to foliage and fauna.

Summary:

Distributed generation, utilizing microturbine technology, is a viable and available commercial technology well suited for sustainable development projects where speed, scalability and preservation of environmental resources are important.

Microturbines applied to resource recovery applications can be instrumental in creating a new economy and developing existing natural resources such as shallow gas reserves or unexploited oil resources.

In addition to traditional economic benefits, energy commercialization can also, at a very low cost, electrify a developing region at a fraction of the usual time required to set up a traditional electric infrastructure. This fast access to electric power may be an even bigger economic benefit.

Richard Truly, former American astronaut and current director of the National Renewable Energy Laboratory in Washington, D.C. once remarked that "people in developing countries, many totally without electric power today, see their needs in terms of clean water, clean air, adequate food and good health ... (a) priority even over education and ... build(ing) a decent living." Were these



economies somehow able to shape a standard of living equivalent to that of industrialized nations, the per capita energy consumption and demand for energy would result in a "most critical engineering challenge on earth today".

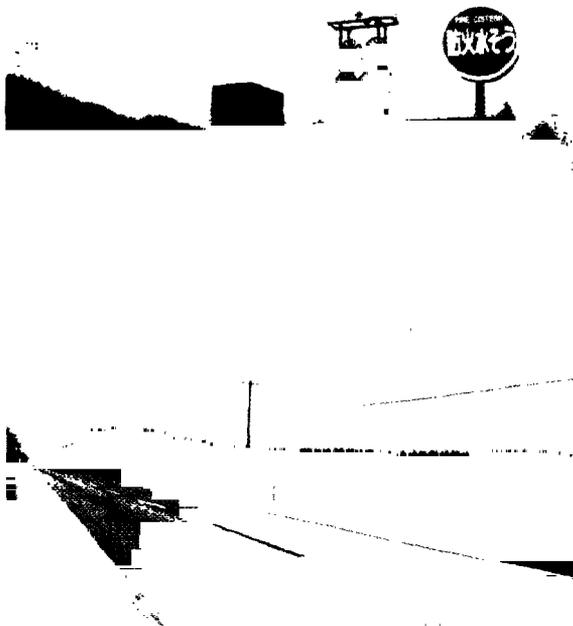
Truly envisions a new affordable, flexible and reliable energy model. It would meet changing needs of a diverse population in a predictable manner, securely, safely, and efficiently. Emphasizing sustainable resources, human activities could be supported without reducing the standard of living or incurring debts for future generations. This model, he proposes, could take up to 50 years to complete.

With the help of distributed generation technologies like the microturbine, the global village could be powered up in years, not decades, starting today.

Senior Management

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On the ground, under the ground, in the water, in the air

*A decade
of successful
IFC
infrastructure
projects*

By Ann Moline

Aguas Argentinas is an efficient, profitable private enterprise, providing clean water to 81 percent of the population of Buenos Aires and sewer connections to 61 percent of households. Photo by Jerry Esmay.

In any worthwhile endeavor, the fundamental infrastructure must be in place before the long-term goals are achieved. Indeed, the expression "You've got to walk before you can run"—trite though it may sound—holds true not only for human development but for poverty alleviation and economic development as well. People must have access to clean running water, electricity, passable roads, efficient transportation, and reliable communications before they can improve their standards of living. Businesses and communities, too, must be able to count on these basic building blocks before they can achieve sustainable growth. Just as an individual would struggle to maintain a steady job while battling illness borne by contaminated water, so would a small local manufac-

turer have a hard time conforming to a tight production schedule while coping with frequent power outages.

And while few would argue the theory, putting the theory into practice has proved a challenge. Early on, IFC recognized the important role that the private sector might play in ensuring the viability of basic services, as state-run utilities throughout the world ran aground. Frequently, over the course of the past decade, the daunting task of designing financial structures that would support such crucial—but risky—projects while withstanding market fluctuations and local currency devaluations has fallen to IFC. The work has not been simple. Admittedly, difficulties have arisen along the way, but the ongoing

impact is profound. Take a look at this cross-section of IFC infrastructure projects, and their positive contributions to broad-based economic development and poverty alleviation.

Aguas Argentinas

Aguas Argentinas S.A. was born in the early 1990s as part of the national privatization program affecting Argentina's utilities. The company represents one of the first private investments in a utility in the developing world and holds a 30-year concession to operate the greater Buenos Aires water and sewage system. Skepticism for the project ran high at the outset, since private sector involvement in such projects was rare. IFC and other multilaterals have played a crucial role,



Photo by Jerry Esmay

assisting the company in securing the financing necessary to carry out its ambitious goals of increasing the quantity and improving the quality of the water supply, as well as expanding sewerage coverage to more of the city's residents

Today, the company is one of the largest privately operated water concessions in the world, with revenues in excess of \$500 million. Its success has served as a model for similar projects elsewhere in the developing world. The overall success of the Aguas Argentinas concession has in many ways been the benchmark over the past years by which other similar projects in IFC are measured.

In less than 10 years, Aguas Argentinas has become an efficiently run, profitable private enterprise, providing a steady supply of clean water to 81 percent of the city's population and sewage connections to 61 percent of households. Meanwhile, the firm contributes to large-scale economic development through job creation and the fostering of links with small local enterprises.

In 1993, just before the concessioning, some 3 million residents of the city had

no connection at all to the central water supply. Many residents constructed makeshift wells, which often became contaminated, causing illness. The sewage situation was even worse. The city's only wastewater treatment plant processed a mere 5 percent or so of the region's sewage.

Enter Aguas Argentinas, which accessed international capital markets with IFC's assistance to finance the turnaround. Eight years after the concession was awarded, the residents of Buenos Aires benefit from decreased groundwater contamination and pollution, improved public health, and increased access among the city's poor to clean, reliable water supplies. In addition, Aguas Argentinas has become a major driver of economic activity in the country. The company's ambitious \$1 billion five-year investment plan should contribute to the creation of about 8,000 new jobs per year, especially in small and medium-sized businesses. Many of these firms are local operations, relying on Aguas Argentinas as their single most important customer.

The challenge that faces utilities such as Aguas Argentinas is to successfully complete investment programs that run significantly longer than the financing provided by the multinationals. This requires a search for new funds to cover part of the existing financing.

Despite Argentina's current debt crisis, Aguas is confident of continuing to fulfill its mandate of serving the population of the city of Buenos Aires itself as well as 17 surrounding districts.

Manzanillo International Terminal

For years, Panama has been poised to take its place as a key hub in an increasingly global supply chain. And, for almost as long, problems ranging from poverty to neglected infrastructure, from political instability to bureaucratic red tape, prevented the tiny isthmus from taking full advantage of its strategic location and existing resources.

The establishment, in 1995, of the Manzanillo International Terminal (MIT)—near the Atlantic coast entrance to the Panama Canal—was the beginning of a massive shift, contributing to Panama's newly heightened importance and ascension into a larger role in the global logistics industry. "MIT has, without a doubt, changed regional shipping patterns. Ships that had been calling at Miami or to Jamaica are now

going to Panama instead," reports IFC senior investment officer Ali Naqvi.

The location of the terminal, adjacent to the Colon Free Trade Zone, has helped cultivate complementary warehouse and distribution activities. The efficiency of the terminal's design, allowing for container unloading while ships wait in line to pass through the canal, has decreased transportation costs and made third-party logistics providers and global manufacturers turn increasingly to the Panama option.

IFC has been involved with MIT, and its parent company, Stevedoring Services of America (SSA), from the outset, helping to fund the original construction of the terminal in 1994. In addition, IFC supported a complementary project, the privatization of the Panama Canal Railroad, which recently began transporting containers across to the Pacific-side terminals.

MIT's success has been striking—double-digit growth in virtually every year of operations, according to Naqvi. And, although the city remains poor, the terminal employs close to 900 local residents, as a thriving small business sector blooms to support the terminal and its activity. "There are lots of good stories to tell that resulted from IFC's involvement in MIT," he says.

Following on the success of MIT, the government of Panama agreed to additional port privatizations, all of which contribute to Panama's increased prominence on the international logistics scene. Highway improvements have received heightened priority as well, as increased demand spurs repair and modernization. Plans to rehabilitate the France Field Airport, adjacent to the Colon Free Trade Zone, will add to the country's multimodal capabilities

IFC's second investment in MIT, the largest of Panama's container ports, occurred in 2000, to help expand the terminal's capacity. The investment also helped secure MIT's long-term financial structure. The expansion work is currently underway, and the outlook is bright, despite recent global downturns in the shipping industry.

Electricidad de Caracas

When Paul Nickson, principal engineer for IFC's power department last visited Caracas in February 2001, electricity was the only service restored to a region that had been devastated by massive

flooding and mudslides in the winter of 1999. Thanks to an emergency \$30 million IFC loan to the Venezuelan power company Electricidad de Caracas (EDC) and IFC assistance in structuring the restoration project in 1999, thousands of mostly poor villagers were able to return to their homes even though they still lacked other basic services.

While the availability of funds helped the company react swiftly following the disaster, Nickson believes that IFC's assistance in managing the project was the key to its effectiveness. This was a very successful public-private partnership. The government and EDC recognized that the World Bank Group knew what to do in these situations, and they relied on us. We created the framework, and they handled the details."

More than a year following the disaster the region was still in poor shape. "There was no water, no phone, no police, no educational system—but the

people had electricity." Nickson recalls speaking to villagers who said that they were able to return home because the electricity had been restored. "It was very satisfying to see that we had improved people's lives," he says today.

IFC's ability to react quickly following on the heels of the disaster was an important factor contributing to the success of this short-term effort. "Sometimes at IFC things take time, but this project took only two weeks from the time we conceived of the idea to approval by IFC's Board of Directors. All of IFC was extremely supportive," Nickson says.

The road, a part of Brazil's federally managed highway system, had fallen on hard times. Traffic jams and accidents were common,

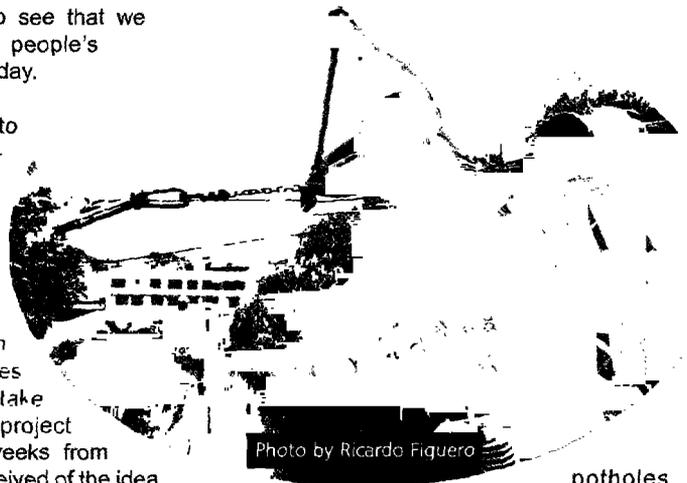


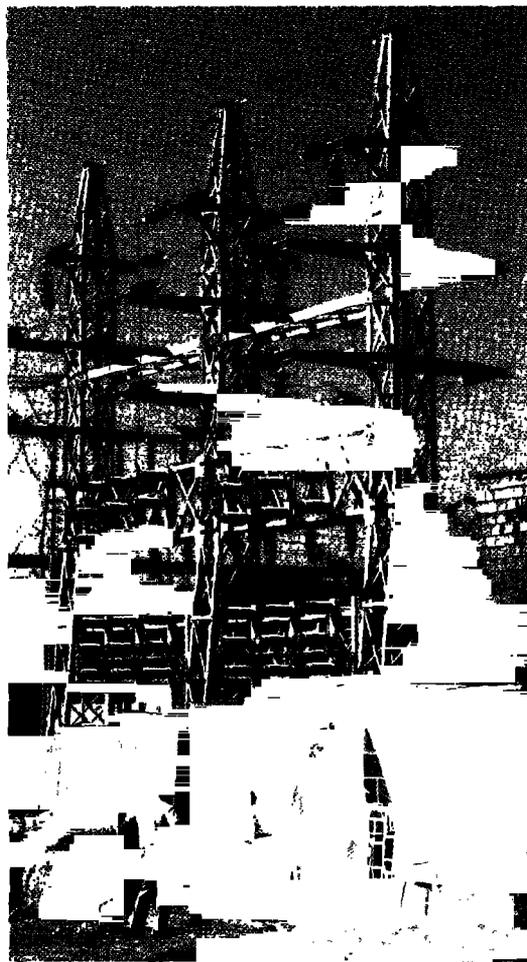
Photo by Ricardo Figuero

potholes and cracks dotted the route, unrepaired structural damage to overpasses and bridges made travel precarious, and, unless one knew precisely where he was headed, finding the way was a problem, since many road signs, including exit markers had disappeared. For businesses, Via Dutra represented a primary reason behind high vehicle-operating costs.

The situation began to change in 1995, when the Brazilian government decided to privatize the roads. Officials conducted an international bidding process to award a 25-year concession to repair and modernize Via Dutra. The \$525.5 million project was granted to a Brazilian consortium of four construction companies. IFC spearheaded the landmark financing structure, combining IFC cofinancing, local currency loans from BNDES (Brazil's development bank), an export-credit mechanism provided by French agency Coface, and uncovered international bank loans.

The five-year project was completed on time at the end of 2000 and met all targets, according to Amnon Mates, manager of transport infrastructure in IFC's Infrastructure Department. "Traffic levels were remarkably close to forecasts reflecting the reasonable performance of the Brazilian economy, despite the large increase in the pace of devaluation," he says. Toll adjustments based on the concessionaire's cost increases, while delayed a bit, eventually helped offset cost increases and maintain financial equilibrium, Mates adds.

Mates, a part of the original investment team, credits the contractor consortium



After torrential rains and flooding in the mountainous coastal area near Caracas, IFC helped provide the financing that restored services to those who needed help the most. Photo by Ricardo Figuero.

With power restored, villagers were anxious to return. In addition, restoration of public lighting cut down on crime, so residents felt safer. "It was really something because the roads were nothing but rubble, but they were well lit, and that made people feel more secure," observes Nickson.

Today, the loan disbursement is nearly complete, as is power restoration.

Via Dutra

Companies cannot make a profit if they cannot get their goods to market in an efficient, cost-effective way. And yet, in the early 1990s transportation remained a challenge for local businesses in many parts of the world. At that time, Rodovia Presidente Dutra, known as Via Dutra, was—and remains—the only continuous highway connecting two of the largest cities in the world, São Paulo and Rio de Janeiro in Brazil. Via Dutra also provided the primary access route to four major states in Southeast Brazil, a region responsible for close to 60 percent of the country's economy.



IFC has participated in railway concession projects as countries have moved toward privatization of rail services. Photo: IFC archives.

as well as the financing for the project's effectiveness. "The financial structure that combined local loans and loans in foreign currency—the latter with substantially lower interest rates—helped balance out the project's financial risks," he says.

Today, Via Dutra boasts a vastly improved safety record. Additional investments include overhead pedestrian crossings, safety barriers, improved signaling, and emergency call booths at regular intervals, as well as rescue team availability at various points along the highway. And BNDES, which previously had not included project financing in its portfolio of financing options, now is using this financing structure for similar projects in Brazil.

Railroads

While other utility sectors in the developing world grappled with poor performance in the early 1990s, railroads, too, struggled against similar problems—bloated labor forces resulting in low productivity, poorly maintained equipment causing unreliable service, and bleak financial situations precluding routine maintenance and repair. At that time in Latin America and Africa, according to

the World Bank's railways advisor Lou Thompson, essentially all railways were government owned and operated.

Over the course of the past decade, the World Bank and IFC have been on the front lines of a remarkable change, helping to replace an aging relic of an earlier industrial age. In its stead, a vibrant, competitive transportation sector now stands, playing a key role in bringing new opportunities to the developing world. IFC participated actively in several railway concession projects as nations began to embrace the privatizing concept, investing more than \$286 million since 1991. Today, according to Thompson, the concessioning of Latin American freight railways is virtually complete, while eleven railways in Africa are currently in the transfer process. The results—increased productivity, lower transportation costs, and expanded access to markets—have not occurred without some bumps in the road, but IFC continues its commitment to the concept. "We will most definitely see a continuation of this trend," Thompson says.

One recent addition to the IFC portfolio, the Panama Canal Railway Company, opened for freight business in October

2001, carrying containers from ships between ports on both coasts.

And the story is not over. The next frontier? "We will soon see similar projects in the emerging economies of Central and Eastern Europe," predicts Thompson. "The rail cargo carrier in Poland, for example, could be even bigger and more important than any of the projects already completed, and Romania is also committed to private investment in its rail freight company," he adds. Indeed, in November 2001, IFC's Board of Directors approved an investment for a new rail concession in Estonia, the first significant private investment in railways in a Central or Eastern European country.

Energy Center Kladno Generating

In 1999, the first independent power plant financed in a transition economy without government guarantees fired up in Kladno, Czech Republic. The \$400 million U.S.-Czech joint venture in a clean coal energy plant was designed to exceed stringent new Czech clean air legislation coming into force in 1999. As a large-scale rehabilitation of an environmentally hazardous industrial site, it was also one of the earliest and

largest of the "brownfield" ventures in the region

"We simply couldn't have done it without IFC," said NRG Chairman Dave Peterson. IFC played a crucial role in helping to broker the negotiations with a local coal mine that shares in the electricity price risk; with the region's electricity distribution company that was moving away from reliance on the national utility; with the city of Kladno, which depends on the heat output for its district heating; and with the Czech banks that provided \$100 million in long-term loans in Czech crowns in their first experience of such nonrecourse financing. IFC contributed \$85 million in financing in A, B, and subordinated loans.

The successful financing of this project was a significant boost for other power sector investments in planning for the transition economies — it demonstrated that viable contractual structures could be put in place that could obtain financing on attractive terms. It also introduced competition for the first time into the Czech electricity sector. IFC's Power Department's Denis Clarke says, however, that Kladno "is not a completely happy story." Subsequent to the financing, the Czech crown performed poorly and has continued to post declines against the euro. As a result, Clarke says, "There were bigger foreign exchange losses than we had projected, and the debt may need to be restructured." The long-term outlook remains good, though, indicated by the intentions of all the current investors and lenders to remain in the transaction.

The project is now producing electricity at low emission levels, on a rehabilitated "brownfield" site, ensuring a future for the local coal mines and contributing to a new competitive electricity market.

GrameenPhone

Meet an unlikely group of telecom executives—the women of rural Bangladesh. A unique program established with the launch of GrameenPhone in 1997 gives village women the ability to manage newly available village pay phone operations, through low-cost financing of cellular phone equipment and bulk sales of airtime. Financing is arranged through one of Grameen's shareholders, Grameen Telecom, controlled by Grameen Bank, a leader in microfinance lending. Currently, the



An IFC-backed cellular phone project in Bangladesh brings service to rural areas that have been poorly served by fixed-line telephones. Women entrepreneurs can start businesses by purchasing phones and making cellular phones available.
Photo: Courtesy GrameenPhone Ltd.

village telephone network consists of 6,000 village phones, with each phone providing coverage for 1,500 people.

GrameenPhone, now Bangladesh's cellular market leader, received \$18.2 million in debt and equity financing from IFC in 1999 to install and operate a nationwide digital cellular network. In addition to the village pay phone network, GrameenPhone is working toward increasing telephone penetration rates throughout Bangladesh. According to IFC investment officer Kofi Arkaah, the country remains among the least connected in the world, well below other countries in similar circumstances. With only 500,000 fixed lines, and 450,000 cellular subscribers for a population of 129 million, much work remains to be done.

Arkaah says that the company has helped bring new opportunities to the impoverished rural sections of Bangladesh, while contributing to overall improvements in the nation's infrastructure. "GrameenPhone has promoted economic development in rural Bangladesh through its successful village phone program," he notes.

Meanwhile, the company is turning a profit. Generating revenues of \$60.3 million for the first six months of 2001, GrameenPhone reported a net profit of \$6.8 million for the same period.

Pagbilao Thermal Power Plant

The line from project inception to completion is not always a straight one. This situation was certainly true for the Pagbilao Thermal Power Plant project on Pagbilao Island in the Quezon province of the Philippines. Conceived as a means to alleviate 12-hour-a-day power outages common in the region during the late 1980s and early 1990s, the coal-burning plant received IFC financing, along with other support in 1992. Plant construction began in 1993 but did not end until November 1995. Further delays, due to grid connection problems, prevented the plant from opening until June 1996.

Today, despite the rocky beginning, the plant has become an important success story. "The Pagbilao plant is the most reliable coal-fired, base-load power plant in the Philippines, significantly exceeding Mirant's [the plant's owner] internal operating standards and making it one of its best-performing plants worldwide," says IFC investment officer Cheryl Edleson Hanway.

Aside from the establishment of a reliable power source, the company can point with pride to a strong record of community support. In addition to providing full-time employment for more than 400 workers and supplemental employment opportunities for another 400 people, the company constructed a bridge to the island, giving local residents easier access to the mainland and to increased job possibilities. The company paved roads, relocated displaced homeowners, and helped build a new high school. "During project implementation, local residents were successfully resettled to a newly constructed village," Hanway notes. "The company has continued to provide services to the community, including skills training, sewing classes, and renovation of the local school."

The ability to count on steady, affordable power has also increased demand for home appliances such as refrigerators and air conditioners, giving local appliance companies a strong boost as well.

Ann Moline is a business writer whose work has appeared in publications such as "Plants Sites & Parks" magazine, "Washington Business Journal," and "womensenews," an electronic news magazine. She has written for various IFC publications, for the Inter-American Development Bank, and for other corporate clients.

Impact

Interviews

Sir Alastair Morton

Alastair Morton was chairman of the Strategic Rail Authority in the United Kingdom from 1999 to 2001 after 10 years as the co-chairman of Euro-tunnel, leading, with André Bénard and then Patrick Ponsolle as his French colleague, the financing, construction, and commissioning—and then the re-financing—of the Channel Tunnel. Over nearly 35 years he has held board-level appointments in both public and private sectors of British and international industry, including steel, oil and gas, and nuclear and conventional power generation, as well as transport. Impact discussed a number of issues with him, ranging from his insights gained from his years with the Eurotunnel to his thoughts on how governments and the private sector could work together more effectively in the planning, financing, and management of major infrastructure projects.

Impact: What have been the most interesting, satisfying projects that you've worked on where everything seemed to come together for success?

Sir Alastair: One project that comes to mind was some 25 years ago when I was appointed the first and founding managing director of the British National Oil Corporation. The British government of that day wanted to get involved in the development of the very large North Sea oil reserves. That kind of project was relatively new to us then. We had to set up an offshore upstream oil company from scratch. The company then raised a lot of money in the United States and invested heavily in exploration and production in the North Sea. I enjoyed that, and then, of course, I became involved in the Channel Tunnel 10 years later.

Impact: What prompted you to leave the oil company?

Sir Alastair: I left after Mrs. Thatcher became prime minister, because she didn't believe that governments should have state oil companies at their disposal. I disagreed with her.

Impact: What similarities were there between the two projects, the Channel Tunnel and the British National Oil Company?

Sir Alastair: They were both capital-intensive projects in capital-intensive industries. Between the oil company and the Channel Tunnel, I participated in the turnaround of the British Steel Corporation. Most of my career has been in capital-intensive industry.

I've found that you have to study projects carefully, think hard, and do your very best to cost them properly and establish the right relationships between the parties. You have to be prepared to go on spending money for some years before you see a return. There are not enough people in the world with that long-term view of life, but, frankly, I've been comfortable with it for the better part of my career.

Impact: It sounds as if part of the challenge is to educate and persuade.

Sir Alastair: I think it is, and I think it points up one of the principal problems of infrastructure development. Too often, politicians—and others as well—have time horizons between six hours and six months. They have to recognize that they can't declare victory after a week or two and can't micromanage the details of expenditure or changing cir-

cumstances. They must simply set the thing up, let the people get on with it, and act only if the project goes seriously wrong. They should refrain from fussing and whining the whole time, which they tend to do.

Impact: You had no pattern to follow in working on the Channel Tunnel. You were inventing that as you went along, I take it?

Sir Alastair: I suppose so, in the sense that it was a joint venture between two countries. First of all, the two governments signed a treaty with each other. Then within the terms of that treaty, the Treaty of Canterbury, the countries granted a concession—initially 55 years, later changed to 99 years—to a company that they stipulated had to be 50-50 British-French.

The partnership was to consist of two companies, one English and one French, tied indissolubly together. If you owned a share in one, you had a share in the other as well. You couldn't separate them. Half my desk was British and half my desk was French, in effect.

We operated under a single management, which reported to a joint board led by British and French cochairmen. I was the British cochairman and André Bénard the French. Both of us dealt with the two governments, a single board, a unified management, and a unified project direction. There were five British and five French contractors who sponsored the projects, and they were bound in a risk-sharing joint venture.

Yes, it was a unique project, and the most remarkable thing about it was the

construction contract. It stipulated that the common principles of English and French law were to govern the contract. To this day I've never met anyone who knows of any common principles between the two, but we got the tunnel built.

Impact: We know that sometimes these public-private partnerships can be bumpy rides, but we know that they can be quite useful as well. What particular challenges do you think these partnerships pose? On the other hand, what are some of the opportunities they present?

Sir Alastair: A quick word on the opportunities first. When I was just starting out in the 1950s and 1960s, big projects usually had to be funded by the government. Capital markets were relatively slight by comparison with the public purse, even in the United States and Britain. The U.S. interstate highway program, for instance, was not a private sector program.

But that changed over the years. Now, a big project by today's standards is too big for the government to fit within an annual budget approach. We must look to the world capital markets to fund it. Although various countries like France have tried to find pragmatic middle ways, with some success, in general, big money for long-term investment needs to come through the private sector. Therefore, it's important to build a relationship between the public interest, the public purse, which is paying for part of the project and stipulating the public services to be provided, and the private interests, the business-for-profit approach of the private sector.

The benefit is that you can get a lot more money together in a public-private arrangement, but that's also where the challenges come: you've got to put the interests of the two sectors, public and private, side by side and find compromise between them. We've now had enough experience to know what the challenges are. Whatever the particulars, at the end of the day you have to satisfy the same questions, allocate the same risks, and resolve the same problems.

One of the biggest challenges can be the underlying cultural approach of the parties. If the public and private parties don't understand each other and believe they are being taken advantage of by the other or that the other is

changing the specifications all the time without regard to costs—if one thinks it's a light-rail system and the other thinks it's the backbone of the national transport system—you're going to end in tears.

The failure to start from a common understanding of the objectives, the outputs, the specifications, and the principles of funding can result in endless trouble. That's a big challenge because the project won't get off the ground. Sometimes the parties to the projects decide to sort things out as they go along whenever they strike a difficulty. But that approach doesn't work; it's better to look ahead and resolve potential troubles in advance.

Impact: Is there a particular example you could point to, where everyone got it right?

Sir Alastair: My example is not a very big one, nor is it an international one, but it is illustrative. There was a bridge built here in Britain—sometime in the 1980s, I think—across the lower Thames River between London and the sea. It is called the Dartford Bridge. It was a private sector proposal to government: if the government would grant a concession enabling the private investors to put a toll on the heavy motorway traffic that was going to use the bridge, the investors would raise the money and run it. It was a very carefully worked out proposal, put very fully to the government, argued about for quite a long time, tied down in detail, and built to time and budget. I know of bigger cases that have also gone well but that's a good example where all the issues were tied down first and kept as simple as possible and where each party's interests were addressed in advance.

Impact: Is there any country that's particularly adept at public-private partnerships?

Sir Alastair: One always believes that the Japanese do these things better or used to when they were doing them. The French also seem more sensible about them than we are. There are reasons for that, but they're partly cultural. In France along the highways are signs saying, "Here the State Is Investing for Your Future," and the people think that's good. France has also over the years had a very well-developed system of state-owned banks that operate like private sector banks and are willing to act as core

banks in major projects. They helped finance the tunnel. Some of them have been privatized, and perhaps things will change. Over the decades, France has established a consensus among voters and taxpayers that the state should provide funds for infrastructure projects and that infrastructure projects can be done well and will improve everyday life, whether it's electricity or water or something else.

When the Japanese set out to build a bridge and tunnel across the mouth of Tokyo Bay, they assigned to the state all the costs and the difficulties of getting to the point where the first bulldozer arrived and cut ground. The state had to settle the worries of villagers who had to move, compensate the fishermen who could no longer fish in the area, and control the entire planning process. The government brought it to the point of construction and then turned over the project to a corporation. The government held the shares initially until enough progress had been made to confirm the completion cost estimate. Then the government planned to sell off shares but still remain involved.

The government gradually withdrew from the project, though I don't know if they completed the withdrawal or remained involved afterward. But at the end of the day there was a toll link that was remunerating what had become private sector capital put into a successful project

Confidence to have government involved in long-term agreements with the private sector is evident in France, and the confidence to be in business with the private sector but withdraw progressively as the risks diminish is evident in Japan.

That confidence is missing in this in Britain because we don't have a culture of long-term investment here. The attitude over there is to be admired, for it takes confidence on the part of government to see long-term investment as essential and to view major risk taking as a function of government to produce public services for the people. To the extent that we can get private sector capital to take on more risks that it can assess for prices that we can accept, we pull private sector capital further into such projects. But if every negotiation is a sort of poker game played out with mutual mistrust, we can't accomplish as much.

Impact: You mentioned long-term risk, which brings up a question relating to

insurance markets. There is the view that post-September 11 insurance is very difficult to get and that investment guarantees are very difficult to come by. There seems to be less appetite for long-term risk than we might have seen earlier. Is that your sense?

Sir Alastair: Maybe so, but I don't see any good reason why it should remain that way. Insurance markets have dealt with risks—that's what they're there for—over the centuries. The market needs the opportunity to assess risk and price risk, and it can put a price on just about anything. If the price is too high, the industry will figure out a way to modify or moderate the risks by laying off part of it or subdividing it.

Some forms of insurance and credit backing will be more expensive in the future than in the past. In the capitalist world, we have got used to the notion that massive banks lend huge sums of money whether for commercial property or whatever reason at very narrow margins—50, 100, 150 basis points. A few bad loans can wipe out all the profits earned by lending with narrow margins. Margin spreads would widen for a while, and insurance prices increase until perceptions of risk stabilize and a comfort with risk returns. After every major hurricane in the Caribbean, insurance companies question why they are doing that kind of business, but they come back.

Impact: Do you see any kind of long-term effect of the events of September 11?

Sir Alastair: In political and diplomatic terms, there has to be more dialogue between opposing sides. There has to be more tolerance. We in England, for instance, look with some amazement on the 30 years of bloodshed in Northern Ireland. But even more than the bloodshed, we look with amazement on the depth of feelings on the two sides. The conflicting parties find it so difficult to sit down with each other. Gradually—and this is a great achievement by Tony Blair—they're beginning to do so. And the blacks and the whites in South Africa under Nelson Mandela eventually sat down together and are working hard to maintain political unity and make it work.

Conflict produces destruction—there's no other way of putting it. And if there's threat of destruction, insurers will hold back. People's perception of risk will increase, and that perception could rise

to a level that can't be priced. I have great faith in the ability of the marketplace to price risk, but past a certain point either the government underwrites the project if it can, or the project doesn't happen.

Impact: If we could talk about emerging markets for a moment, do you see any promising opportunities in infrastructure investment in the developing world?

Sir Alastair: For 10 years after its privatization, I was on the board of the major electricity generator here in Britain, National Power, and we set up a business in the independent power plant (IPP) market around the world. We took on a lot of projects, most of which went reasonably well.

That sort of project has become a commodity now. You package these combined cycle gas turbine facilities, which are very efficient electricity-generating plants, and supply them on standard conditions to all sorts of countries. The market is probably being well served now, and whether there are further opportunities depends on what you consider an opportunity. Because of increased competition, the opportunities to make a great deal of money are now limited.

Highway building is probably similar. Railways and more complex projects in most of the emerging markets are trickier—everyone has to think hard, and words like government guarantee and World Bank backing take on more meaning.

Impact: Could you comment on the differences you have observed between working in emerging markets and working in the developed world?

Sir Alastair: One difference has to do with the chain of fuel supply-generating costs, capital costs, and electricity price. Different countries have different ways of approaching the problems. If a country has poor quality, cheap local coal, for instance, they face problems that are not an issue if there is a ready pipeline supply of gas. Or if the gas field has to be developed to supply the power units, problems other than power generation have to be addressed.

Another difference between working in developing and developed countries is the possibility of deteriorating currency in developing countries. Because dollar denomination of a number of prices is common, people have to proceed very

carefully to avoid building in inflation. The parties have to figure out in advance what to do if the currency degrades and prices escalate in special circumstances. If you try to hold the ceiling on the electricity price to the consumer despite changes in the fuel price, you can get into difficulties. Tying down that contingency is very important.

Impact: Should infrastructure projects, because of their price tags, be set aside during recessions?

Sir Alastair: I've got into some quite energetic arguments with our Treasury here in Britain when they behave like all treasuries. When there's a recession, they want to reduce expenditures. It's easy to cut back on projects—all you do is draw a line through the project plan and it's dead. It's an attractive option compared with laying off workers.

In my view, though, it's counterproductive in the long run to cut projects. If you commit today to a long-term project like a new railway line, a major power station, or a big sewage development, not much money gets spent for a year or three, depending on the planning situation. Spending in the early days of the project on-site is also quite restricted. Spending starts in earnest only later. The time of heavy expenditure comes around when the recession is over.

Therefore, as you go into a recession, say I, you should commit energetically to project development. If you don't commit to project development until the boom returns, you will be disburging through the next recession. It may not always be as dramatic as that, but that's the general pattern. I find that Treasury people here are remarkably unreceptive to that debate.

Impact: What are the sectors you see as the most vulnerable now?

Sir Alastair: The key story of Britain is transport. Both road and rail get cut back in every recession. The authorities think that because there is less traffic today, for example, they can't justify the project despite the fact that the long-term trend is upward. Recessions do place transport projects at risk.

Many other infrastructure sectors are privatized fully here in Britain. There's a pipeline of projects in the works, parti-

ularly in water and electricity. Telecoms are in recession, but that was virtually a bubble. People were overclaiming what these new forms of telecommunications could do for us and touting the booming business to be had. That bubble has burst good and proper. Pending or actual overcapacity in some areas may well result in recession in some project sectors.

Impact: Sir Alastair, you've been involved in infrastructure for a long time, and you've seen many trends. One of the most important these days is the rise of the Internet. Can you explain how the Internet has affected the world of infrastructure?

Sir Alastair: I'm sure that the ease of communication and particularly the improvements in procurement made possible by the Internet are bringing many benefits. In the motor industry, for example, getting the component supplies or the subassembly supplies to the major automobile companies has become more efficient though the Internet. The creation of an e-commerce market in tenders for large volumes of product is quite useful—it makes the prize of being the low-cost producer even greater and it encourages globalization.

Countries that are just getting into e-business and are competing with industrialized countries may find entry into the new world a bit painful, though. I'm not sure what greater exposure of information does for the economies of the developing countries.

Impact: One thing we believe here at the International Finance Corporation is that infrastructure is critical to economic development in emerging markets. Is that message getting across?

Sir Alastair: I think people in general are clear on that, and they're even clearer on it in Brussels. Integrating Europe, bringing more and more countries into the European Union, is highly reliant on transport and other forms of infrastructure—telecoms, water, electricity, the lot. Brussels places a strong emphasis on the need for every investment to facilitate commerce across the European Union.

What differs between the countries is their culture of long-term investment. Belgium, for example, has a 10-year view of the future development of its railway. Belgium is not a big country, and quite a lot of its railway activity

comes through from France and on into Holland or Germany. But the Belgians have a 10-year plan out of which they create a 5-year capital expenditure budget. They have, of course, a 1-year operating budget, and every year the 5-year capital budget advances one year. But the government's permission to spend for the next five years is committed.

That notion is quite foreign to Britain; we don't have that culture. The British Treasury has managed the economy for cash for decades and thinks it should be very shy indeed about things that cannot be turned on and off from one year to another. Short-term thinking is not constructive when it comes to putting the infrastructure of the country in place. As a result, those elements of the infrastructure that are still in the public sector, rails and roads, have been underinvested for decades. In contrast, telecoms and water, to take two examples that were privatized by Mrs. Thatcher in the 1980s, have had enormous investment that we hope will produce good results.

Impact: Your days at the Strategic Rail Authority are coming to a close. Do you have any good advice to pass long to Richard Bowker, your successor?

Sir Alastair: I wish him well. He's a very able man, and he's younger than I am so he can stay with it longer and see it further through if it gets going properly.

The situation in rail here is not happy. It hasn't been a successful privatization. It's probably the first unsuccessful privatization in Britain, and it's unsuccessful for a variety of reasons—some structural and managerial and some stemming from government attitudes, what you might call cultural again. You cannot prevent ministers from thinking they are responsible for travel and transport, and if they feel responsible, you can't stop them meddling.

My message to Mr. Bowker would be to use the leverage of his appointment to get the prime minister's support, to get policy directives given to the Strategic Rail Authority, and to create space for the SRA to do its job. The SRA needs the long-term commitment of funding from the public purse to create what has to be a giant set of public-private partnerships.

The railways in Britain won't be run with purely private capital. Strictly private ownership doesn't work for rail anywhere except in the American freight

system, because railways are not profitable almost anywhere else.

Impact: Would you point to the lack of funding as one of the key problems?

Sir Alastair: Underfunding is a key problem, but the structure of privatization was not successful, either. Those who arranged the privatization separated operations from infrastructure, which is what Brussels wants. That can be done, but you have to pay a lot of attention to how it's done and how it's regulated. Privatization of the rail system here in Britain has got to be revised, not reversed, revised. That is Mr. Bowker's main challenge.

Impact: Do you think the lessons have been learned?

Sir Alastair: I'm not convinced. There is confusion at the moment over the status of the infrastructure company Railtrack, and I don't think the government knows its own mind. I have no doubt that Richard Bowker will help them to get clear on it. But then they have to allow him to be active in moving in the directions agreed on, sooner rather than later.

Impact: We are interested in knowing what your next challenge will be.

Sir Alastair: Well, I shall be 64 in January. I'm prepared to take a side seat and try to advise people on some of the difficult situations they face. I hope that we can get a bigger bang for every buck of investment and get a good deal of infrastructure in place, not just in the emerging markets but also in places like Britain, so that the quality of life can be better assured.

The conviction with which I started my career is still valid, I think: we need investment, investment, and more investment to produce better public services, better facilities, better education, better health care—all of this is absolutely essential to an improved quality of life for all of us. Governments need to bring in experienced and skilled people to think projects through; then those governments need to say what they are going to do and fund—then do and fund what they have said. Long-term trust in a government's skills and intentions is a prerequisite for public-private partnerships in infrastructure.



By Danny Leipziger and Vivien Foster

A Romanian delegation visiting an IFC-investee company, Aguas Provincial de Santa Fe. The delegation was on a study tour of privatized water concessions in Argentina, France, and the U.K.; IFC provided advisory services in connection with the water and sewer system in Burdaries. Photo by Jerry Esmay.

Back in 1990, it was almost a tenet of faith that infrastructure services were best provided by the state. Who could have predicted that within a decade more than 120 developing countries would have been willing to invite the private sector to participate in their water, electricity, telecommunications, or transport services? Or that the private sector would have accepted this invitation so enthusiastically, increasing its infrastructure investments in developing countries by a factor of ten?

Social Concerns

Although private sector participation in infrastructure services has become the new orthodoxy, many remain concerned about the social implications. It is often argued that privatization leads to tariff hikes that make services unaffordable for the poor and that profit-oriented multinationals are unwilling to provide services to urban slums and remote villages. There is undoubtedly some legitimacy to these concerns. As this article aims to show, however, the

problem lies not so much with privatization itself as with the political objectives for which it is typically used.

Often prices do have to increase substantially in the context of privatization. Where this happens it is usually because tariffs have been kept well below costs for many years, generating a substantial drain on the public purse and diverting scarce resources from other vital areas of public expenditure. In the majority of states in India, for instance, power sector subsidies actually exceed expenditure on public health services. Put simply, in many countries it may be a choice between cheap electricity or childhood vaccines.

Moreover, poor families often don't represent a very attractive commercial prospect. Many of them live in outlying settlements that are costly to serve and consume only modest amounts of infrastructure services, which they may not even be accustomed to paying for. In the Bolivian city of El Alto, for example, poor families spend only about a dollar a month on water and sewerage services,

which barely covers the cost of reading the meter and issuing the monthly bill.

Status Quo

Whatever the concerns raised by privatization, it is equally important to recognize that the poor have not fared particularly well under the traditional model of state ownership.

It is true that state-owned providers keep tariffs low and take a relaxed attitude to illegality and nonpayment. This very policy, however, has left many operators starved of financial resources. As a result, service quality is often very bad. In many South Asian cities, for example, families receive water for only a couple of hours at a time—and this not even every day. Moreover, the meager revenue collections of state-owned utilities mean that there is little capital left over to finance network expansions into the slums and villages where the poorest families live.

Ironically, the poor who live beyond the reach of network utilities often end up

paying much higher prices to meet their basic needs. For example, in Guatemala, households with electricity pay less than \$0.10 per kilowatt hour to light up their homes, while those without rely on candles that cost the equivalent of \$5 per kilowatt hour. In Port-au-Prince, Haiti, households with piped water connections pay \$1.00 per cubic meter, but those without pay \$10 per cubic meter to obtain water from private vendors. Such price differences between the "connected" and the "unconnected" make the tariff increases that are often introduced following privatization look comparatively modest.

Even more ironically, the subsidized tariffs offered by many state-owned providers often fail to reach the poor. This is partly because a high proportion of the poor are unconnected and so are unable to access the subsidy. It also reflects the fact that utility tariff structures are not very effective in targeting subsidies toward low-income con-

sumers. In Colombia, for example, 80 percent of those benefiting from water service subsidies are not poor. Similarly, in Honduras, 80 percent of the overall value of electricity subsidies is captured by families that live well above the poverty line.

Nor is illegality necessarily in the interests of poor households. Another article in this issue—"Bringing Light to Rio's Slums"—vividly illustrates the risks of electrocution and electrical fires faced by poor households that steal from the electricity network. It also shows how establishing a formal relationship with a utility can be a first step to establishing the proof of residence necessary to obtain credit and access to other services.

Privatization Dividends

If state-owned enterprises have historically failed the poor and privatization raises potential social concerns, what then is the way forward for bringing essential infrastructure services to the millions of poor people around the world who still do not have access? The answer is probably not to discard privatization, but rather to make privatization work for the poor.

There is considerable evidence that privatization creates substantial dividends. Private management of services often leads to significant reductions in costs, particularly when competition is also introduced or when there is at least effective regulatory control of prices. It is estimated, for example, that the improvements in efficiency following the infrastructure privatization program in Argentina were as much as 1 percent of gross domestic product.

Privatization also opens up access to an important new source of capital. The total flow of private capital to developing country infrastructure in the 1990s was nearly \$550 billion, or more than three times the \$150 billion foreign development assistance to the infrastructure sectors over the same decade.

It would clearly be a mistake for any country to overlook dividends of this magnitude. The key question is how the benefits of privatization are distributed among different stakeholder groups in society and whether they can ultimately be channeled toward the poor.

Conflicting Interests

Policymakers face great challenges, given the number of conflicting interests that arise in any privatization transaction.

The Ministry of Finance will tend to regard privatization primarily as a revenue-raising exercise. The preference will therefore be for a transaction design that maximizes the sale value of infrastructure assets and reduces reliance on state subsidies. This can be achieved by keeping tariffs relatively high, minimizing investment obligations, and postponing the introduction of competition.

From the perspective of existing customers (generally the better-off), the priority should be to keep service tariffs as low as is compatible with providing an adequate quality of service. This objective is best served by selling assets off cheaply, minimizing major rollout obligations, and speeding up the introduction of competition.

For those who currently lack access to infrastructure (generally the poorest), the most important objective is to accelerate the expansion of the network into underserved areas—regardless of the fact that this is likely to lead to higher tariffs and a lower sale value for the enterprise.

How these conflicting interests are resolved is ultimately a question of political priorities.

It appears that in many countries fiscal concerns, rather than poverty issues, have been uppermost in the design of privatization transactions. Worldwide, 42 percent of the private investment attracted to the infrastructure sectors during the 1990s was captured by the state in the form of asset sale revenues, rather than being reinvested in infrastructure networks to upgrade and

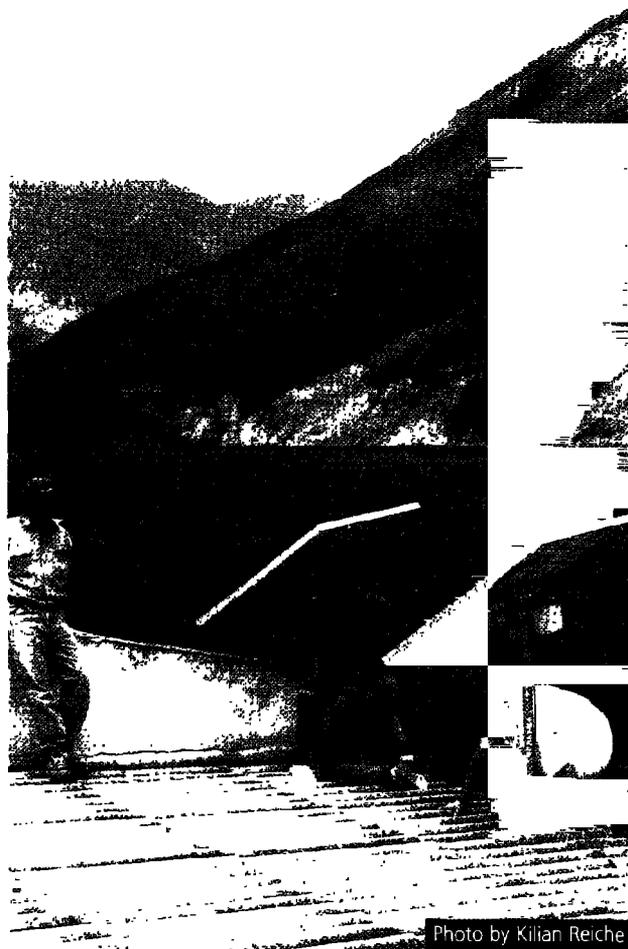


Photo by Kilian Reiche

expand services. In the Latin America region, the proportion captured by the state is even higher at 58 percent of total private investment.

This is not necessarily a bad thing, if the additional fiscal resources are judiciously allocated to pro-poor investments (such as primary education, rural roads, or urban slum upgrading). But there is no guarantee that this will actually take place. Moreover, such indirect benefits of privatization are not very visible politically.

Political Will

There are some important examples of privatization transactions, however, that have been consciously designed with the interests of the poor in mind. They offer important lessons for countries aiming to privatize in a socially sensitive manner. Furthermore, they illustrate that—when the political will is there—privatization can be made to work for the poor

The first lesson is to make the expansion of access for the poor a central objective of the privatization program. The Bolivian government, for example, consciously chose to award the concession contract for water and sewerage services in La Paz and El Alto to the private operator willing to make the largest number of new connections in low-income neighborhoods. The winning bidder was contractually obliged to connect 72,000 families to piped water and 38,000 families to sewerage over a five-year period.

The second lesson is to use the privatization process itself as a means of financing the expansion of access for the poor. In Guatemala, the total net proceeds of the sale of the two national electricity distribution utilities—some \$110 million in all—being used to finance an ambitious rural electrification program. The program aims to electrify 280,000 homes and has already reached more than 60,000 families.

The third lesson is that the private sector is often willing to provide services to unprofitable communities, as long as some financial incentive is provided by the state. In Chile, Guatemala, Peru, and Colombia, capital grants have been competitively allocated to the private operator willing to provide (unprofitable) rural services at the lowest subsidy cost to the government. These programs have succeeded in bringing public telephone services to some 19,000 rural

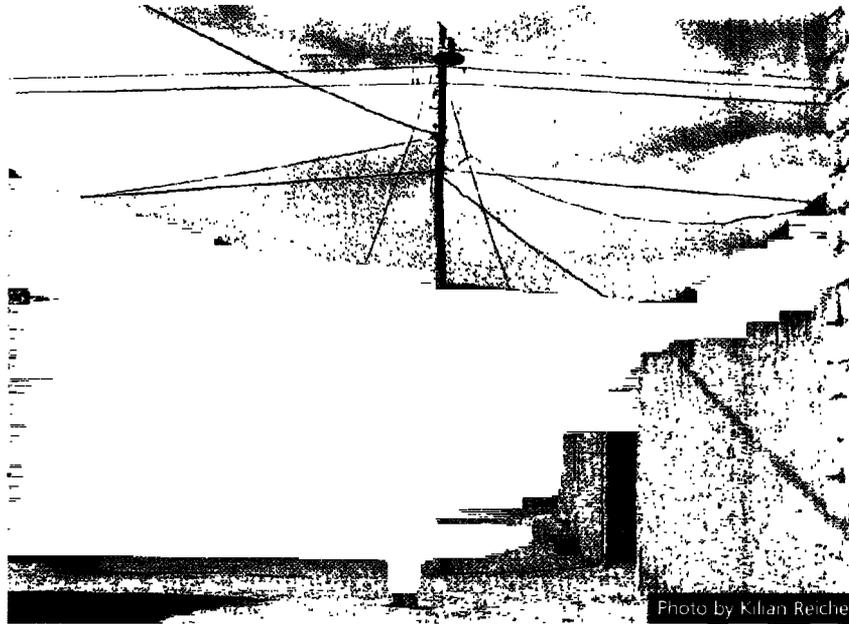


Photo by Kilian Reiche

communities. Moreover, every dollar of public subsidy has leveraged at least two dollars of private investment.

The fourth lesson is that social policies can be introduced to protect the poorest from tariff increases necessitated by privatization. In Chile, water tariffs had to be doubled to pave the way for private participation. To mitigate the impact, the government introduced a targeted subsidy scheme to ensure that no family spent more than 5 percent of its budget on water bills. Eligibility for the subsidy is determined on the basis of a household interview that reviews a broad range of socioeconomic factors. Although the subsidy scheme costs the Chilean government about \$40 million per year, this is less than half of the \$100 million of state subsidy to the sector before the reforms.

A Two-Edged Sword

To conclude, privatization is a two-edged sword. In the right hands, it can be deployed to harness the efficiency and resources of the private sector for the achievement of social objectives. But mishandled, it may leave the poor where they have always been: namely, “unconnected” to the most basic necessities of life. The choice is ultimately a political one.

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Photo by Kilian Reiche

Rising Insurance Rates Cast Cloud Over Finance Market



By Afshin Molavi

Photo by Norbert Schiller

As the dust settles in the aftermath of the terrorist attacks of September 11, the worldwide insurance industry faces the difficult prospect of recovering from its largest insured loss in history. Estimated losses range anywhere from \$30 billion to \$70 billion, far exceeding the losses incurred by the devastating Hurricane Andrew of 1993, previously the highest property and casualty loss

In the face of such steep losses and the inevitable higher risk perception engendered by the terrorist attacks and the subsequent war in Afghanistan, private sector infrastructure financiers will have to face new insurance market realities: higher premiums, renegotiation of existing cover, substantially higher

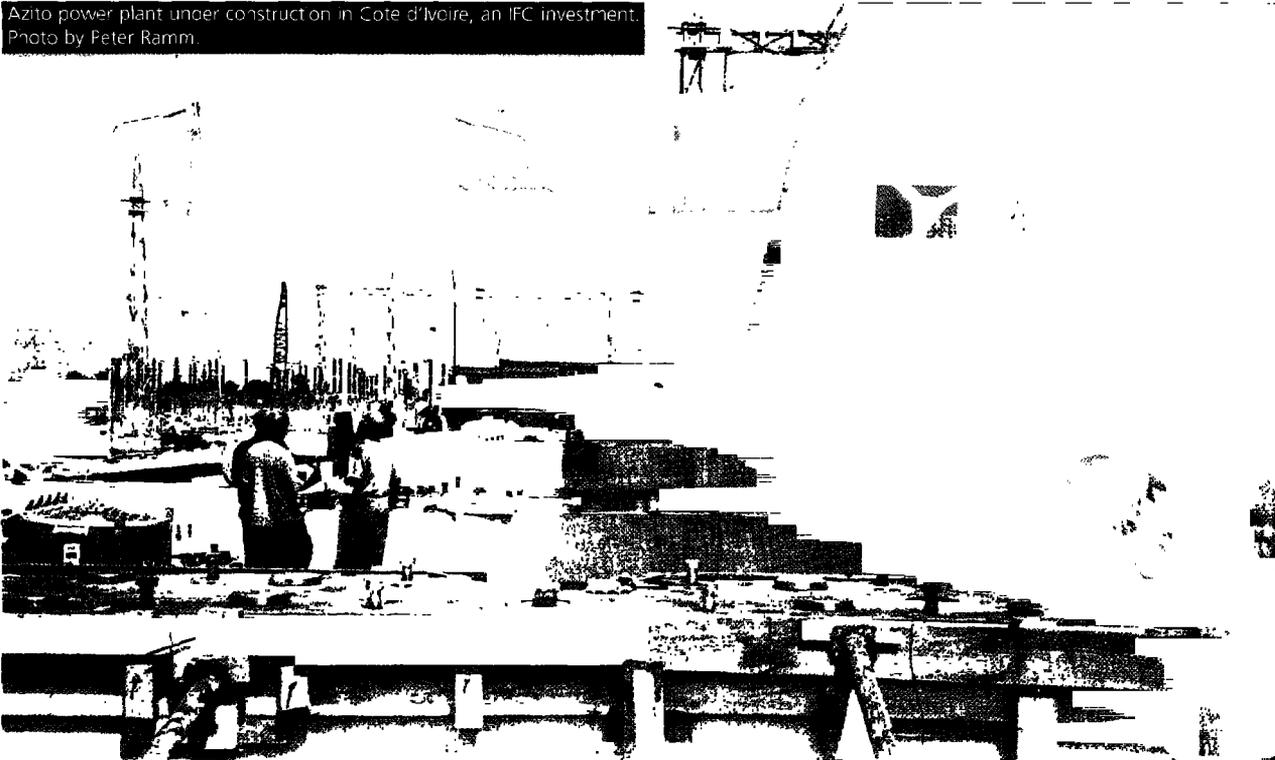
deductibles, new restrictions on coverage, lower appetites for risk, and the rise in importance of political risk insurance.

Impact-Private Sector Partners surveyed the infrastructure finance insurance market in wide-ranging interviews with leading insurers, reinsurers, brokers, specialists, and project financiers. Although insurers noted that well-structured deals will still be insured at reasonable rates, project financiers and managers expressed alarm at the current market. "I have never seen such high premiums," one veteran project finance observer said. "Even good, well-structured deals are facing difficulties in getting reasonable insurance rates. Premiums are way too high."

Higher Costs, Tougher Terms

Insurance companies generally raise premiums in the wake of heavy capacity-reducing disasters in order to build up new reserves. All told, 10 percent of the world's insurance capacity—the amount of money available for insurance—was wiped out by the terrorist attacks. Bill Chew, a managing director and infrastructure specialist at Standard & Poor's, says that "project financiers will have to face these higher costs with a more selective approach to investments in 2002. We will see a crowding out of the marginal deals, the deals with tight financial schedules that benefited from a soft insurance market. The terms and the premiums on those types of deals won't make economic sense."

Azito power plant under construction in Cote d'Ivoire, an IFC investment.
Photo by Peter Ramm.



Daniel Riordan, executive vice-president and managing director of Zurich Emerging Markets Solutions, a subsidiary of Zurich Reinsurance, said: "The contraction in the market is significant. Our colleagues in London are pulling back substantially. Still, I believe that good deals will be insured. Insurers might be more selective than in the past, but that does not mean that good deals will lack for coverage."

Still, project financiers and managers are having a tough time. Dean Jobko, a risk and insurance specialist with Mirant, says that "the post-September 11 market is a very difficult one." He noted that "the insurance market had been tightening even before September 11, but September 11 exacerbated the situation greatly." Mirant, which operates two coal-fired plants in the Philippines that are supported by IFC investments, has managed to "work through the current market," Mr. Jobko said, after renegotiating its cover on November 1. Asked if the two projects might have been able to get off the ground in today's insurance market, he said, "Probably not."

Merunisha Ahmid, insurance manager at IFC, sees an alarming number of projects slowed by insurance worries. "A large number of our projects in the infrastructure and oil and gas sectors experienced difficulties renewing their programs post-September 11," she said.

"Despite the fact that these were good risks, market capacity has shrunk, and the projects could be renewed only at substantially reduced terms and at a higher cost," she added.

Mr. Jobko, Ms. Ahmid, and many others are waiting anxiously for the reinsurance renewal season in January to see what sort of capacity might be on the market in the year 2002. Market insiders, however, are not optimistic that the January renewals will bring much relief to the current situation.

Building New Capacity

Project finance insurance managers are also watching closely the rise of a new group of Bermuda-based insurance companies that are sprouting up in the wake of September 11 to fill the need for new capacity. This new group of heavily capitalized firms is expected to enter the market in early 2002. Some of these firms are backed by leading American and European investment banks and are expected to focus primarily on the American and European markets. Still, the rise in capacity should be beneficial to project financiers in emerging markets.

Costly Renewals

The effects of the Bermuda firms and the rise in capacity as a result of the higher

premiums will not be felt until late 2002, most analysts say. In the meantime, new projects will be up against a tougher entry market and existing projects will face tough renegotiations of cover. Parvez Ghias, of Pakistan-based Engro, a leading fertilizer producer, faced a particularly difficult renegotiation. "Our premiums shot up from \$327,000 to \$1.12 million, our deductibles for PD/MD went up from \$33,000 to \$1 million and from 14 days to 30 days," he said. "Local insurers have also reduced cover. There is no appetite for Pakistan risk anywhere," he said, noting that there is little relief on the horizon. "I see the insurance situation in Pakistan deteriorating further."

Pakistan, a front-line state in the ongoing war in Afghanistan, has been especially hard hit, but Engro is not alone. Paul Aird, a risk specialist with global powerhouse Bechtel, notes that several Bechtel projects came out of their annual renewals with renegotiated higher premiums. He also noted with concern the number of exclusions being added to policy wordings. "If you go into a renewal and come out with 20 new exclusions added to your policy wording, your risk rises immediately," he said. "On existing projects, the higher rates and new exclusions disrupt the initial calculations made by the project developer, who factored in a certain amount for insurance but is faced with a new, much higher rate and

new exclusions for the next year and potentially beyond."

Mr. Aird also noted that war risk insurance for airport projects is "naturally much more expensive than before September 11." Airport projects can expect to face the highest premiums, analysts say, along with transport and shipping. "There is a bullseye on those sectors right now," Mr. Chew of Standard & Poor's said. "Premiums will be quite high there."

Declining Terms

Also worrying, insurance terms are declining dramatically. "The days of ten-year terms are over," a London-based broker said. "These days, one-year deals are more likely." *Project Finance* magazine, a leading industry observer, noted that insurance behemoth Lloyds "may start to limit their terms to 12 months—anywhere." Lloyds has been particularly hard hit by the September 11 terrorist attacks. Standard & Poor's recently downgraded Lloyds to A-minus.

Mandy Woods McNeil, vice-president and head of infrastructure and project finance at Marsh Insurance, explains the reality of today's market this way: "Today, insurance companies will want to make sure that project participants have their interests aligned fairly. All sides should have a fair share of skin exposed. In the past, the insurance firms exposed more skin to risk. Now, there will be demands for more equitable arrangements." Still, she says, "If a project is well-structured and the market fundamentals are solid, then insurance companies will display interest."

She said that Marsh is meeting the challenging new environment by "thinking more creatively about what we can do to create capacity in order to stay on top of the well-structured deals, which will always attract interest." She said that "the portfolio of tools available for project finance is expanding."

The rising insurance costs have also put a heavy burden on infrastructure users, such as shipping companies and airlines that face prohibitively high war risk insurance costs. Shipping lines that serve the Middle East and South Asia have been particularly hard hit, with several companies reporting a reduced flow in shipping. Several national governments have stepped in to help airlines pay their rising insurance costs.

Political Risk Insurance

Multilateral and national investment guarantee agencies are expected to step up their role in project finance insurance to help cover the rocky market. The Multilateral Investment Guarantee Agency (MIGA), a member of the World Bank Group, may see more requests than usual in fiscal year 2002.

MIGA has developed considerable experience with complex infrastructure projects. In fiscal year 2001, these projects accounted for about 30 percent of MIGA's total outstanding portfolio. The projects guaranteed included the North Tollway transportation project in Manila, a water services project in Ecuador for which a performance bond was also covered, and a project to support the upgrading of newly privatized electricity distribution companies in Moldova.

"MIGA's risk mitigation products can really provide confidence to investors in these uncertain times," says Philippe Valahu, manager for infrastructure at MIGA. "We are well positioned to guarantee complex infrastructure deals in keeping with our broader mandate to promote FDI flows."

Strong Demand for Insurance

Of course, rising insurance costs and war risk concerns are not the only factors in creating a more challenging environment for infrastructure investment. A simultaneous economic downturn in Japan, the United States, and the European Union has slowed world growth and forced project financiers—like everyone else—to retrench and reorder priorities. Still, the demand for private participation in infrastructure projects remains strong. Worldwide, there are enough telecoms, water, power, and energy deals to keep project financiers busy.

Daniel Riordan of Zurich Emerging Markets Solutions puts it this way: "I think everyone will be cautious in this market, but everyone also knows that the demand for infrastructure projects remains strong. As long as the demand is there, industry people will come up with creative ways to accommodate that demand."

Mr. Riordan expects a rise in the importance of political risk insurance cover. "Currently, about 10 percent of foreign investment is insured for political risk,

but I think that is likely to rise." Zurich Emerging Markets has received new interest from infrastructure companies looking to cover existing risk, Mr. Riordan said.

"With the drop in capacity, we are all looking for new ways to serve our customers," he said.

Sir Alastair Morton, the outgoing chairman of the Strategic Rail Authority in the United Kingdom and veteran of infrastructure project management with more than forty years of experience, offers some long-term perspective on the issue:

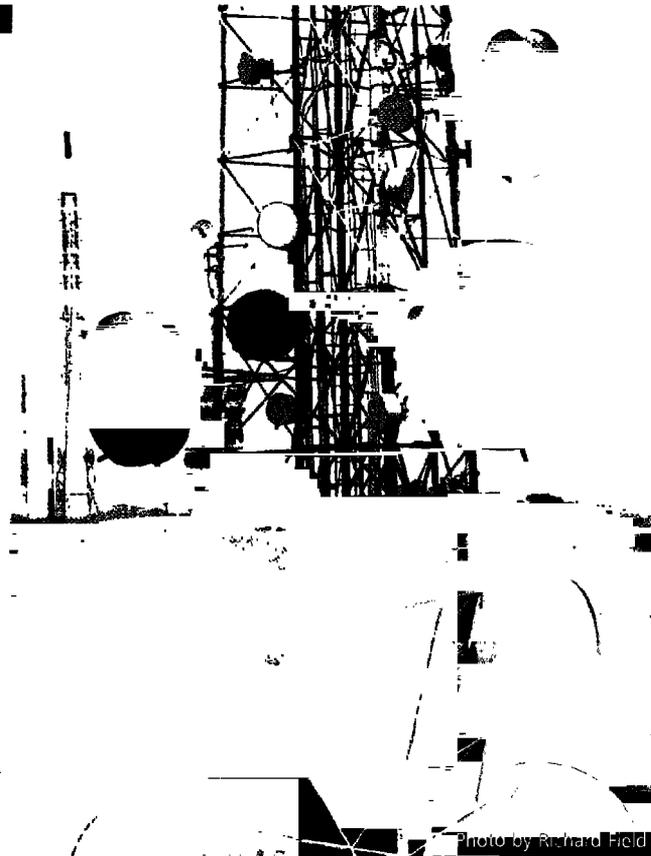
"Insurance markets have dealt with risks—that's what they're there for—over the centuries," he told *Impact* in an interview (see article in this issue). "The market needs the opportunity to assess risk and price risk, and it can put a price on just about anything. If the price is too high, the industry will figure out a way to modify or moderate the risks by laying off part of it or subdividing it. Some forms of insurance and credit backing will be more expensive in the future than in the past. In the capitalist world, we have got used to the notion that massive banks lend huge sums of money whether for commercial property or whatever reason at very narrow margins—50, 100, 150 basis points. A few bad loans can wipe out all the profits earned by lending with narrow margins. If margin spreads widen for a while, insurance prices will increase until perceptions of risk stabilize and a comfort with risk returns. After every major hurricane in the Caribbean, insurance companies question why they are doing that kind of business, but they come back."

In the end, despite the tight insurance market expected for the year 2002, a confluence of factors—the rise of the Bermuda firms, the build-up in capacity through the raising of premiums, stepped-up activity by multilateral and national investment guarantee agencies, the regenerative nature of the insurance industry, and the increasing demand for private participation in infrastructure—provide a silver lining to the insurance cloud hanging over the project finance market.

Afshin Molavi is a communications analyst at the International Finance Corporation and an Impact staff writer.



Finding your niche



By Desmond Dodd

Photo by Richard Field

Until recently a telephone line offered little to callers in the Democratic Republic of the Congo (DRC). Even the lucky ones with access grew accustomed to busy signals, since the network was usually clogged. And there were few places to call anyway. Under the state-run monopoly somewhere between 5,000 and 20,000 telephone lines—depending on whose figures are accurate—were responsible for linking a population of over 50 million.

"There was only one company and the fees were very high," recalls Pierre Pollie, an import-export agent in Kinshasa, referring to the situation that prevailed until the late 1990s. The user of a Celtel GSM-standard mobile phone now finds that calls are declining in price while service is improving in a competitive market. Pollie is able to get more done because he handles simple tasks from his office rather than by constantly traveling around town. "Business is much easier," he declares.

Netherlands-based Mobile Systems International Cellular Investments Holding (MSICIH) set up Celtel to acquire a license in the DRC and capitalize on the obvious business opportunity created by the telecom market

vacuum. "There was no alternative," says Thomas Chopin, MSICIH's director of corporate finance. By October 2001, Celtel had 129,000 subscribers for its mobile telephone service. The company is preparing to expand further, bringing the capital expenditure for the project to around \$50 million. And that's one of MSICIH's bigger projects.

MSICIH is on the leading edge of private telecom investment in sub-Saharan Africa. In addition to operations in the DRC, the Dutch holding company's projects include cellular operating subsidiaries in Gabon, Sierra Leone, Uganda, and Zambia, and it is looking at other African markets. The continent is woefully underserved, even taking into account the income level and conflicts in the region. "The need is definitely there and the solution is very simple," says Chopin.

Yet conventional wisdom suggests that niche infrastructure projects—projects that are unique to a particular country, or small projects in high-risk countries, or projects small relative to the size of the market—don't make sense for financiers when compared with large projects in more stable countries. As a result, financiers are hardly knocking down the door for the chance to lend or invest in

small telecom projects in Africa. But Chopin believes that his company's string of operators is proving that small can be beautiful in infrastructure.

As a rule, banks today prefer large, internationally recognized, and proven sponsors engaging in big infrastructure projects. "We don't like small projects," says Martin Weurth, the New York-based director of global project finance at Germany's HypoVereinsbank. He doesn't rule out financing niche projects, but he doesn't seek them out either. Instead, he looks for projects in the lowest-risk developing countries, like China, and with financing needs to match the market involved. The bigger the country risk, the more important it is that a project is structured carefully and is landmark in nature, thus ensuring a high profile. "This has been our policy all along, but the current downturn helps us see that we are comfortable with this position," Weurth notes.

African projects are a particularly hard sell. The continent tends to be perceived not as a hotspot for investment but for conflict, instability, and the associated risks. In the DRC, for example, then-President Laurent Kabila was assassinated in January 2001, and the country is only tentatively recovering from ethnic

strife and civil war that has plagued the country since 1994. "Africa just hasn't registered with commercial financiers," notes Randall Riopelle, an investment officer at the International Finance Corporation, the private sector finance arm of the World Bank Group, which has provided loans to MSICIH and its subsidiaries.

Problems financing commercially viable small projects extend beyond Africa. Brazilian company Andrade Gutierrez Concessões (AGC) is a leading partner in infrastructure projects, including toll road and water concessions in the states of São Paulo, Rio de Janeiro, and Paraná. Yet when reviewing Brazilian projects, particularly the more ordinary ones, international sources of capital find the present cocktail of neighboring Argentina's woes, the attack on the United States, and the global slowdown unpalatable.

Local sponsors like AGC say they continue to find good project opportunities, prompting them to work out large domestic-only financing packages when possible. The company is confident that its experience and knowledge of the local market make it especially well-placed to understand and successfully manage small and medium-sized projects and that Brazilian infrastructure is an especially promising sector.

One banker who has investigated work with local sponsors emphasizes that lenders and investors have to take a long view if they want to work on projects lacking a high international profile. But the payoff can be strong if you find a unique project at an early stage and then research your local partner well. "There are incredibly volatile cycles in emerging markets and this makes it difficult to finance small or large projects," he advises. But he continues, "If you are willing to spend more time sniffing out the right sponsors, you can position yourself to look at smaller projects."

Global trends in infrastructure finance only add to the challenge for small projects in search of finance. Infrastructure financing prospects in emerging markets in 2001 soured despite hints that the trend for private infrastructure finance had turned the corner during the previous year. Even before the September 11 attacks in the United States, *Institutional Investor's* risk ratings showed a dramatic rise in perceived risk around the world. In its survey completed in mid-2001, 102 countries saw investor perceptions of

risk rise, compared to only 42 that enjoyed lower risk perception. Higher risk perception tends to translate into a declining willingness to lend or invest, especially in countries already rated high risk.

During headier days of capital flows, making the case for projects with lower profiles than large, landmark privatizations might have been easier. Private financing of infrastructure in developing countries boomed between 1990 and 1997, increasing from less than \$16 billion to more than \$120 billion, according to the World Bank's Private Participation in Infrastructure (PPI)

Investment in Private Infrastructure Projects in Developing Countries, 1990-2000

(in 2000 US\$ billion)

	Total
1990	17
1991	17
1992	26
1993	39
1994	45
1995	58
1996	85
1997	128
1998	108
1999	75
2000	91

database. When developing economies faced trouble following the Asian financial crisis, capital flowing to infrastructure projects declined in real terms by 15 percent in 1998 and another 30 percent in 1999. Surviving resources for private infrastructure were directed mainly toward projects with political risk insurance or guarantees from multilateral development banks, according to PPI's analysis of the trends it documented. The appetite for expanding investment into specialized projects or untested areas of infrastructure had subsided among international financiers.

Unfazed, MSICIH points to subscriber growth and its ability to control the risks related to the convertibility of local currencies, transferability of funds offshore, and expropriation of its networks. Diversification through the growing portfolio of African networks provides the parent company with the added level of confidence that it is prudently managing its risks. That diversification no doubt affords international financial institutions a greater comfort level for providing

funds at the holding company level. With a track record in the region, MSICIH's Chopin claims a growing number of banks are more willing than in the past to talk about future financing, even in today's difficult markets.

José Antonio Sousa, finance manager at Brazil's AGC, says that while the market for capital is not good, creative and complex deal structures would make it possible to arouse interest among some sources of finance. Even when he can hold the attention of banks long enough, however, his company may not be happy with the outcome. "Our main concern is pricing," says Sousa. Loans costing 10-12 percent after inflation are frequently too expensive to accept on projects that don't produce immediate cash flow.

Working with domestic and international development banks has helped AGC and its parent continue to fund projects during the current downturn. Sousa also believes that 2002 will be a better year for locating new sources of financing, although it is probably too early to assess the full impact of Argentina's woes on Brazil. Meanwhile, his company will try to be creative in structuring deals so that it can continue to finance water and sanitation projects.

MSICIH uses its rapidly growing subscriber base to stir the initial interest among financiers, but Chopin's challenge is to convince investors that the risks for his type of projects are not nearly as great as conventional wisdom holds. Chopin says he uses any attention he receives to get reluctant financiers to focus on the specific risks they are concerned about and relate them to the project at hand rather than to general notions of regional or country risk.

Chopin and Sousa remain confident that the type of small infrastructure projects they specialize in are gems in need of greater appreciation. But unless they and others promoting small but commercially promising communications, port, toll road, or utilities projects can effectively make their case so that others understand risk the way they do, commercial financing is likely to remain hard to come by.

Desmond Dodd has covered finance and capital markets on assignments in Asia, Europe, Latin America, North America, and the Middle East. He is an editor at the International Finance Corporation in Washington, D.C.

Russian Infrastructure Investment: A View from Moscow

Russia's infrastructure needs are immense, and there is a growing awareness of the importance of the private sector role in order for Russia to meet those needs. Still, important questions remain about the nature of the Russian infrastructure market and pace of regulatory change. To explore some key issues in Russian infrastructure investment, Afshin Molavi of *Impact* magazine interviewed **Edward Nassim**, IFC's Moscow-based director of Central and Eastern Europe investments. Nassim talks about the need for regulatory enforcement and a change in the public view toward infrastructure, the durability of current Russian infrastructure, corporate governance issues, and the prospects for financing projects.

Impact: There is much talk of the critical need for private sector involvement in the next phase of Russian infrastructure building? How do you view the prospects for private participation in Russian infrastructure?

Nassim: I think there are tremendous opportunities. It's a place that needs a tremendous amount of investment in infrastructure. All one has to do is drive around, fly around the country to see the immense need. Certainly, the private sector will need to play a key role. If you look at all forms of infrastructure in Russia, its telephones, roads, bridges, ports, and railways, and you added up the whole mass of this investment, it's very difficult to see it coming from the public sector, because the public sector doesn't have the resources. So inevitably, they're going to have to turn to the private sector. There are two questions that are raised: will Russia take the necessary regulatory steps to turn to the private sector fast? How does the private sector make a return?

On the first question, we need to see regulation and enforcement as a way to attract private money to ensure adequate returns. We also need to see a change in attitudes. Russians have not been accustomed to paying fees for telephones, electricity, or trains. To change attitudes is quite tricky because those charged with enforcing the new rules are themselves unaccustomed to paying. They don't always understand why they should enforce rules they themselves view as unfair—after all, these services have always been free.

Yes, it is clear that the private sector is needed. Yes, the Russians will turn toward privatization to do it. But how fast this occurs depends on laws, regulations, enforcement,

and the much more tricky thing of changing attitudes of people towards what is free and what has to be paid for. The last part will be perhaps the more difficult challenge for Russian officials.

Impact: Do you see Russian officials doing those four things that you laid out—the laws, regulation, enforcement and changing public attitudes?

Nassim: Yes, slowly. They are doing them slowly. It is not an easy task for them. The country is now a democracy and if you are trying to run for office, it's very difficult to win the election while tripling electricity bills. So they're steering this ground between realizing it has to be done, but not willing to be the first one to suggest that they're going to do it immediately in their area because of the votes. So that's why it's going to take longer than people think.

In fact, a lot of the laws have already been enacted, but there's always a question of implementation of those laws—how does one educate the judges and the courts? So it's a long process.

The process might move faster if the economy continues to grow. If the economy keeps on growing at 3, 4, 5, 6 percent a year, and people are better off, there will be less resistance to paying for things. If the economy is stagnant, it's very difficult to then ask people with stagnant wages and salaries, with unemployment, to pay for services they didn't have to pay for in the past. You can afford also to separately subsidize the older population and younger population who don't have the means to fully pay for the costs of these services. So it depends on how fast you grow as a country.

How fast will this process take? We'll have to see. If the economic situation gets bad, then there could be some reversals.

Impact: Is there a particular sector in Russia that you think might be most promising?

Nassim: I think maybe the telephone and power are the sectors that offer the best prospects because they depend on the individual users, so it's easier to ask individuals to pay for these services. To ask companies is sometimes a bit more difficult, especially when the companies are in bad shape, as they are in a lot of these regions.

Railways will take a long time. Water and district heating will also take a long time to do

because people are accustomed to these things as a free service and, frankly, you cannot simply cut off heating service when you have a temperature of minus 20 degrees centigrade. Physically, it's also a very difficult to do because if you heat a whole building or a whole district, you can't switch off an apartment. It's very difficult to enforce.

Impact: There was a report by the Russian Duma (Parliament) that noted that Russian infrastructure could collapse by 2003 just as debt levels are going to reach untenable heights. Is that a serious problem?

Nassim: That report is a bit exaggerated. I remember visiting a power station in Moscow that was still operating from World War One, and it's still functioning. The Russians have an incredible ability to keep old things operating. That report sounds alarmist.

Although I absolutely agree that there are substantial needs for substantial investments, I don't see a collapse taking place. In fact, as GNP dropped for so many years, electricity usage and so on dropped also. So, although there are many power stations that need to be decommissioned, I do not see any sort of collapse imminent.

Impact: What about financing? One of the troubles with investing in Russian infrastructure is the lack of long-term financing.

Nassim: Yes, the maximum you can get is three-year local-currency financing with a resetting of rates every year. That's with a partial guarantee from IFC of principal. There are going to be a limited number of issues. All the issues that have taken place by now have been by major oil companies.

Impact: What about local Russian banks? Obviously, they are not in a position to finance large infrastructure projects, but are they moving toward that goal?

Nassim: Russian banks still have a long way to go to reach that sort of financing capacity needed for infrastructure projects. In general, they need to be reformed in order to achieve their potential. Most deposits are in the Sber Bank, the savings bank of Russia. The rest of the banks, around 1,300 of them, are competing for the rest of the deposits.

When banking first started in Russia, it was either a vehicle to channel government subsidies through enterprises or a vehicle in which banks basically invested in govern-

ment securities. That's how they made their money. With the collapse of '98 and the collapse of the government bond market, bankers had to think about how they would make their living. So for the first time, they actually started providing loans to the real [i.e., industrial] sector. That's what's happening still. Most of the banks we're working with are earning money through fees and dealing with clients and providing loans to the real sector.

Now, on the other hand, that's been quite small. So it's too early yet to expect that banks other than Sber Bank can begin to provide financing for large infrastructure projects as well. We hope to be able to work with Sber Bank because a number of large projects we're doing will need local currency financing and the presence of a local bank. We are beginning to have discussions with Sber Bank to be able to bring them in. We can help them understand how to do project finance better, and they can provide long-term local funding that nobody else can provide, so we sort of complement each other. That is the only one now that can provide large amounts of money.

Impact: Is Russia ready for public-private partnerships?

Nassim: My sense is it's still a bit early to have that confidence between the two at this point. Private-public partnerships tend to work when there's real trust between the two parties. I think at this point it's still a bit too early to get the level of trust between private and public to be able to have a partnership.

Impact: What sort of inquiries do you get from project financiers around the world?

Nassim: Most of the inquiries we get are either a combination of foreign investors who see a market opportunity there despite what's happening in the world, and want to continue with their plans in Russia or we get inquiries from local investors.

The second group, the local investors, is a group we hope to do more business with because it will benefit the long-term health of the Russian economy. They are Russian companies, who maybe are starting to understand transparency or corporate governance or international accounting standards and which we feel we can work with. We see some opportunity for the future with these companies.

Impact: You mentioned corporate governance, which raises a point that many foreign investors in Russia are concerned with, in light of Russia's reputation for lack of transparency and industrial domination by oligarchs. Can you get involved in, say, a big power project without dealing with one of the oligarchs?

Nassim: I think it's a very good question. It is important to remember this: for the first

time, Russians are beginning to pay attention to corporate governance, and the Securities Commission has published a governance code, which is a voluntary code for the private sector. IFC was involved in the drafting of that code. We are engaged in technical assistance programs to help Russians understand the need for corporate governance. Corporate governance classes are being taught in the universities. We are getting some of the universities around the country to work with companies, to work with shareholders on these issues.

Russian infrastructure is still, mostly, in the hands of each state, or the state has a very large share of it, like in telephones so far, and electricity. The oligarchs, however, are involved in banking, mining, transportation, oil, and airlines.

As more Russian companies are listed on the stock exchanges in New York and Moscow, Russian businessmen are beginning to understand the need for better corporate governance in order to increase the value for their company. They realize that transparency in governance can increase the value of their companies. As a result, even the oligarchs are beginning to talk about corporate governance, because they wonder, Why should an oil company in Russia be worth a fraction of what the European or American oil company is worth? Having acquired the asset, they want to increase its value, so it makes sense for them to move toward better corporate governance.

One piece of good news is that whenever you read a business paper in Russia right now, there's always something mentioned about corporate governance. Now, the key of course is how do all of these positive signs translate into real corporate governance in the true sense?

Initial steps are positive, but we will also need the stick and the carrot. You need to have the carrot that if people do behave properly, the values of their enterprises go up. You need to have the stick that if you don't behave properly, the Securities Commission and the court will impose various sanctions on companies who don't behave properly. That's a beginning.

When you talked to Russians about corporate governance four or five years ago, the terminology seemed foreign. Now they are very familiar with the concept.

Impact: How does IFC deal with the issue of corporate governance in its investments?

Nassim: It is, of course, of great importance to us. For example, we are considering a very large investment in coal mining in Russia, and we are using our corporate governance team to help the company get its corporate governance in order because that is one of the conditions of us investing

in the company. Most Russian companies who want IFC funds are getting to know our stress on corporate governance as a precondition.

Impact: What examples of Russian infrastructure might be instructive to project financiers?

Nassim: An interesting one was the privatization of Svyazinvest, a telephone company. A lot of people thought that it could be easily privatized and transformed. But people now realize how complex it is. It is a holding company of something like 98 regional telephone companies, which makes things very complicated because it cuts across the interests of the central government, regional governments, the companies, and the users.

It is much easier to go and start a mobile telephone company in a big city than it is to try and face the issues of privatizing a company with 98 subsidiaries, where there's private sector ownership, government ownership, regional government influence, et cetera.

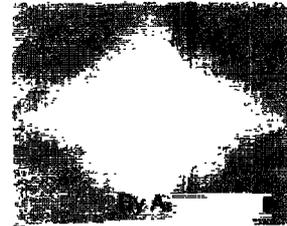
Many difficult questions ensued: how do you regulate telephone rates of the 98 regions of Russia? How do you enter and regulate the telephone rates between regions? International rates? It's very, very, complex.

It is the same with power. The power company in Russia is one of the biggest companies in the world. It employs hundreds and hundreds and hundreds of thousands of people. It has enormous generation capacity, many power stations including nuclear power stations, hundreds of transmission lines, and it serves 150 million people. To suddenly transform that company into a private company à la U.K.--you know, generation and distribution and regulation--is not an easy exercise. So I think what people have realized is the complexity of what is needed.

These are complex issues, but I am optimistic about the progress we've seen so far in Russia and, for that matter, all of the region. If one looks at the whole macroeconomic situation in the region, the main trend in all those countries is positive for private sector development. The private sector has a much more important role in the economy than it had in the past. That's taken place through a number of ways: privatization of existing assets, foreign direct investment, and new private businesses being established. The emerging trend is that of a much more important role for the private sector in the economy.

We must remember that these economies only began their transition ten years ago. I think we have seen substantial progress and we are staying engaged to contribute to the further development of the private sector in these countries.

Recent Trends in Private Sector Finance by International Financial Institutions



Over the past decade, international financial institutions (IFIs include development finance institutions and multilateral agencies) have become increasingly involved in private sector finance in developing countries. The growth in private sector financing coincided with development or expansion of private sector growth within a number of these institutions, but only a small number of over 25 of these institutions. It has been difficult to document how their role in private sector finance in developing countries has evolved, particularly during the financial crisis that started in Asia in 1998.

Recent Trends in IFI Finance

Figure 1 shows the long-term financing and guarantees (excluding political risk insurance) provided by IFIs to private sector projects in developing countries over the past decade. The growth through 1997 was very strong, with total financing approaching \$30 billion. Since 1997 the investment has declined, although financing and guarantees still exceeded \$24 billion in 2000.

The amount of financing and guarantees is quite significant compared with all global financial flows to the private sector in developing countries, exceeding 20 percent of debt flows and equal to over 7 percent of all flows. The flows are even more significant in the higher-risk regions of Africa, Europe, and the Middle East (figure 2).

figure 1

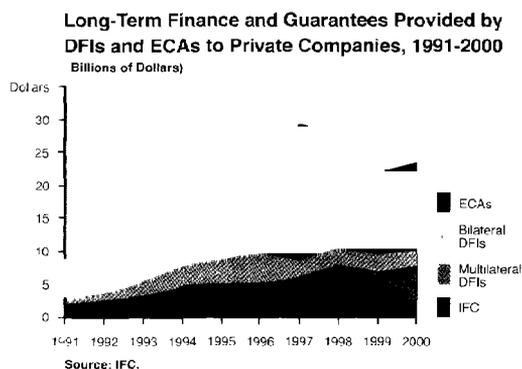
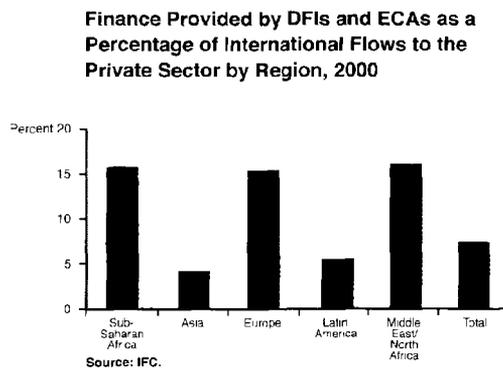


figure 2



The dynamics of recent IFI finance to the private sector become more clear when the recent levels of finance and guarantees are compared over time with some major benchmarks—global debt flows to the private sector in developing countries (figure 3) and total private infrastructure finance in developing countries (figure 4). International investment trends have had an obvious effect on the international financial institutions. IFI shares of international debt flows, however, have been relatively stable, and the share attributable to the development finance institutions has actually increased significantly.

figure 3

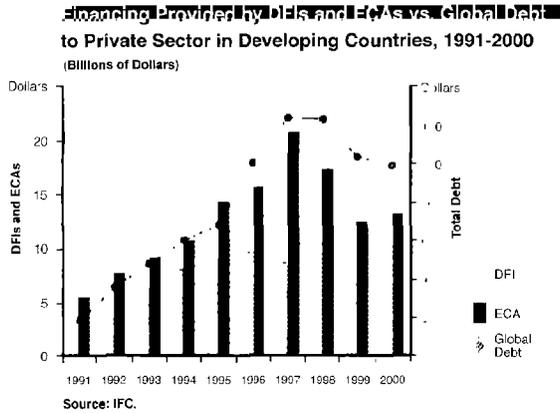
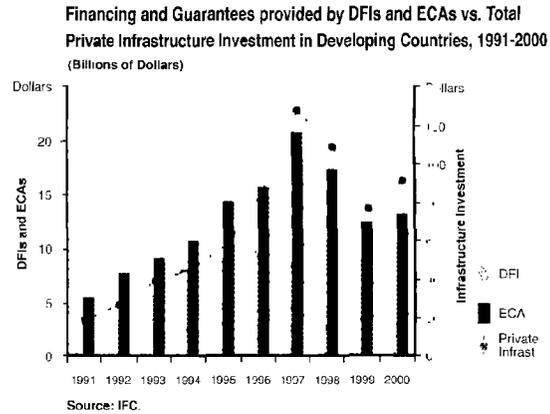


figure 4



Figures 5 and 6 show the regional breakdown of the IFI finance from 1997 to 2000. The drop in financing by export credit agencies occurred largely in Asia, although there is some evidence of temporary effects of the financial crisis in Europe. Despite the generally stable trends for development finance institutions, the crises in Asia, Europe and Latin America appear to have had at least a temporary effect on the pace of finance.

figure 5

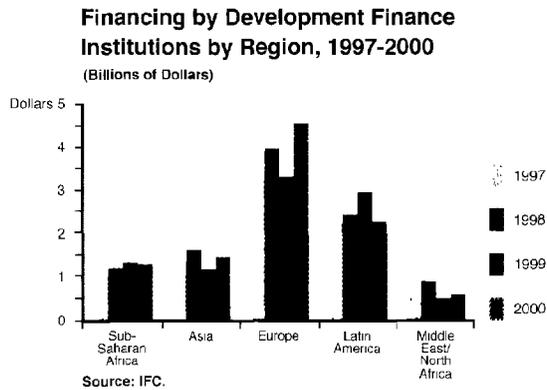
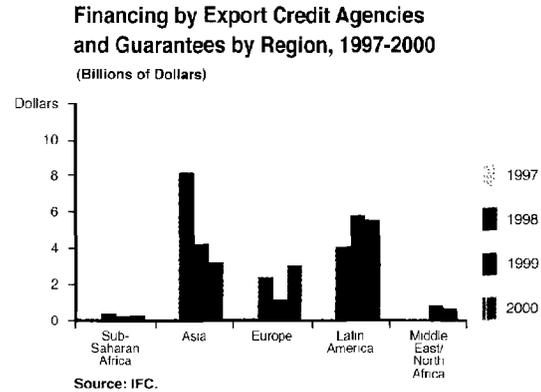


figure 6



Implications

The IFIs play a significant role in international finance, accounting for more than 20 percent of the debt flows to the private sector in developing countries. In higher risk regions, that role is even greater. Thus despite the rapid growth in private flows to developing countries, the risk-mitigating and project development contributions of the IFIs support a significant amount of those flows. Although there has been some impact from recent global financial crises on the absolute volumes of some IFIs, the relative importance of the development finance institutions has actually increased in recent years. Amid growing global economic uncertainty, as foreign direct investment falls and private capital flows slow, the role of IFIs in private sector activity is likely to take on added importance.

Arthur Karlin is a principal advisory officer at the International Finance Corporation. He led the recent mission to analyze the private sector financing trends of the IFIs.

Private Sector Investment

Private Investment in Social Overhead Capital Facility

In Korea, private sector capital has been flowing into social overhead capital facility (SOCF) for 5 to 6 years. The Korean government has attracted private capital to invest in large-scale SOCF construction projects in order to harness the creativity and efficiency of the private sector in the construction and operation of SOCF, while reducing the financial burden of the government budget.

As is the case, SOCF construction projects have increasingly needed a variety of investors for successful implementation; therefore, relevant legislation has been enacted and regulations have been amended to facilitate the investments in SOCF projects. Since the introduction of the practice that guarantees appropriate profitability to the investors and apportions risks between the government and the private sector, investors including construction companies, facility management companies, and overseas investment funds are actively investing in projects in Korea.

Private Sector Investment and the Role of Financial Institutions

For the successful implementation of SOCF construction projects, successful fund-raising of a significant amount of investment is crucial. In Korea, generally 25%-30% of the total project cost comes from investors' capital, while the rest is financed by financial institutions. Accordingly, the role of financial institutions is viewed as the most important among the parties interested. Of all domestic financial institutions undertaking the role of financial

advisor and/or loan arranger, Kookmin Bank is the most active participant in investment banking in Korea.

Investment Banking of Kookmin Bank

In the retail banking market, Kookmin Bank has secured a predominant competitive advantage. The merger with Korea Long-term Credit Bank in 1999 has increased the bank's know-how in the corporate banking sector. After the merger with Housing & Commercial Bank in 2001, Kookmin became the largest bank in Korea, with assets of 189.1 trillion won as of the end of 2001.

Kookmin Bank has participated in numerous construction projects for SOCF, and one example is the construction of the Incheon International Airport Expressway in 1995. This project was significant in that it was the first Korean SOCF project funded by the private sector. Kookmin Bank, the largest lender of this project, granted a credit of 324 billion won out of the total loan of 1.2 trillion won. The repayment of principal and interest will be covered

in Korea

by the road operation income. Kookmin Bank arranged 136.5 billion won for the syndicated loan of the Daegu Eastern Beltway construction in 2000. The total investment in this project was 195 billion won, and Kookmin Bank was once again the largest lender of the project.

In addition, Kookmin Bank has extended credits of 315.9 billion won to 12 SOCF construction projects including roads, seaports, airports, and environmental facilities. Other than fund raising, Kookmin Bank has participated in 6 infrastructure projects as a financial advisor and is currently providing consulting services for 13 projects. Thanks to the financial expertise provided by Kookmin Bank, infrastructure projects have successfully raised the required funds, and are expected to yield the return required by the investors.

Kookmin Bank provides not only credits to SOCF construction projects but also a variety of financial services such as M&A Financing, Property Development Financing and ABS. Kookmin Bank had provided M&A fund by arranging a syndicated loan of 250 billion won

to Larfage Halla Cement Corp., and also provided a total credit of 158.7 billion won to four other M&A projects.

Kookmin Bank has generated successful results in developing, arranging and investing in new real estate projects which are expected to create sufficient cash flow for repayment. One example of a recent successful real estate development project is the Suwon Station Development Project that cost 193 billion won. In this project, Kookmin Bank had provided financial advisory services to ensure a stable business structure for the companies involved and served as the arranger for the 75 billion won syndicated loan. Overall, Kookmin Bank currently is providing credits for 7 real estate development projects totaling 225 billion won.

Kookmin's Active Commitment to Investment Banking

Kookmin Bank is expanding its investment banking business on the strength of expertise and funding ability. PFI (July, 2001) ranked Kookmin Bank at the top in Korea, 3rd in Asia and 38th in the world for

project and structured finance. The Bank will not confine its role to bank loans only, but does capital investment in promising venture companies based on in-depth feasibility studies. The investment in overseas infrastructure projects will be another field of interest for Kookmin.

Kookmin Bank is in the process of networking with other worldwide investment banking institutions for efficient funding and active participation in domestic and overseas projects. Through these networks, Kookmin plans to develop the opportunities for arrangement and investment in domestic and overseas infrastructure projects.

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Photo by Dileep Wagle

By Javed Hamid and Dileep Wagle

The sharp decline in global capital flows to emerging markets during the recent past highlights the importance of the business environment to countries in emerging markets. The Asian financial crisis saw net international resource flows of private capital to countries in the region falling to less than half of their 1997 peak of \$110 billion, and they have yet to recover their former level. The fragility of financial and economic structures in these countries that was exposed by the crisis led to a sharp decline in investor confidence, compounded in some countries by political and economic volatility, which heightened the risks of investing. Any real recovery from the crisis will require not only the restructuring of corporate and

financial sectors but also corresponding and significant improvements in financial transparency, supervision and regulation, corporate governance, and legal and judicial regimes. Without this, restoration of investor confidence will be difficult, if not impossible.

We describe here an initiative introduced in IFC's East Asia Department in early 2001 to assess and monitor on a regular basis the business environment in our major client countries, drawing upon the extensive knowledge and familiarity with the business sector of our country managers, supplemented by the experience of the World Bank's private sector development group. Currently, the initiative has been introduced for China, Indonesia, the Philippines, and Thailand, with

assessments being updated every quarter. The results provide a valuable input into the World Bank Group's country dialogue with client governments in the region, with a view to influencing the content of its policy recommendations for strengthening the role of the private sector.

Why Are Strong Business Environments Important?

In simple terms, the importance of a good business environment stems from the fact that private sector businesses of all sizes need well-functioning markets to thrive and achieve competitive efficiency. And for markets to function well, certain basic conditions must exist, including the absence of barriers to entry and exit, appropriate

regulatory institutions that administer the laws in a fair and just manner, sociopolitical stability, and adequate management of the macro economy. If these conditions do not exist, markets could fail to ensure competition, to allocate resources efficiently, or to maximize productivity. Thus, the growth potential of the overall economy would be adversely affected.

By contrast, a dynamic business environment can help transform the ways in which companies compete in the marketplace. A strong legal and regulatory infrastructure will elevate the level of competition, allowing companies with competitive advantage, with unique products and processes, to challenge those firms with a traditional comparative advantage based on abundant availability of the factors of production. Over time, the increasing sophistication of market competition will lead to a successive upgrading of the structure of the overall economy, in effect promoting economic development.

Investors do not always need perfect business environments, often being willing to take pioneering risks if potential rewards seem attractive enough and special arrangements can be made to mitigate risks in some key areas. As the recent experience of independent power producers in South Asia has shown, however, such risks are sometimes very real and can easily be underestimated. In general, a strong business environment—in which governments, for instance, show genuine and even-handed commitment to the private sector and where judicial systems can be relied on to enforce contracts—is the best way of providing investors with the comfort they need in risky countries.

The quality of business environments is of particular relevance to international financial institutions like IFC, for which the mobilization of capital is an important part of its role. Strengthening the business environment is a key step to achieving a lowering of the level of country risk

perceived by investors, thereby making it easier to attract commercial capital flows. Helping improve the business environment also provides international financial institutions with a strong potential payoff in developmental terms, as even relatively small improvements in key areas can significantly strengthen competition and productivity in the economy through enhanced opportunities for the private sector.

The Initiative Described

Taking advantage of IFC's decentralized structure in the East Asia region, whereby country managers have specific responsibility for keeping track of and representing the Bank Group on private sector development issues, the East Asia assessment model was built around a set of indicators that are thought to be the key determinants of the business environment. There were eight such indicators covering the quality of commercial and foreign direct investment (FDI) legislation and



Photo by Dileep Wagle

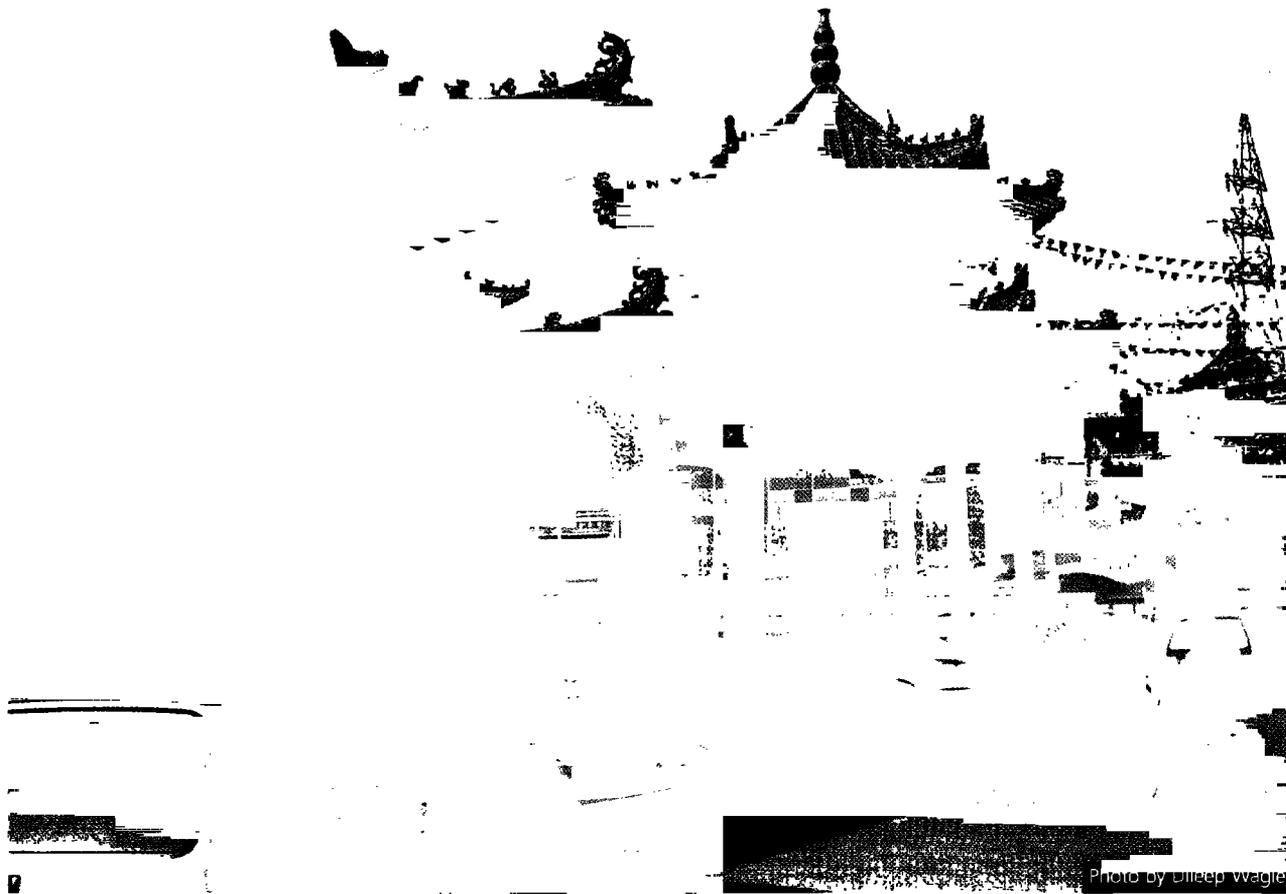


Photo by Dilleep Vagla

the ability of existing institutions to administer regulations efficiently; the basic commitment of the government to the role of the private sector; its willingness to remove barriers to market entry and exit, the willingness to maintain a relatively distortion-free tax regime; and the ability to maintain socioeconomic and political stability. (Details are provided in the table that follows this article.)

Country managers, in consultation with their World Bank colleagues specialized in private sector development, were asked to assign a rating on a 1-to-5 scale to each of these indicators. This information is to be combined with macro-economic and market data, such as inflation statistics, exchange rate movements, corporate restructuring, and stock market indices to provide a composite view of the state of play of the business environment, from the perspective of those who might operate within it—investors and private sector firms. To

minimize the possibility of subjectivity, the rating system was made much more disaggregated, so that the ratings for each of the indicators would be based on a much larger number of subcomponents. Further, to reduce scope for differences in interpretation, fairly specific definitions were provided for the two endpoints of the ratings scale, and country manager ratings were supplemented by information from specialist staff in the Legal Department and elsewhere.

The Results Thus Far

The project began with an assessment for Indonesia in the first quarter of 2001. The scope of work expanded gradually throughout the course of the year and now includes China, Thailand, and the Philippines (with Vietnam to follow). Preliminary results from the assessments offer a useful broad-based picture of business constraints.

In Indonesia, Thailand, and the Philippines, for example, political turmoil and government turnover have contributed to investor uncertainty. In crisis-affected countries—Indonesia and Thailand—there is concern about the effectiveness of regulatory institutions. Businessmen have concerns about the efficiency and reliability of these government agencies and view them as a serious impediment to investment. In Indonesia, an otherwise sophisticated framework of commercial and FDI legislation has been rendered ineffective through major shortcomings in judicial and regulatory implementation. This has been compounded by major political and socioeconomic instability, the impact of which has encompassed the country's tax regime.

For the Philippines, the assessment includes a positive perception of the basic legal framework and its implementation, as well as of the openness of markets. On the downside, a serious

deterioration in law and order in certain parts of the country has led to a decline in investor confidence, particularly among foreign investors.

In China, which has been successful in maintaining its FDI inflows, factors such as the foreign investment framework, soundness of economic management, and socioeconomic stability have been generally well perceived. In areas more directly applicable to domestic investors, such as the availability and effectiveness of commercial legislation, the financial infrastructure, the openness of markets, and the tax system, there are still many shortcomings. In almost all areas, however, improvements appear to be underway, and a comparison with ratings assigned a few quarters hence should be interesting.

Next Steps?

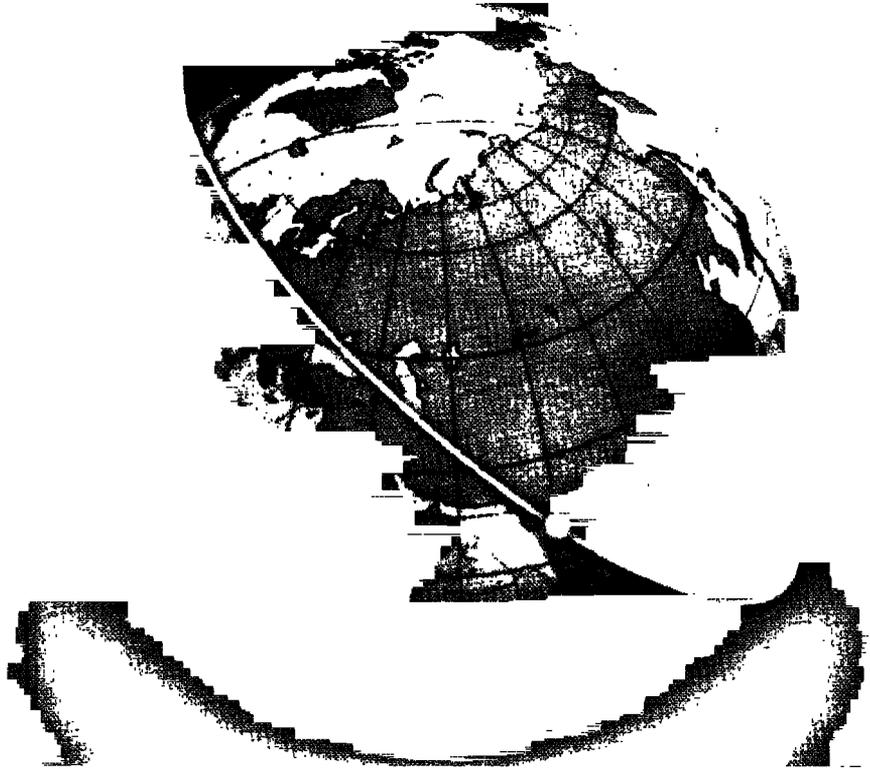
In addition to feeding into the World Bank Group's country dialogue with governments, assessments should provide staff and especially IFC management with regularly updated information on country risk factors. Assessments are shared with World Bank country directors and in one case, Indonesia, the Bank's country team is now actively involved in contributing to the ratings.

Results could also usefully be shared with other international financial institutions, which are already pooling country-specific project information through a collaborative database. This would also help reinforce pressures on governments to ensure that essential reforms are undertaken. There are no current plans to make findings more widely available outside the Bank Group (and perhaps other international financial institutions) on account of concerns regarding the possible impact on market sentiment. To the extent that transparency and widespread dissemination might help to mobilize public support for reform, however, sharing the results of the assessments more broadly could equally have a positive outcome. With the project in its early stages, these considerations will have to be weighed.

Javed Hamid is director of the East Asia Department at the International Finance Corporation. Dileep Wagle is manager of strategy, budget, and programming in the East Asia Department at IFC.

East Asia Initiative Business Environment Indicators

- Clarity and transparency of private sector development policy goals
- Predictability and stability of policies
- Progress in divestiture of state-owned enterprises
- Clarity of responsibility of government departments
- Speed and transparency of decision-making
- Accountability of decision-making
- Regulatory arrangements for utility sector
- Soundness of economic management
- Controls on trade
- Convertibility of currency
- Controls on new businesses
- Price controls
- Existence of company law
- Existence of pledge law
- Existence of bankruptcy legislation
 - Effectiveness of company law
 - Effectiveness of pledge law
 - Effectiveness of bankruptcy legislation
- Existence of regulations governing FDI
 - Licensing/regulation procedures
 - Repatriation of profits
 - Ownership of property by foreigners
 - Work permits for expatriate workers
 - Nondiscriminatory taxes and levies
- Implementation of FDI regulations
 - Transparency of decisions
 - Consistency and predictability of implementation
 - Speed of decision-making
- Existence of legal and regulatory infrastructure
- Accounting and auditing practices
- Banking law
- Securities laws and regulations
- Insider trading law
- Regulatory bodies
- Effectiveness of laws and regulations
- Maintenance of accounting and audit standards
- Clear rules for banking and securities activities
- Enforcement and review by regulators and courts
- Nondiscriminatory incidence
- Universality of application
- Efficiency of administration
- Corruption
- Law and order and social tensions
- Social safety net



About the company

- *POWERGRID, one of the largest Transmission Utilities in the world and recognised as Central Transmission Utility (CTU) of India owns and operates over 40,000 circuit kilometres of transmission lines and 68 sub-stations with a transformation capacity of about 34,000 MVA.*
- *System availability maintained at over 98% by deploying best O & M practices at par with International Utilities.*
- *Turnover went up to US \$ 560 million in 2000-01 from a modest US \$ 130 million in 1992-93 and Net Profit increased to US \$ 155 million in 2000-01 from US \$ 50 million in 1992-93.*

Conference

of the Earth

: 40,192 kms.

Power Transmission

Network

: Over 40,000 ckt. kms.

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Investment and opportunities

- Govt. of India has planned to add around 1,00,000 MW of generation capacity by the year 2012.
- Poised to establish a strong National Grid with an investment to the tune of US \$ 16 billion.
- Large scale opportunity for private investors to participate on their own strength as Independent Power Transmission Company (IPTC) as well as join hands with POWERGRID forming Joint Venture (JV) Company.
- Global Expression of Interest (Eoi) has already been invited under IPTC route for transmission projects worth US \$ 4.5 billion.

Embarking upon telecom business

- Embarked upon to establish countrywide National Backbone Telecom Network, thereby achieving synergy in its strong Transmission Network and Communication facilities.
- Establishing broadband optic fibre network of about 14,000 kms. by December, 2003, connecting about 56 cities including State Capitals, major Industrial Cities and Towns of commercial importance.
- Envisage to take the role of National Long Distance Operator (NLDO) in association with its Joint Venture Partner.

Partnership and consultancy

- Successfully provided consultancy to major clients such as Merz & McCellan, Price Waterhouse, U.K. and various State Electricity Boards.
- Joined hands with M/s KEMA Consultancy, USA in the area of System Coordination and Control (EMS, SCADA) and ready to take up assignments at global level.
- With strong Project Management Capability supported with cutting edge technology and economy, POWERGRID is ready to offer consultancy and take up works in all facets including Engineering, Procurement, Project Management & Financial Management, Institutional Development etc., POWERGRID is also keen to join hands as partner in the field of EHV Transmission, Grid Management and Telecom at global level.



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Bringing Light to Rio's Slums

MIGA-backed power project tackles outages and safety hazards



A special program, supported by MIGA, is dealing not only with Brazil's power crisis but also the basic energy issues that plague the city's slums, including in Rocinha, pictured here.

Photo by Angela Gentile-Blackwell

By Angela Gentile-Blackwell

Power outages, fire, electrocution, unfulfilled economic opportunities...These are the unfortunate facts of life for residents of Rocinha, one of Latin America's largest and oldest slums, where a lack of electricity and illegal connections affect life at the most basic level. There's no one answer to the problem, but a concerted effort to deal with infrastructural inadequacies, provide essential services at low cost, and educate residents about proper power usage are making inroads, here and in other slums in Rio de Janeiro.

The service is being provided by Light Serviços de Electricidade SA, Rio's main power provider, as part of an ongoing program to upgrade the city's electricity transmission and distribution systems.

The latest effort falls under a \$200 million non-shareholder loan made by Citibank NA on behalf of a syndicate of banks, a portion of which is covered against the risks of transfer restriction and expropriation by a MIGA guarantee. The project is especially timely, given Brazil's current energy crisis.

The drought

With one of the most extensive river networks in the world, Brazil obtains more than 90 percent of its electricity from dams, and has invested little in alternative sources of energy. The current drought is creating one of the worst power shortages the country has faced in decades. Lights on streets, in offices, and homes are dimmed or switched off as Brazilians rally, in the

face of penalties, to reduce power consumption by 20 percent.

The crisis has mobilized Light to launch a massive energy conservation campaign to teach people ways to save energy and cut costs. The messaging is important to all Brazilians, who have been asked to reduce power consumption by 20 percent until the rains replenish dwindling water supplies. "The power crisis is changing people's habits," says Vasco Barcellos, head of investor relations at Light. "It is imposing certain limits, but people know it's better than having blackouts, which would be pretty traumatic."

For residents of Rocinha, where a lack of electricity affects lives at the most basic level, this is not an unusual hardship.

Here, Light is taking its campaign one step farther, dealing with infrastructural inadequacies in addition to educating residents about proper power usage.

Serving low-income clients

In September 1997, Light created the Program for Normalization of Informal Areas. PRONAI, as it's called, aims to provide safe, legal power connections in the city's *favelas* (slums) and other low-income communities by establishing and upgrading power networks and by installing transformers and meters. Educational activities are a fundamental component. But the program doesn't just provide a steady, safe source of power for favela residents; it also documents proof of residence, necessary for getting a phone and establishing credit, in addition to other benefits.

The recent power crunch has added a new urgency to the program, which in 2000 reached out to about 150,000 new low-income clients. By 2005, Light expects the PRONAI program to be operational in 728 slums and 594 low-income communities and "irregular" areas—those with unregistered connections or "doctored" meters—adding some 176,000 new clients.

Program coordinator Marcia de Moraes Coutinho, with 20 years of experience working in the favelas, moves confidently along the winding streets and paths of Rocinha. The slum is home to 25,000 families, whose average income is R\$200 a month. Set against the breathtaking backdrop of Rio's famous camelback mountains are ramshackle homes built wherever there is a patch of land or anything stable enough to anchor a foundation. Plastic tubing carries water along rooftops, crisscrossing the bundles of wires, or "gatos," that run haywire throughout the community as they carry sporadic electricity, often illegally, into the dwellings.

The PRONAI program, begun last year in Rocinha, picks up on work supported by the World Bank in the early 1980s to bring power to the favela. Coutinho says the program is really three-pronged, aiming to "normalize" transmission lines and connections, remove safety risks, and educate people about safe power use and conservation.

"People don't know the power lines are dangerous," she says. "They build their houses too close together, which makes it impossible for a fire truck to get through when there is a fire caused by

the lines. Just the other day, 200 houses burned down in one of the local favelas." Another real danger is electrocution, which is a fact of life in the slums. "A simple, cheap solution might turn out to be very expensive," she says.

As in the other 250 favelas that Light has already tackled—usually those with the most egregious infrastructure problems—the Rocinha program works hand-in-hand with local nongovernmental organizations to make sure people understand what the effort entails and to get their buy-in. Local students, usually in their teens, are trained to be "Light Agents," who reinforce the message by

going door-to-door and talking with each family. They also make presentations and hold community meetings, in addition to taking stock of the current situation, which is important in determining what steps the company needs to take.

In its latest endeavor, PRONAI is working with Rocinha XXI, a growing NGO in the foothills of the slum. At the top of a narrow stairway, a long white room is filled with young people sporting green and white Light T-shirts. Among them is Déo Pessoa, a 29-year-old field assistant. Pessoa knows a lot about Rocinha. He grew up there. His father

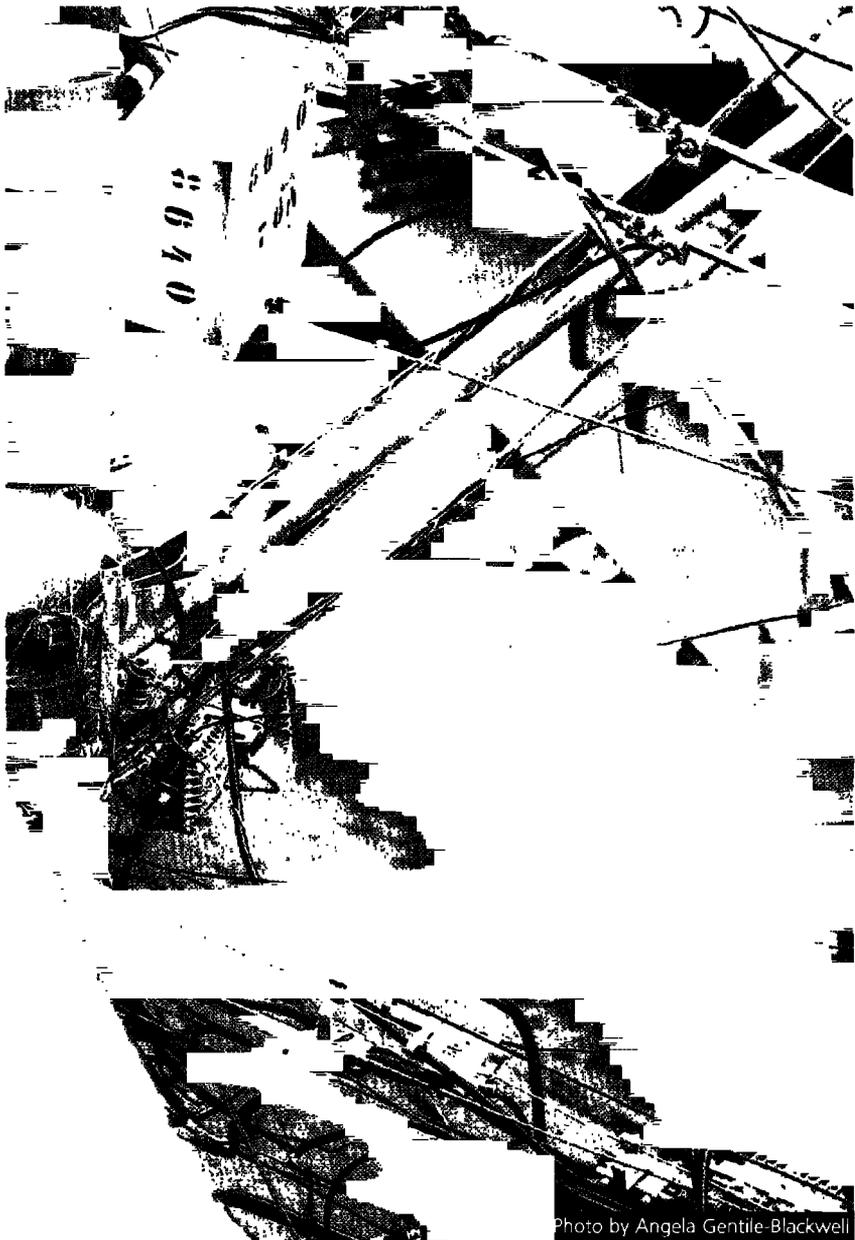


Photo by Angela Gentile-Blackwell

Brazilians' favelas are rife with safety hazards, including electrocution, that stem from illegal power connections known as "gatos."



Photo by Angela Gentile-Blackwell

A local climber ascends the steep hillside on his way home, a piece of electric wire in hand.



Photo by Angela Gentile-Blackwell

"Light Agents" gather in local NGO Rocinha XXI to discuss their work programs.

was president of the municipality. His parents, who have since moved, lived there since the 1970s.

"We have it in our blood," Pessoa says, whose job it is to help explain the program to local residents. It's not too hard of a sell, he says: "The people here want the program. They know it's for the betterment of the community. There's a great need here for this type of service. Since I was little, I've witnessed the community's economic and social development. Light is a private business, but it gives us a good, essential product."

Local resident Sandra, 33, who runs a small grocery shop overlooking a sharp precipice, agrees. A lifetime resident of Rocinha, she says the program is "legal," using a play on words to say it is literally equal as well as "cool." "With a meter and connections," she says, "we will not have problems with power shortages. Now things will be better."

After the company installs the power network, each resident is connected to the service and a meter is installed. For low-income residents, the connection costs about \$30, providing a 42 percent discount over the regular charge. Light has a microfinance program that allows residents to make 24 payments of R\$3 to cover the expense. "It takes each neighborhood about five years to generate a profit," Coutinho says.

The setup is a major change for residents, about half of whom are estimated to be siphoning off power illegally. "Stealing power in Brazil is a socially acceptable crime," says Coutinho. "It's very easy to doctor meters. Of course it's illegal to steal power, and we could ask for three years of back payment, but PRONAI wipes the slate clean." For Light, the main benefit is that the program will help reduce power losses.

To Coutinho, the effort boils down to something very human: "People need to

live in better conditions. This program brings electricity into homes, on a steady basis, which makes life easier and safer. It plays an important role in helping the local economy, by allowing workers in cottage industries, to work at home and giving them the address that is needed to get credit. It also gives them a sense of citizenship."

The program takes good corporate citizenship to another level, donating furniture and equipment, and funding language, computer, and college preparatory training in local community centers. The college entry training is going strong. In its first year, 60 students passed the test. Last year that number was 240, for an average of 80 percent getting into university, including some of the most competitive.

A measure of success of any effort is whether it is good enough to be replicated elsewhere. PRONAI's development impact has been so significant that it is

being extended to another 500 or so favelas in Rio alone, and even into other states.

MIGA

Created in 1988 as a member of the World Bank Group, MIGA promotes foreign direct investment into emerging economies to improve people's lives and reduce poverty. The agency does this through its investment guarantee (insurance) program, encouraging investors to venture into the world's poorest countries where perceptions of noncommercial risk often inhibit investment, and through its investment marketing and dispute mediation services, helping countries improve their investment climates and know-how for attracting new business. Since its inception, MIGA has issued more than 500 guarantees and more than \$9.1 billion in coverage, facilitating some \$41 billion in foreign direct investment across the globe. For more about MIGA, visit www.miga.org.

The company

Light Serviços de Electricidade SA has 3.4 million customers in the 30 municipalities it serves in the state of Rio de Janeiro. With more than 5,000 employees, it is one of the region's largest employers. The century-old company is currently owned by Electricité de France (64 percent), AES Corporation (24 percent), the public (11 percent), and the Brazilian government (1 percent). Light generates about 15 percent of the energy it distributes, and has eight power plants. Since its privatization four years ago, which MIGA also supported, Light has made good progress on a \$1 billion investment program. Technological improvements have led to reductions in the duration and frequency of outages, and the company's work to improve conditions in the city's slums has made strong progress.

Angela M. Gentile-Blackwell is a communications officer at MIGA. She has worked for the World Bank since 1993 and has extensive experience in the field of development communications.



Photo by Angela Gentile-Blackwell

Rocinha resident Sandra, with sons (l-r) Zé Carlos, 12, and Julio, 8, says power shortages are an everyday event.

New meters with special locks installed by Light technicians are expected to reduce energy theft.



Photo by Angela Gentile-Blackwell

Emerging Markets Infrastructure News Highlights

Algeria - Tesco gets pact to drill wells in Algeria

Tesco Corp. has entered into an agreement to drill six water wells in western Algeria. The company said the project is its second commercial Casing Drilling project of 2002. It is being done through an agreement with Steppe Forage, a major Algerian water-well-drilling contractor. The contract will be performed over a period of approximately six months and is valued at about CAD \$1.5 million (US\$942,000), the company said. It will be the first time that the Casing Drilling process has been used on a water-well-drilling program, Tesco officials said, and the first time the company has drilled with casing outside of North America.

Argentina - Financial Crisis could cost Agbar US\$ 28 million

The economic crisis in Argentina could cost Aguas de Barcelona (Agbar), the Spanish water and waste treatment company Euros 32 million (US\$27.68 million). Agbar, which like many other Spanish companies has a significant presence in the Latin American country, will take a charge of Euros 20 million against company reserves and Euro 12 million against profits when it reports 2001 earnings, daily El Pais said. Citing company sources, the paper said that the figures do not include an increase in late payments by Agbar's Argentine clients. It said Agbar's investments in Argentina had a theoretical accounting value of Euro 236 million. "This value will be updated ... taking into account the long-term concessional character of the investments ...," a report said.

The impact of late payments in Argentina on Agbar's 2001 results was estimated at

Euro 3 million. It said the late payments had already been taken into account in December when Agbar said it expected to produce a net profit of Euro 139 million (US\$122 million) in 2001 on revenues of Euro 2.6 billion, increases of 14 and 15 percent respectively.

Brazil - AES completes Eletropaulo share swap with EdF

AES Corp has acquired a controlling interest in Brazilian energy concern Eletropaulo-Eletridade De Sao Paulo after completing a share swap with Electricite de France. AES said it exchanged its 24 per cent stake in Light Servicos de Eletricidade for EdF's 88 per cent stake in AES Elpha, which owns a stake in Eletropaulo. "We now begin a new chapter in our service to the people of Brazil. Acquiring a controlling interest in Eletropaulo has been an important, long-standing AES objective," said AES Chairman Roger Sant.

Brazil - Clifford Chance advises on \$1.1 billion Brazilian Project Financing - the first in the petrochemical sector in Brazil

The Rio Polimeros project financing is the first in the petrochemical sector in Brazil and involves setting up what will be one of the single largest polyethylene plants in the world. It is also one of the few truly limited recourse financings to have closed in Brazil. Located 30km north of the City of Rio de Janeiro, the plant will produce up to 540,000 tpy (tons per year)

of polyethylene and 520,000 tpy of ethylene to be sold domestically and internationally. Export revenues will exceed \$1 billion over the life of the project and the volume sold in the domestic market will result in Brazil remaining a net exporter of polyethylene. In addition, the project will create significant employment opportunities for the municipality of Duque de Caxias and the State of Rio de Janeiro. The Clifford Chance team, lead by Jeremy Connick, was composed of lawyers from the Washington, New York, London and São Paulo offices and acted on all aspects of the project for Rio Polimeros, the special purpose company set up to manage the project on behalf of the project sponsors. Signed on October 26th 2001 and funding this week, the project will start-up in mid 2004 so that production may commence shortly thereafter. The financing for this deal is split 60:40 debt to equity and involves a three-tranche loan package with US Ex-Im Bank, a syndicate of commercial lenders acting under insurance cover from SACE, the Italian export credit agency, and BNDES, the Brazilian development bank, as the lenders. This is in fact the first time US Ex-Im Bank has lent money directly to a project, rather than providing insurance.

Chile - AES unit secures loan to restructure debt

Energia Verde S.A., a Chilean unit of AES Corp. has received a US\$25 million syndicated loan from local banks to restructure its debt. Energia Verde, which generates electricity and steam using waste from the timber industry, is owned by Chile's AESGener, which in turn is owned by the US power giant AES. The loan, with a five-year maturity, was provided by Chilean bank Banco Credito Inversiones and ScotiaBank's Chilean branch. Energia Verde has four plants in Chile, supplying 180 million kilowatts of power annually and over 900,000 tonnes of steam for the woodpulp industry.

China - Ericsson reveals plans in China

Ericsson will create another 29,000 jobs in China and triple exports from the country by 2005 in an aggressive plan to strengthen its position in the rapidly growing market. The Swedish firm, which has begun a cost-cutting plan that could see it shed 22,000 jobs elsewhere, said last month it would double investment in China over the 2001-2005 period to more than US\$5 billion, including investments by Chinese joint venture partners. Asia-Pacific president Ragnar Back told an economic conference in Beijing that investment would create another 29,000 jobs in China, the firm's biggest market and an island of growth in the slowing global telecommunications sector. "We predict that our investment in five years will also double the employment opportunities to 58,000 people and triple our export growth to \$4.5 billion by year 2005," Back said. He said the company, which makes wireless network gear and mobile phones with Chinese joint ventures, also planned to boost its exports from China from \$1.5 billion this year to \$4.5 billion by 2005. Last month, other top mobile phones and wireless gear makers also revealed aggressive investment plans in China, where mobile operators are building networks to handle tens of millions of new users. Nokia said it would set up a research and development centre for high-speed third-generation (3G) networks in China, while Motorola said it would invest \$6.6 billion in China over the next five years. With more than 136 million mobile phones users and a growth rate of about five million subscribers per month, China is an outpost of strong wireless telecommunications growth at a time when growth in Europe and the United States has fallen slack. Analysts say China also offers the added attraction of a low-cost production base.

China - Nortel and Ericsson win contracts with China Mobile

Nortel and Ericsson both announced GSM network expansion deals with subsidiaries of China Mobile. Nortel won a US\$78 million contract to expand one

network and provide software upgrades and network optimization for four networks. Ericsson meanwhile won IP backbone deals with four operators. Nortel will implement its fifth expansion of Xinjiang Mobile's GSM 900 network, increasing capacity from 600,000 subscribers to 1 million. In addition, the Canadian vendor will provide network software upgrades to support advanced intelligent network functionality in Xinjiang Uygur Autonomous region, Hunan and Shaanxi provinces, and the municipality of Tianjin. These upgrades will increase subscriber capacity for the four operators. Sweden's Ericsson has won contracts with Chongqing Mobile, Hunan Mobile, Yunnan Mobile and Xinjiang Mobile. The IP backbone equipment is expected to be installed at the end of the year. For Chongqing Mobile and Xinjiang Mobile, Ericsson will deploy its AXI 580 and AXI 520 series IP routers (which are based on Juniper M160, M40 and M20 routers). It is also supplying LAN switches from Extreme Networks and managing the integration with the existing equipment. For Hunan Mobile, Ericsson is also providing AXI 580 and AXI 520 routers, plus customer services such as installation, support and training. And for Yunnan Mobile, it will supply the routers, LAN switches from Extreme and internally developed AXC 711, 623 and 270 Tigris access routers. The vendor will also supply training, project management, system support and hardware replacement services. Nortel said it has won contracts in China totaling over \$1.2 billion since the beginning of the year. The Canadian vendor said it has won wireless contracts in 17 of China's 31 provinces. Ericsson said it has IP backbone contracts with 17 of China Mobile's provincial subsidiaries.

Egypt - \$280 million allocated to transportation development in Egypt

The Egyptian Prime Minister, Atef Ubeid, said that the government allocates 1.3 billion Egyptian Pounds (\$280 million) annually to supporting services, railway facilities and land transportation services. There are 21 airports in Egypt, of which 11 are international. The existing railway network carries nearly one million passengers per day, which eases the heavy traffic movement in the country.

India to issue four overseas calls licenses

India will issue licences by March to four firms that want to start international long distance phone services when state monopoly over the business ends on 1 April, a government official has said. Shyamal Ghosh, federal telecoms secretary, told reporters on the sidelines of a business seminar in Calcutta that two Internet Service Providers and two domestic long distance carriers had applied for permission for international long distance service. He did not give details. Ghosh has said that two of the applicants for international long distance were Indian telecoms group Bharti Enterprises and Internet access company Data Access, the Indian unit of Hong Kong's Pacific Century Cyberworks. "We expect to issue the licences by March, if not by the end of February," Ghosh said on Monday when asked when the four firms would get permission to start international long distance services. The government, which has steadily deregulated its telecoms sector in the past three years, is ending the monopoly of Videsh Sanchar Nigam Ltd over the international calls business which it plans to throw open to unlimited competition.

Peru extends deadline for utility bids

Peru's privatisation commission said it has extended the closing date for offers for the sale of two electricity generators to 30 April from 30 March, after the companies which pre-qualified requested more time. The commission said offers for Egasa, which supplies electricity to Peru's second city, Arequipa, in the south of the country; and Egesur, which supplies Tacna, near the Chilean border, had been due by 27 March. The privatisation commission did not name the companies involved in the bidding process. Peru aims to raise some \$700 million this year through privatisations - mainly of utilities - and has said it may take in over \$1 billion.

Peru - Positive Kuczynski details Peru 2002 privatisations

Peruvian Economy Minister Pedro Pablo Kuczynski has said electricity sales would generate the bulk of more than US\$1 billion revenue from privatization that the government has targeted for 2002. "What is going to generate the \$1 billion to \$1.2 billion in revenue that we are expecting are electricity companies," he said.

"This is the main part. There are some other things (to privatize) but they are not important from a fiscal point of view," he added. Kuczynski said that interests of holding company JORBSA (Jose Rodriguez Banda SA) now could be sold off. JORBSA, a unit of Grupo Gloria, originally had been awarded a 30 percent interest in four regional utilities -- Electro Norte, Electro Norte Medio (Hidrandina), Electro Centro and Electro Noroeste (Enosa) -- with a \$145.5 million bid in a 1998 partial privatization. But JORBSA failed to secure funding to boost its stake and seek control. It has agreed to relinquish its 30 percent stake. Peru's privatization commission said on Friday Spain's Union Fenosa, which previously had flirted with joining JORBSA, may be interested in buying the companies. Kuczynski said the JORBSA interests could raise \$250 million to \$300 million, while southern electricity generating interests could net \$200 million, southern distribution interests some \$250 million and northern and southern transmission interests another \$250 million. "That's where we get the base \$1 billion from," Kuczynski said. Peru's official privatization goal for next year is \$700 million but the government has said it is confident of exceeding that, and of using extra cash raised to fund infrastructure projects in the poor Andean nation. President Alejandro Toledo took office in July promising to spark Latin America's No. 7 economy out of a three-year slump that has crippled demand and paralyzed growth, fight poverty and create jobs.

Philippine power privatisation attracts foreign interest

Power companies from UK, Canada and the US have shown interest in

investing in the Philippines' National Power Corporation (Napocor) due to be privatised later this year. According to a statement by the Presidential palace, President Gloria Macapagal Arroyo met with officials from National Grid (UK) Plc, Edison Mission Energy (EME), InterGen, MidAmerican Energy Holdings, and Hydro-Quebec during her visit to the three countries. Napocor, the country's main power supplier, is due to be privatised in the second quarter of 2002. It is set to auction about 70 percent of its assets worth between US\$5.2 billion and US\$6.0 billion. Energy Secretary Vincent Perez said in the same statement the plan was to first privatise the power firm's transmission companies before its generation companies -- which got the backing of foreign investors

Philippines - WorldWater signs agreement with Dept. of Agriculture

WorldWater Corp. signed agreements with the Department of Agriculture in the Philippines and the US Trade and Development Agency (USTDA) to implement a US\$52 million program that will utilise the company's solar pumps for mainstream power in broad sections of the Philippine Islands. The USTDA agreement approved funding the initial phase of the program in the form of a water and power feasibility study to be performed immediately by WorldWater. The USTDA funding for the study is worth US\$302,500 reported by the chairman and CEO of WorldWater. WorldWater's hydrogeologists and engineers will do the work in conjunction with its subsidiary, WorldWater Inc., beginning in January next year. The US\$52 million project is planned for financing by PNC Bank, with US ExIm Bank guaranteeing 85 percent, all backed by a Philippine government sovereign guarantee, he said. A nation-wide irrigation development project is scheduled to follow immediately on completion of the study in late spring 2002, according to Kelly. The WorldWater program will be carried out under the auspices of the National Irrigation Administration (NIA) of the Department of Agriculture, according to Jesus M. Paras, NIA Administrator. The project will take WorldWater and NIA engineers into all areas of the Philippines and is scheduled to be completed within 24 months.

South Africa and France sign transport deal

An agreement under which France would assist South Africa on various transport-related issues has been signed in Pretoria, South Africa. These included civil aviation, road safety, port and maritime transport matters, said Transport Minister Dullah Omar at the signing ceremony. His visiting French counterpart, Jean-Claude Gayssot, was a co-signatory. "In particular, we have decided to combine our efforts in civil aviation in order to promote co-operation in the field of training for black pilots. We are aware that there is a shortage of such skills among people from the historically underprivileged communities." Omar said Gautrain, the envisaged high-speed train between Pretoria and Johannesburg via Johannesburg International Airport, was also mentioned. "I pleaded with Gayssot to encourage the French private sector to bid for the construction of this transport system." The minister said that, in terms of the agreement, France would offer support and assistance in South Africa's road safety campaign. Omar was excited about the forthcoming 22nd World Road Congress, to be held in Durban next year, saying it would create an opportunity for road experts of the two countries to meet. Gayssot, who is in the country on a three-day visit, announced that Thales, a French aeronautic and arms manufacturer, was currently presenting a plan to modernise air traffic control centres -- including those in South Africa. "I hope this country will continue to rely on French technology and on Thales, which acquired a calibration machine for civil aviation from a South African private company," he said. France supported the South African government's affirmative action programme, allowing black engineers to obtain master's degrees in aeronautics. "I would like this specific programme to be extended. I will have the opportunity to see the results of it while participating on Tuesday in the 2000/2001 graduation ceremony at the Air Traffic Navigation Services College in Bonaero Park," Gayssot said.

South Korea 3G services to start in 2003

South Korea's mobile carriers have said they would launch commercial third-generation (3G) mobile services in 2003, countering concerns they were delaying rolling out the networks. Third-genera-

tion, or 3G, mobile technology is expected to provide Internet access, data and streaming video at five to 25 times faster than current 2G speeds. "We will launch a commercial 3G service in the third quarter of next year," SK IMT Co, a 3G unit of top mobile carrier SK Telecom Co, said in a statement. Separately, KT ICOM Co, a mobile unit of Korea's largest fixed-line telecom company KT Corp, also said it would begin a 3G service early next year. "We will select 3G telecoms equipment suppliers in the first half of this year and complete a pilot service test by year's end," it said. "KT ICOM chose LG Electronics Inc early in February as the 3G network supplier for the demonstration of its next-generation mobile services during the 2002 World Cup final soccer games in May and June. Korea granted 3G licences late in 2000 to two consortia led by SK Telecom and KT, which promised to launch commercial 3G services using W-CDMA technology, widely adopted by European companies and Japan's NTT DoCoMo, no later than 2003. LG Telecom Ltd, Korea's smallest mobile carrier, also won a 3G licence to operate 3G mobile services based on Qualcomm's cdma2000 technology. But industry watchers said SKT and KT were reluctant to invest in deploying W-CDMA 3G networks, while upgrading their current services to help save costs. SK Telecom conducted a pilot test of cdma2000 1x EV DO, an upgrade from 2G CDMA (code division multiple access) mobile services, in a couple of big cities in January. KT also offers an initial EV DO service in limited areas through its mobile service unit KTF Co. The International Telecommunications Union regards cdma 2000 1x EV DO as a 3G service. SK Telecom said on Friday it would spend 1.6 trillion won (US\$1.22 billion) until 2005 on deploying W-CDMA 3G networks to offer a nationwide service by then. KT ICOM had said it earmarked 500 billion won for its 3G budget this year and plans to invest a total of 2.5 trillion won by 2005.

Senegal ends power talks with Vivendi

Senegal has ended negotiations with France's Vivendi Environment and its Moroccan partner over the sale of a majority stake in power company Senelec, and will now talk instead with AES Corp. Vivendi and Morocco's National Electricity Office (ONE) had agreed to pay 63 billion CFA francs (\$84 million) for a 51 per cent stake in state-owned Senelec. But a statement

released by the two sides said that the terms of payment proposed by Vivendi and ONE "do not conform to the conditions laid out during the bidding process." "The state has decided to terminate the negotiations with the consortium," it said, adding that talks would begin with AES whose offer came second behind Vivendi's in the bidding process. Vivendi Environment's director for Africa, the Middle East and Latin America Regis Mesnier, who signed the statement along with Energy Minister Macky Sall, told reporters he "understood the government's decision to ensure that the rules of transparency apply." Vivendi Environment is part of media giant Vivendi Universal. Senegal decided last November to accept Vivendi and ONE's joint proposal. The privatisation committee said at the time the details, including the buyers' future undertakings, would be settled in due course. A provisional accord was signed on December 13 but the deal was never finalised and last week sources close to the talks said Vivendi and ONE had asked for more time to find the 63 billion CFA francs.

The consortium had eventually offered to pay 42 billion CFA francs immediately, with the rest to be paid in annual instalments over a period of years. Sall said that as a result of the failed negotiations, the government authorised the board of Senelec to raise power tariffs by 10 percent. Only three people out of 10 in Senegal have electricity. Senelec has 398,000 customers and installed capacity of 422 MW. The state plans to sell a further 10 percent stake to Senelec's workers and 25 percent to local investors.

Trinidad major oil province?

BHP-Billiton, the Anglo-Australian natural resources group, said on Tuesday that shallow-water exploration work showed Trinidad "has the potential to become a major hydrocarbon producing province." A second exploration well has indicated a multi-hundred million barrel find of high quality oil on block 2c on which the group and its partners are working. As recent US government data put Trinidad's proven oil reserves at around 700m barrels, a find of this scale would be a considerable boost to the Caribbean state and could reverse a decline in oil production that now stands at some 130,000 b/d. BHP-Billiton said that further appraisal drilling was necessary but that "we will look to

fast track the development," which could be in development in two to three years, given the shallow waters in which the find was made. BHP-Billiton is operator on the block and holds a 45 per cent stake in the licence. TotalFinaElf holds 30 per cent and Talisman holds the balance. Trinidad has sizeable natural gas reserves used for industrial and power production as well as the export of liquefied natural gas.

Venezuela - Chávez appoints new head of state oil company

President Hugo Chávez has named a leftist central banker as head of state oil company Petroleos de Venezuela (PDVSA), a move that observers said sets the stage for foreign exchange controls and which will financially damage Latin America's largest company. Gaston Parra had been a lecturer on petroleum economics at the provincial University of Zulia, before being appointed as first vice-president of the central bank a year ago. Venezuela's central bank last week significantly increased its daily sales of dollars in an effort to defend the bolivar, the local currency, which came under intense pressure amid deepening political instability and murmurs of unrest in the armed forces. Mr Parra's appointment, announced by chief of staff Rafael Vargas, appears geared to installing a compliant head at PDVSA, which is obliged to sell most of its hard currency income to the central bank, in preparation for foreign exchange controls, analysts said. The appointment of Mr Parra could also be a move intended to quash resistance within PDVSA to make a heavier fiscal contribution in the months ahead, rather than invest in exploration and maintaining capacity. The appointment of Mr Parra, who will be the fourth head of the state oil company since Mr Chávez came to office three years ago, is likely to meet a frosty reception from multinational oil firms which operate association contracts with PDVSA. Mr Parra helped draft legislation that led to the nationalisation of the oil industry in the 1970s and he opposed the later opening up of the industry to foreign capital in the 1990s.





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