

Formal Report 329/09

Designing Strategies and Instruments to Address Power Projects Stress Situations

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Energy Sector Management Assistance Program

Energy Sector Management Assistance Program (ESMAP)

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Designing Strategies and Instruments to Address Power Projects Stress Situations

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Contents

| | |
|---|------------|
| Acknowledgments | v |
| Executive Summary | vii |
| 1. Introduction | 1 |
| 2. Overview of PPI Projects, Incidences of Stress, and Their Causes | 3 |
| Investment Trends in the Power Sector | 3 |
| General Characteristics of Power Projects and Stress | 5 |
| Causes of Project Stress in the Power Sector | 7 |
| Consequences of Power Project Stress | 8 |
| Summary | 12 |
| 3. Preventing the Emergence of Stress Situations | 15 |
| Importance of Adequate Governance Arrangements | 15 |
| Toward Stronger Project Governance Frameworks | 16 |
| The Role of Stakeholders in Power Projects | 19 |
| Promoting Disclosure and Transparency | 20 |
| Dealing with Conflicts of Interest | 21 |
| Accounting and Financial Reporting | 23 |
| External and Embedded Restructuring Mechanisms | 23 |
| Setting Up Adequate Restructuring and Bankruptcy Mechanisms | 24 |
| Dealing with Macroeconomic Shocks, Sector Shocks, and Political Transitions | 25 |
| Relationships Between National and Sub-National Political Institutions | 26 |
| Level of Sector Development | 27 |
| Market Position and Ownership Structure | 27 |
| Creative Use of Risk-Management Tools | 28 |
| Risk Sharing in Power Projects | 28 |
| Subjecting Private Sector Partners to Less Risk | 31 |
| Integrated Risk-Management Systems in Power Projects | 33 |
| Complementary Measures | 36 |
| Summary | 36 |
| 4. Strategies for Addressing Stress Situations | 39 |
| Facing Stress | 39 |
| Time for Action—Stress Has Taken Over | 39 |
| Roles of Parties to Address Stress | 39 |
| Resolution Approaches | 43 |
| Mediation | 43 |
| Arbitration | 43 |
| The London Approach | 44 |
| Instruments to Be Used in Stress Resolution | 46 |

| | |
|---|--|
| Financial Restructuring | 46 |
| Credit Enhancement Guarantees | 49 |
| Exchange Risk Mitigation | 52 |
| Securitization | 52 |
| Summary | 53 |
| 5. Conclusion | 55 |
| Annex 1. Changing Incentives in the Project Cycle: Hungary's Electricity Privatization | 59 |
| Annex 2. How Reliable Are Sovereign Guarantees? | 61 |
| Annex 3. The Role of International Arbitration | 63 |
| Annex 4. Annotated Bibliography | 65 |
| List of Formal Reports | 97 |
| Boxes | |
| Box 3.1 | Toward an Effective Project Governance Framework 17 |
| Box 3.2 | A Primer on Ethics Committees & Compliances Programs 21 |
| Box 3.3 | Restructuring Mechanisms and Prevention of Stress in Power Projects 27 |
| Box 3.4 | Exchange Rate Risks in Power Projects 34 |
| Box 3.5 | Financial Risk Management and Prevention of Stress in Power Projects 35 |
| Box 4.1 | Elements of Financial Restructuring 47 |
| Box 4.2 | Alternatives for the Resolution of Stress in Power Projects 49 |
| Box 4.3 | Indonesia Applies Learning from East Asia Crisis 51 |
| Figures | |
| Figure 2.1 | Annual Investment in Electricity Projects with Private Participation by Region, 1984–2005 4 |
| Figure 2.2 | Percentage of Various Types of Private Investment, 1990-2005 5 |
| Figure 2.3 | Cumulative Investment in Electricity Projects with Private Participation by Region and Type, 1990-2005 6 |
| Figure 2.4 | Percentage of Electricity Projects Under Stress by Subsector 7 |
| Figure 2.5 | Main Causes of Stress 8 |
| Figure 2.6 | Consequences of Stress 9 |
| Figure 2.7 | Consequences of Stress by Type of Project 11 |
| Figure 2.8 | Consequences of Stress by Region 11 |
| Figure 5.1 | Private Investment in Infrastructure by Sector, 1990-2005 55 |
| Tables | |
| Table 3.1 | Responsibilities of Public and Private Sectors in the Design of Project Governance 22 |

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Executive Summary

International Financing Institutions (IFIs) or other donors may get involved in the renegotiation of Private Participation in Infrastructure (PPI) contracts in the power sector. In deciding whether and how to approach a distressed PPI contract, intervention teams should be guided by the following principles:

- Client ownership
- Minimizing moral hazard
- Transparency
- Effective mitigation of conflicts of interest
- Proportionality and consistency
- Quality

Mediation. Whenever the parties involved in a power project have provided for mediation or conciliation under the auspices of an appropriate forum, they make certain procedures a part of their agreement. The details of the procedures depend on the chosen venue for conflict resolution. The mediator does not have the authority to impose a settlement on the parties but will attempt to help them reach a satisfactory resolution. Mediation is terminated by the parties' signing a settlement or by the mediator reaching the conclusion that further efforts are not worthwhile, or by a declaration to this effect by a party or parties to the dispute.

Arbitration. The parties to a dispute may also select a national or international arbitration forum. Specialized bodies maintain rosters of arbitrators, from which arbitrators are appointed. In this context, it is understood that the term "arbitrator" actually refers to an arbitration panel composed of one or more arbitrators. An arbitrator has the power to rule on his or her own jurisdiction. At any stage of the arbitration proceedings, the parties may agree to conduct mediation to facilitate settlement.

The London Approach. The London Approach involves a "workout," that is, a financial and operational rehabilitation or restructuring of a project that takes place outside an insolvency process. This approach addresses the need to resolve coordination and conflict of interest problems between creditors while avoiding problems with statutory regimes. The London Approach reduces the risk of unnecessary liquidation of projects, enjoys international recognition, and has been widely applied in many countries, including East Asia at the time of crisis in the late 1990s.

Financial innovation. A different set of issues is raised by innovations in finance, notably the growth of securitization and credit derivatives. Securitization is the process of converting loans or receivables into negotiable instruments. It enables non-tradable assets that range in marketability, credit-worthiness, and size to become liquid secondary instruments. The impact of securitization of project loans on workouts depends on the extent to which a creditor really does shed the credit risk in a securitization deal: a bank that has securitized part of its loan book may remain exposed to reputational risk if it walks away from a loan it has initiated. Similar considerations apply to credit derivatives, although these appear to offer a clearer route to transfer risk. The growing use of each

of these instruments is part of a broader shift from relationship to transaction-based banking, and from banking to capital market finance.

Investment guarantees. Investment guarantee agencies backed by official sources often guarantee cross-border investments, including investments associated with financial restructuring. They usually are flexible regarding eligible types of investments, including equity, shareholder loans, and loan guarantees issued by equity holders. Other eligible investments include management contracts, leases, and franchising and licensing agreements. Guarantees typically protect against the following kinds of risks: currency inconvertibility and transfer restrictions; expropriation; war and civil disturbance; breach of contract; policy and regulation. Guarantees are also frequently used to protect against collateral issues, including fuel price fluctuation risk, project completion risks, national partner debt repayment risk, and force majeure.

Exchange rate risk. Exchange risk mitigation is frequently considered to be a major factor in the reluctance of power sector investors to invest in developing country infrastructure projects. Frequently the investment and related debt are denominated in a currency other than the cash flow created through the tariffs approved by regulators in accordance with the agreement between the investor and the government. Risk management instruments that are expected to help deal with contract compliance under extreme circumstances may fail to do so in real-life situations. Hence, designers should include the possibility of contract renegotiation under severe macroeconomic shocks as a last resort. Another approach is the use of hedging mechanisms underwritten by a third party—commercial credit granting agencies or, for less credit-worthy countries, international financial institutions.

1

Introduction

It is an internationally recognized reality that continued and increased investment in the power sector by private firms is essential to providing affordable and reliable energy to an increasing portion of the world population. However, investing in power projects in the developing regions of the world exposes nations, governments, consumers, and investors to unusually high levels of risk.

This study will have succeeded if it encourages parties—on all sides—to recognize problems as early as possible and concentrate on identifying possible solutions, and then implementing them.

Purpose of This Study

This study marks the interest of investors and lenders in finding procedures and instruments to facilitate the resolution of disputes arising from stress situations.

It will look at case studies and employ analytical methods to identify problems, suggest solutions, and point to possible players who may be of assistance and the instruments they may have available. Each stress situation is unique and each solution must be tailor-made indeed, but the study seeks to identify generic instruments that may be helpful.

Many of the factors that cause stress in power projects with private participation can be avoided or minimized by proper planning at inception. Along the same line, a most common fault is denial by investors and lenders of the existence of a problem until the stress level has increased to a point that a workout becomes difficult and uncertain in outcome. To ensure resilience against stress, the pillars of a project ought to be built of truth and clarity. From the beginning participants must foster an environment of trust and open communication,¹ establish clear incentives, and make sure that decisions are implemented.

To begin with we will summarize the predominant causes, characteristics, and consequences of project stress in the energy sector of emerging markets. We will seek to describe and understand the incidence of various patterns of characteristics and consequences of project stress that emerge as power projects are broken down by type industry stage and region. Then we will discuss how to prevent the emergence of stress situations in power projects as well as the instruments and strategies available for the resolution of power project stress.

¹ Several instances were observed in which the reluctance to share information between the private partner and the government became a clear aggravating factor in the stress situation. The absence of clear definition between commercially confidential information and information that needs to be shared for an effective regulation of a concession or a utility is a recurrent problem. The unfortunate outcome of Electricité du Mali (EDM) privatization in Mali illustrate this point.

2 Overview of PPI Projects, Incidences of Stress, and Their Causes

Telecommunications and electricity led the growth in private activity in developing countries between 1990 and 2002. Total investments for these two sectors during that period amounted to US\$560.1 billion. During that same period, more than 100 developing countries opened their telecommunications sector to private activity, and the total investments in telecommunications amounted to 45% of the total PPI investments. Furthermore, 79 developing countries introduced private participation in the electricity and energy sector, which accounted for US\$239.3 billion in investment flows (33% of total PPI inflows), followed by the transport sector with a 17% share and water and sewerage with a 5% share.

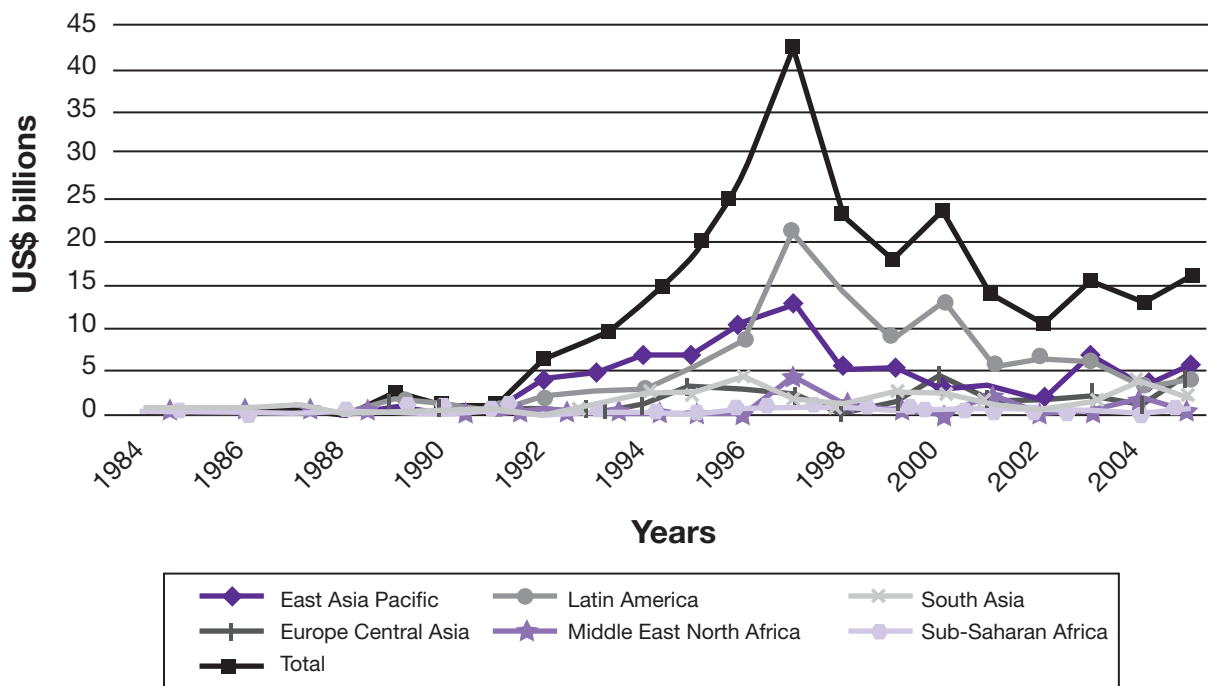
At the regional level, there are marked variations among the different regions, with greater concentration of PPI in Latin America and the Caribbean, which had the lion's share of PPI projects relative to other regions. Latin America and the Caribbean (LAC) accounted for nearly half of the investments in PPI projects, totaling US\$366.3 billion (47%), followed by East Asia and the Pacific with US\$217 billion (28%), Europe and Central Asia with US\$105.2 billion (14%), South Asia with US\$40.1 billion (5%), and Sub-Saharan Africa and Middle East and North Africa with 3% each.²

Investment Trends in the Power Sector

Traditionally, energy services in developing countries were provided almost exclusively by public monopolies that generally failed to expand service coverage and improve quality at a reasonable rate. Investors and lenders eventually saw this situation as a business opportunity and started seeking high returns in developing countries with growing energy demand and underserved markets, particularly at times when developed country markets seemed to be already saturated. At the same time, developing country governments began to redefine their role in the power sector, from being exclusive financiers, managers, and operators to being facilitators and service regulators.

Private sector involvement in the electricity sector, as investor or long-term lender, started in the 1980s with a comprehensive privatization program in Chile, as well as a few power projects in other countries. According to the World Bank's PPI power projects database, which covers infrastructure power projects with private investment in the energy sector, there were 1,232 electricity power projects in 154 countries with private participation between 1984 and 2004, attracting investment commitments of

² See a statistical analysis of PPI in the power sector and distribution by region, type of investment, and legal status by Ananda M. Covindassamy, "Analysis of Power Projects with Private Participation Under Stress," Energy Sector Management Assistance Program, The World Bank, 2005/10/01.

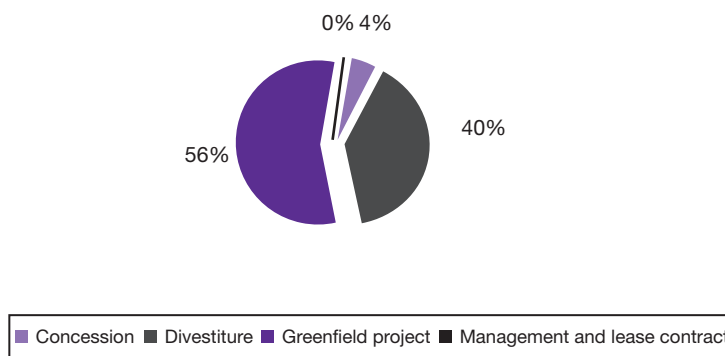
Figure 2.1 Annual Investment in Electricity Projects with Private Participation by Region, 1984-2005

Source: PPI database 2007.

more than US\$282 billion. Private activity grew rapidly in the power sector in the 1990s, with annual investment commitments for private electricity power projects in the developing world rising from US\$1 billion in 1990 to a peak of US\$42 billion in 1997. The peak investment levels were related mainly to the privatization of electricity companies in Latin America and the Caribbean as well as greenfield power projects in East Asia and the Pacific (EAP). In particular, Brazil became an extremely active country when it privatized many of its large power distribution companies, accounting for about one third of private investment in the power sector in the developing world in 1997.

Investment commitments then dropped sharply as a result of the East Asia crisis and the subsequent crises in the developing world starting in September 1997. Private investment in 2005 (\$16 billion) is about 38% of the levels achieved during the peak of investment activity in 1997. At present, not only is the flow of new deals well below investment needs, but many

governments struggle to maintain existing private infrastructure projects and are now faced with problems surfacing from existing PPI contracts, including the need to renegotiate such agreements. Their efficacy in dealing with legacy deals will influence, to a large extent, the levels of political commitment and investor support that can be sustained to make future reforms and projects happen. Concern among policymakers and investors has been rising as the number and value of energy power projects with private participation have displayed a clear declining trend since the 1997 peak despite a modest recovery since 2003 due mainly to the acceleration of private investment in the electricity sector in the East Asia and Pacific region (China). This trend has disappointed many developing and transition countries, which embarked in sector restructuring in the hope that private investment would help accelerate economic growth. Moreover, the persistence in the energy sector of power projects under stress, although in small number, may be

Figure 2.2 Percentage of Various Types of Private Investment, 1990-2005

Source: PPI database 2007.

detering new or additional commitments by private investors.

It follows that the settlement of investment disputes could potentially contribute to restoring the willingness of private investors to invest in the energy sector in emerging markets, an idea that was given serious consideration at the Investors Roundtable of March 15, 2004. However, it also emerges from an analysis of power projects under stress that workout approaches and instruments need to be flexible enough to be tailored to real-life situations. Each project is unique, having its own characteristics and special history. However, it is still possible to classify the causes and symptoms of stress into a number of broad categories, and understanding of these categories is a prerequisite for subsequent customization of workout strategies and instruments.

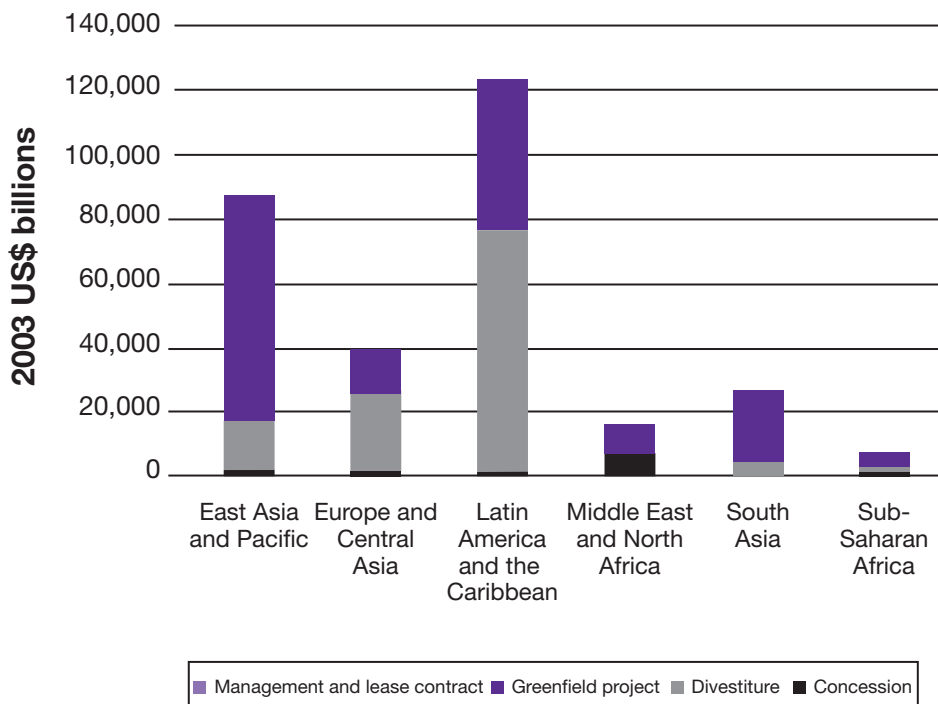
General Characteristics of Power Projects and Stress

Greenfield power projects were the most common type of private participation in the power sector in developing countries and attracted most of the investment (56% of the value of cumulative investment in 1990–2005). Investment was driven mainly by greenfield power projects for independent power generation in the EAP. Divestitures were the second most common type of private participation (40% of the value of cumulative investment in 1984–2005), driven mainly by the LAC region. Concessions of

existing assets accounted for the rest (4%) of the cumulative investment in power projects, divided between the Middle East and North Africa (MENA) and Sub-Saharan Africa (SSA) regions. Management and lease contracts have been used to introduce private participation without requiring the private sector to accept significant investment risks and often without undertaking major sector reforms upfront. Only 27 power projects involved such contracts, of which 17 were in the SSA region, where short-term management and lease contracts were used as a transitory structure while sector reforms are developed.

The generation business attracted most investment, accounting for 70% of the total. The stand-alone distribution business was the second most active segment, accounting for 14% of cumulative investment. Integrated utilities followed as the third most active investment segment. This pattern reflects the trend that emerged in the late 1990s for “unbundling” the power sector and separating its three basic functions according to their perceived potential for introducing effective competition (generation, which is essentially competitive; transmission, which is usually seen as a natural monopoly; and distribution, which is sometimes thought to be competitive). The allocation of investments between generation and distribution reflects the higher capital intensity of the generation business compared to distribution activities. In addition, these data illustrate the lack of appetite of investors for the commercial risk of the

Figure 2.3 Cumulative Investment in Electricity Projects with Private Participation by Region and Type, 1990-2005



Source: PPI database 2007.

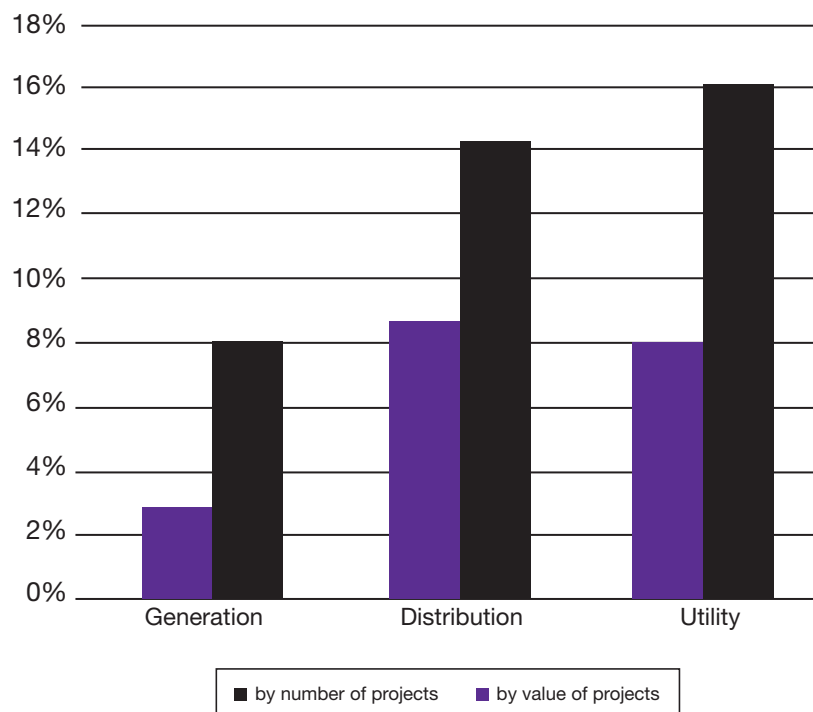
distribution business as well as their preference for the generation business where the market risk is taken by a third party through “take or pay” power purchase agreements.

Most electricity power projects in East and South Asia were stand-alone generation facilities. In LAC stand-alone generation businesses emerged from three types of transactions: Build-Own-Operate-Transfer (BOOT) and Build-Own-Transfer (BOT) schemes and privatization of segments of unbundled vertically integrated utilities. Developing countries used two schemes to introduce private participation in integrated utilities: in most cases minority stakes were sold in state-owned enterprises, an approach shared with Europe and Central Asia (ECA) and EAP; in the other cases, management control was also transferred to the private sector, an approach used in several countries in LAC, SSA, and

MENA. LAC was the only region to introduce PPI on a significant scale in the transmission business, possibly because it was the only region where the sector reform scheme was sufficiently advanced and the business climate was adequate to address the specific issues of the regulation of a privatized natural monopoly.

Altogether, the statistics collected by directly surveying investors, host governments and Bank staff indicate that a small proportion of private power projects went through or are in a stress situation: only 4% of the projects in number are affected by stress (10% in investment value), and the distribution and utility projects are much more prone to stress than generation projects.³ It is clear that the perceived risk distress of private power projects is often overestimated compared to the actual small number of projects that are or have been affected. Nevertheless,

³ See Ananda Covindassamy, op. cit., Chapter 3, for a full discussion of the types of projects under stress, by type of project, by subsector, and by region.

Figure 2.4 Percentage of Electricity Projects Under Stress by Subsector

Source: A. Covindassamy, op. cit.

because of the publicity that has surrounded the cases of distress, the perception of investors is that investment in the power sector in emerging markets is a high-risk activity and that the highly visible cases of stress need to be resolved satisfactorily as a precondition for more investment to flow to emerging markets (except China, where investors are still very active). Annual statistics, moreover, show that most of the cases of stress occurred between 1996 and 1999, when more than 10 projects went in distress every year, and that the number of stress cases annually has considerably decreased since 1999, to stabilize around two to three projects per year, worth less than \$500 million.

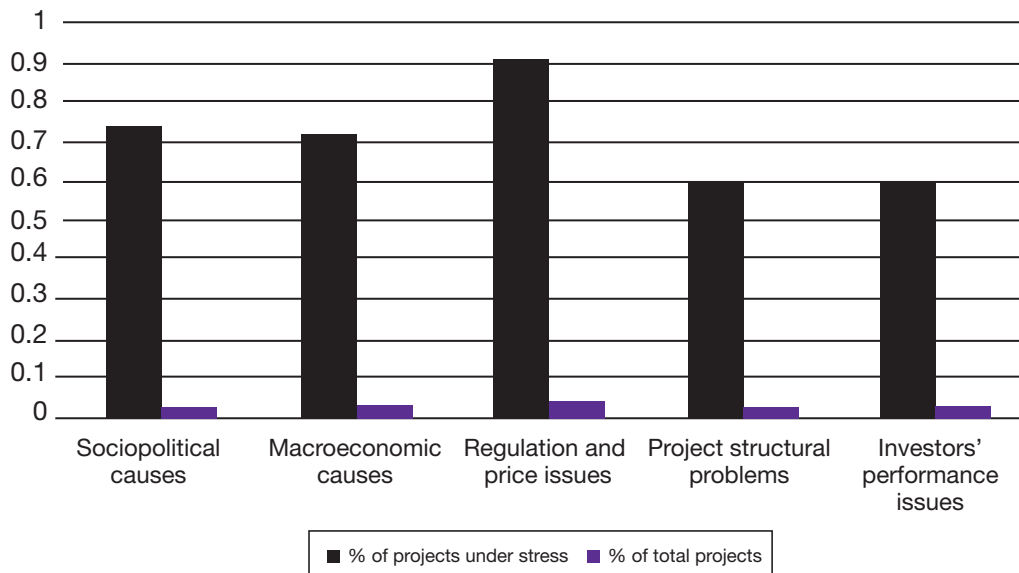
Causes of Project Stress in the Power Sector

There are two broad categories of causes of project stress, namely, country-specific issues

related to the behavior of the host government vis-à-vis the power sector and macroeconomic shocks that are not specifically related to the power sector.⁴ In practice, most power projects seem to come under stress as a combination of both kinds of shocks. To obtain further specificity, it is possible to break down the causes of stress into five categories: (1) sociopolitical, (2) macroeconomic, (3) industry regulation and pricing, (4) project structural problems, and (5) investor performance.

The most frequent cause of stress was industry regulation and pricing (90.3% of power projects under stress) followed by sociopolitical (73.8%) and macroeconomic issues (71.4%). More specifically, pricing formulae and government interference have been identified as problem areas in power projects under stress. Structural problems and investor performance were the least possible causes of project stress. Curiously, when there have been problems with investor performance, it is commercial performance and

⁴ See Ananda M. Covindassamy, op. cit., Chapter 2.

Figure 2.5 Main Causes of Stress

Source: A. Covindassamy, op. cit.

service quality that tend to be the weakest areas. Hence, in power projects that have come under stress, the areas that most frequently justified private sector involvement are precisely the ones in which investors have failed to perform up to expectations.

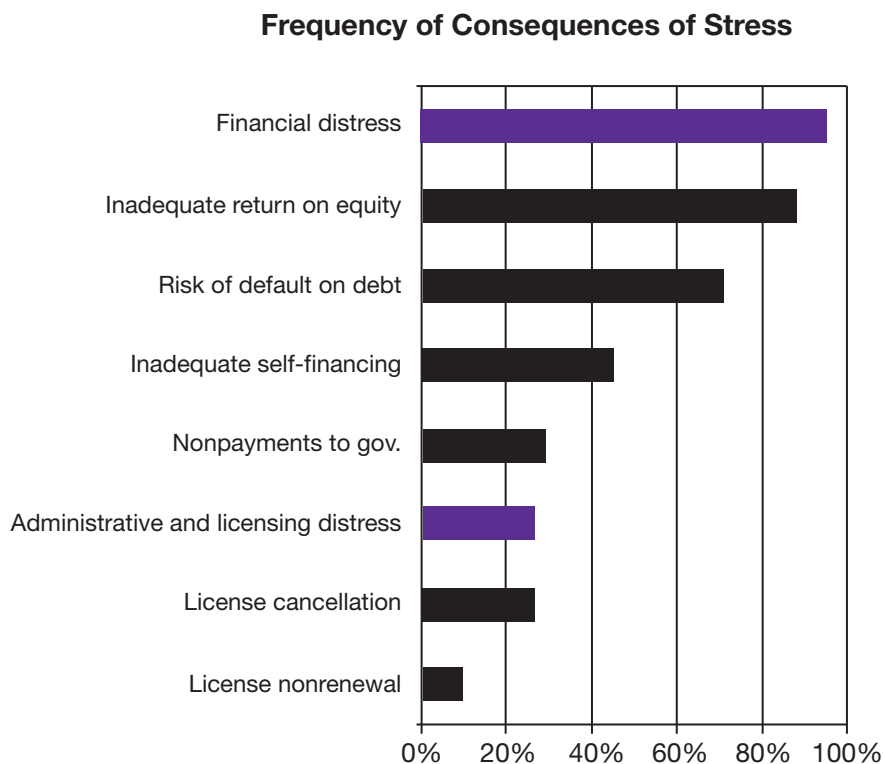
We can conclude that the most frequent causes of stress are essentially project and sector specific and can be addressed through sector-specific workout strategies and instruments. The political dimensions of project stress situations resulting from the lack of popular support for PPI is often underestimated but is, in fact, an important factor in cases of stress. This confirms the importance of consensus building and consultation at the national level before recommending PPI; transparency, open communication, and participation of the public should also be part of the workout process. This runs counter to the usual practice of commercial confidentiality, which subsequently leads to the appearance of lack of transparency in the negotiation of a contract, especially when this may affect the public through tariff setting or otherwise.

Macroeconomic shocks are also important causes of stress. Macroeconomic shocks cannot

be handled through sector-specific strategies, but instruments may be made available to soften their impact on power projects. However, risk management instruments that were expected to help deal with contract compliance under extreme circumstances may fail to do so in real-life situations of major macroeconomic stress. Hence, designers should include the possibility of contract renegotiation under severe macroeconomic shocks as a last resort.

Consequences of Power Project Stress

The consequences of project stress have been categorized into two broad areas that are not mutually exclusive: financial distress and licensing distress. Financial distress includes the following kinds of events: (1) cash flow shortages leading to lower than expected returns to investors, (2) heightened risk of default to lenders, (3) inability to pay dues to the host government, and (4) inability to finance an investment program from internally generated resources. Administrative and licensing distress mainly includes the threat of cancellation or non-renewal of a license.

Figure 2.6 Consequences of Stress

Source: A. Covindassamy, op. cit.

Previous studies⁵ have shown that

- More than 90% of power projects under stress in the power sector report at least one type of financial issue, mainly inadequate return on equity and the risk of debt default.
- About 25% of power projects report the risk of cancellation or non-renewal of license.

This pattern suggests that the actions taken by the governments aim at "correcting" what they perceive as the excessively favorable financial terms of a PPI rather than challenging the principle of PPI itself. In other words, the majority of power projects that come under stress seem to do so because governments are taking action to squeeze project cash flow while keeping the project in operation. The most frequent consequence of project stress is a lower return on equity (88% of power projects under stress). The next two most frequent financial

consequences are the risk of a debt default and insufficient investment self-financing (45%). The incidence of nonpayment of government dues stands at only 28%, in line with the senior status of taxes in project cash flow.

The threat of a license cancellation as a result of stress situations is relatively low, affecting about a quarter of power projects under stress. Interestingly, more detailed analysis has shown that this risk is rarely a consequence of financial difficulties, as the correlation between financial and licensing distress is low. Instead, administrative distress with a risk of license cancellation seems to result from the political causes. The risk of non-renewal of licenses remains low as most PPIs are fairly new and still several years away from their license renewal date.

Earlier studies have shown that the consequences of project stress change according to the type of power project under consideration.

⁵ See Ananda M. Covindassamy, op. cit., Chapter 3.

In 95% of greenfield power projects under stress the main consequence was financial distress, mainly lower return on equity (83%) and a risk of debt default (75%). As these power projects generally involve the construction and operation of a single plant, there are few consequences of stress on the investment program. The risk of nonpayment of government dues as a consequence of project stress is also low (33%) reflecting either the privileged creditor status of the government or the fact that many greenfield power projects are tax exempt for a number of years. The administrative risk of license cancellation for greenfield projects was low as well (25%).

Concessions display their own pattern of consequences of stress. Concessions power projects under stress presented financial risks that affected the potential return on equity, the company's self-financing capacity as well as debt repayment capacity (77%). The risk of nonpayment of government taxes was fairly low (33%) although concessions do not frequently benefit from tax exemptions. Concessions, however, do show a higher risk of license cancellation (44%) relative to other types of power projects, perhaps due to the fact that assets are government property and would never be stranded with an unlicensed company.

The consequences of stress for divestiture power projects are fairly similar to those of greenfield power projects, except that the incidence of a possible default on the debt is lower (66%) possibly because divestiture power projects are often less indebted than greenfield power projects. By contrast, the risk of insufficient cash flow for sustaining an investment program is higher (42%) as divestiture power projects typically have large investment programs to carry out. The risk of license cancellation is low (19%), probably because of the complex legal implications and the potential consequences for service quality in the event of cancellation.

Specific incidence patterns also emerge when power projects under stress are broken down by main activity. For generation power projects, the financial consequences of stress are mainly a lower return on equity (89%) and increased risk of debt default (84%), while the potential impact

on investment program is low (31%) since most generation power projects require limited future additional investment. The risk of license cancellation for generation power projects under stress is lower than for other types of PPIs (10%) reflecting the low political visibility of generation power projects, compared to distribution power projects and utilities.

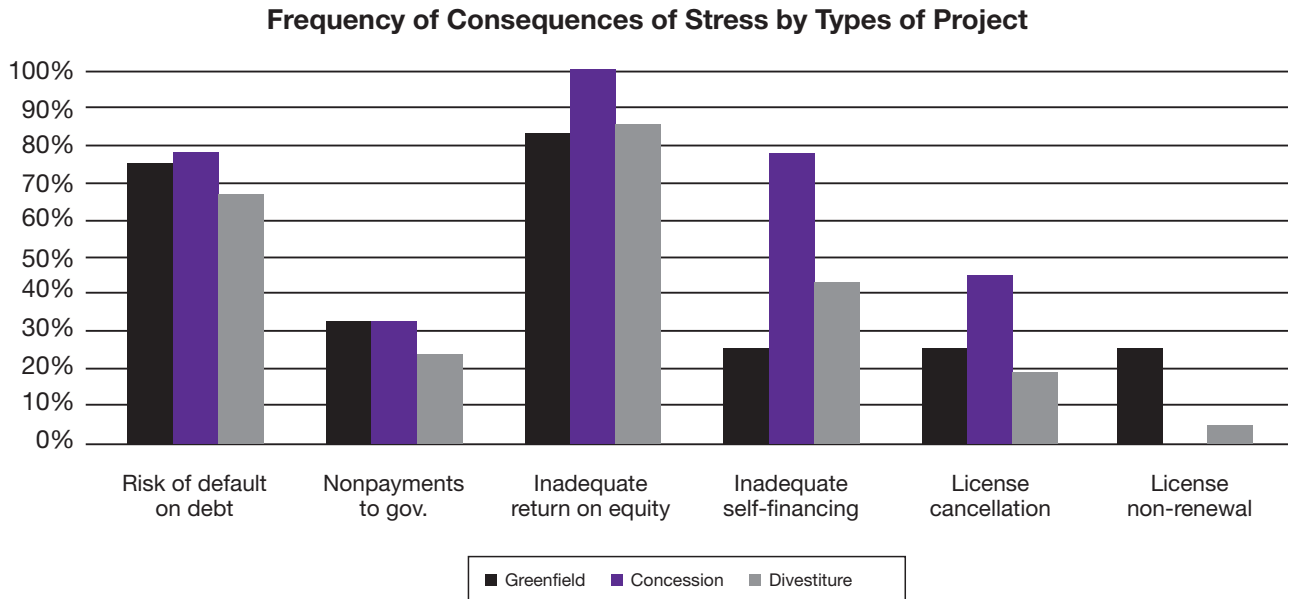
Project stress had a strong financial impact on distribution, mainly on return to equity (92%) and capacity to repay lenders (84%), reflecting the fact that distribution companies often raise debt for project implementation, rehabilitation, or extension. The potential impact of stress on investment programs is higher (53%) than for generation projects, as distribution companies have larger investment programs than IPPs (independent power providers). The higher risk of cancellation of distribution licenses (46%) as a consequence of project stress reflects the relatively large number of cases where distribution power projects went under stress due to sociopolitical issues. In those cases, the intent of the government may have been related to the principle of PPI for power distribution and its political visibility.

The consequences of stress for integrated utilities are similar to those for distribution power projects, with a high incidence of financial risks. Cash flow shortcomings for the self-financing of investment feature prominently (60%) in the case of utilities, but the risk of debt default is fairly low (30%) compared to other types of PPIs. This reflects the generally low leveraging of utilities in the initial years after privatization compared to other types of power projects. License cancellation risk is also relatively high (46%) presumably for sociopolitical reasons.

The regional analysis shows that the consequences of project stress are largely dependent upon the type of project and activity in the power sector prevalent in each region, as well as the regional political climate.

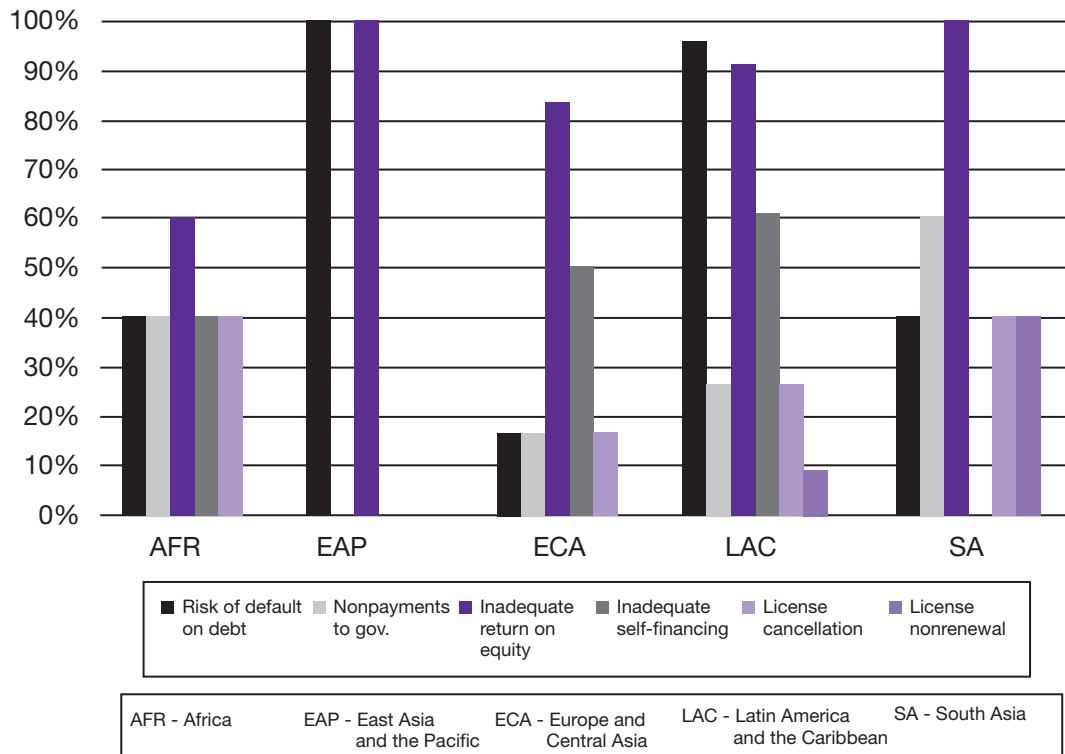
In Africa (AFR) the consequences of stress reflect the fact that nearly all power projects under stress are utilities. The consequences of stress situations are lower expected financial returns and the inability to finance post-privatization investment programs (40%),

Figure 2.7 Consequences of Stress by Type of Project



Source: A. Covindassamy, op. cit.

Figure 2.8 Consequences of Stress by Region



Source: A. Covindassamy, op. cit.

whereas the risk of default on the debt is low (40%) compared to other regions as this type of power project is less dependent on debt than greenfield generation power projects. On the other hand, the risk of cancellation of licenses is high (40%) compared to other regions, indicating the political sensitivity of electricity power projects involving direct contact with the public and the apparently low level of political commitment to PPI.

Past studies have shown that all PPI power projects under stress in the East Asia and Pacific region (EAP) reported similar consequences: financial issues and no license cancellation risks. The financial consequences of stress were always a lower rate of return for investors and a higher default risk. This pattern is explained by the fact that all power projects under stress in EAP are highly leveraged IPPs for which there are no future investment programs to be financed, while special tax regimes are often applicable.

In Europe and Central Asia (ECA), most power projects under stress were aiming at improving the management and efficiency of distribution companies and utilities, which did not lead to significant increases in debt levels. This explains a high risk of general financial distress (82% of power projects under stress) but low risk of debt default (16%). Also, there is in ECA a relatively high risk of license cancellation (16%) resulting from the prevalence of distribution and utility power projects with high political visibility.

In Latin America and the Caribbean region (LAC) most power projects under stress were meant to increase generation capacity, followed by a smaller but significant number of distribution power projects. This structure is reflected in the consequences of stress, which are primarily of a financial nature, with a high risk of debt default (96%) as both generation and distribution companies in LAC tend to have high debt exposures. There is also a high risk on investment programs of distribution companies (61%). The LAC region also has a 26% risk of license cancellations mainly on distribution power projects.

In South Asia Region (SAR), power projects under stress are split evenly between generation and distribution. The prevalence of distribution power projects and the frequent emergence of governance and sociopolitical issues are reflected in an unusually high proportion of power projects in risk of license cancellation (40% of power projects under stress). The number of leveraged generation power projects, on the other hand, explains the risk of default on the debt (40%). The pattern of consequences of stress in SAR points to weak sociopolitical support for power sector reforms.

Summary

Private investment in power projects went through a peak in 1998 when they represented nearly 30% of investment in the sector, followed by a sharp decline until 2002, when their share declined to about 10% of sector investment. Since then, the interest of private investors has been moderate, except in China, and private investors have voiced their concern with risks associated with private investment in energy in emerging markets.

Private investment in the power sector was directed mainly to the Latin America region, followed by East Asia and Eastern Europe, with Africa coming last. Investments were directed mainly at greenfield generation projects (in Latin America, East Asia, South Asia), followed by divestitures (mainly in Latin America). Power generation attracted 70% of investment, whereas distribution represented only 14% of private investment, integrated utilities making for the remaining 16%.

Despite the widespread perception that investment in power projects in emerging markets is a risky business, statistics over the 1984–2005 period show that, in fact, only 5% of private projects go through a stress situation. Stress events, though, are widely publicized and are a deterrent for more investment. The successful workout of power projects going through a stress situation is therefore important to restore investors' and lenders' confidence.

The main causes of stress that would need to be addressed in a workout are first, pricing and regulatory issues, followed by sociopolitical issues stemming from a lack of consensus or communication on the role of private investment in the power sector, and macroeconomic shocks. Causes of distress of power projects are therefore largely sector specific and can be addressed as such through project or sector-specific workout. General macroeconomic issues that affect all

sectors of the economy play an important role, though they are not the most frequent issue affecting private power projects.

The consequences of project distress are always a financial return below expectation and a risk of default to lenders. Only rarely does the host government envisage canceling the license of the private project. The focus of workout strategies should therefore be on addressing in priority the financial distress issues.

3 Preventing the Emergence of Stress Situations

This chapter explores how adequate governance arrangements help in preventing the emergence of stress situations in power projects with private participation. To prevent the emergence of stress, governance arrangements need to be based on accountability and transparency. In addition, they should promote, in addition to effectiveness and efficiency in the management, adaptability to changing circumstances. Given the high political profile of most power projects in emerging markets, governance arrangements need to incorporate appropriate communications and consultation strategies with all stakeholders. By their very nature, power projects usually have some form of government involvement, as owner or investor, watchdog or regulator, as well as client and supplier. It follows that in most cases, the prevention of stress situations in power projects is a shared responsibility between the public and private sectors, each having a role to play and each in its own realm of responsibility.

The prevention of stress situations in power projects also relies on the existence of a minimum capacity to reorganize and restructure a project, whenever certain combinations of circumstances and events might occur. As restructuring mechanisms become more effective and diverse, project stress becomes less likely. From its inception, a power project should facilitate recourse to bankruptcy laws as a last resort but most of all, alternative resolution mechanisms, if and when it becomes necessary to resolve a stress situation. Depending on the legal systems in the host country, bankruptcy does not necessarily imply liquidation or disruption of services to consumers. At the same time, simply because the public sector is involved, this should not

necessarily mean that there is either an explicit or implicit sovereign guarantee for the obligations of the project. However, other avenues for restructuring are available and should be preferred over formal bankruptcy proceedings, including using automatic renegotiation clauses (e.g., in case of macroeconomic crises) and more or less formal frameworks for mutually agreed renegotiations, all of which can prevent or resolve stress situations. Later chapters in this study will provide more details on alternatives for restructuring a power project.

Naturally, many of the situations that lead to project stress can most often be identified *ex ante* and in many cases action may be taken to reduce the probability of their occurrence. The next step is to introduce appropriate, comprehensive risk-management frameworks in a project, including risk-mitigation tools whenever they are available. Note, however, that the availability of effective restructuring mechanisms often acts as the best tool for the prevention of stress, even if those mechanisms are never in fact used in the context of a particular project—paradoxically, their very existence makes them less likely to ever be used. Their existence permits all parties to evaluate potential costs and risks of each alternate approach and encourages discussion and settlement through negotiation rather than through processes over which the parties perceive they have less control.

Importance of Adequate Governance Arrangements

In designing power projects, there is always a need to consider the political nature of the industry. Doing so allows project designers and

policymakers to identify and exploit differences in country-, industry-, and firm-level factors with a view to introducing appropriate governance arrangements in power projects.⁶

The governance arrangements of a large power project should be thought of as including the nature of the relationships among various supervisory, regulatory, and enforcement authorities in a country. The legal, regulatory, and institutional foundation of implicit and explicit contracts is also part of broadly defined governance arrangements. As such, a governance framework may include elements of legislation, regulation, self-regulation, and voluntary commitments. It also includes ongoing relationships and commitments toward the public and international stakeholders.

The power industry is characterized by a high level of political scrutiny that results from the many uses of electricity in a modern economy as well as the relatively high level of political influence held by consumers of electricity in emerging countries. Moreover, economic and political volatility cause recurring rounds of negotiation and bargaining between private investors and governments—a characteristic of project stress.⁷ It is often the case that project stress revolves around various aspects of project governance arrangements. Hence, project designers and policymakers are advised to take into consideration that stress events are likely to lead to challenges to the prevailing governance arrangements and therefore, that there will be a need to incorporate features that increase a project's capacity for survival.

Project designers must also take into consideration the particular dynamics of the incentive structures faced by investors as well as governments over the project cycle. For example, in the case of projects with private participation that involve construction of new or expanded facilities, once an investment has been made and is physically built in the territory of a host country,

governments face incentives quite different from what they faced early in the project cycle. In general, once a project is built governments have significantly greater bargaining power than they did earlier in the project cycle.⁸ The dynamics of a project's incentive structure can be said to have an in-built tendency to cause stress situations and therefore, project designers must always incorporate hazard mitigating mechanisms in governance arrangements to help prevent the emergence of stress due to the dynamics of incentive structures. Subsequent chapters in this analysis propose hazard-mitigating mechanisms that can be used in power projects.

When stress situations do emerge, mechanisms should also be available that help to increase the chances of project survival. Sound project design strategy does not consist only, or even mainly, of a collection of ex ante mechanisms, but rather a balanced combination that would function both ex ante and ex post as effective stress-mitigating mechanisms. We now discuss some elements of a project's governance framework that contribute to the prevention and resolution of project stress.

Toward Stronger Project Governance Frameworks

Project designers and policymakers should begin by establishing the basis for an effective governance framework, which in itself represents a solid defense against the emergence of project stress situations. The first principle to be followed in the design of project governance frameworks is to take into consideration their impact on the project's overall economic and financial performance and on the incentives created for various stakeholders in the project. In other words, an assessment of a project's economic and financial performance would explicitly take into consideration decision scenarios under alternative governance frameworks. A qualitative

⁶ See Text Box on following page entitled "Toward an Effective Project Governance Framework."

⁷ This characteristic is shared by all types of large infrastructure projects, such as oil and gas, ports and airports, and highways.

⁸ The balance of power also depends on how far the relationship between the controlling investors and government has deteriorated, and how far each is prepared to go. At a moderate level of conflict, the incumbent controls de facto the electricity switch. Ultimately, however, the government holds the capacity to take over project facilities, including by force.

Box 3.1 Toward an Effective Project Governance Framework

Project designers should begin by establishing the basis for an effective project governance framework, which in itself represents a solid defense against stress situations. An effective governance framework would have the following characteristics:

- It would clearly articulate the division of responsibilities among different supervisory, regulatory, and enforcement authorities in a country.
- There is an effective legal, regulatory, and institutional foundation upon which participants can rely in establishing their contractual relations.
- An effective project governance framework typically comprises elements of legislation, regulation, self-regulation, and voluntary commitments. The best mix among legislation, regulation, and self-regulation and voluntary standards, will vary from country to country.
- Transparency and continuous consultation with the public is an essential element of an effective project governance framework.
- Moreover, a project governance framework should duly consider the need for and the results from international dialogue and cooperation.

assessment of how actors would behave under alternative governance arrangements is a good start. However, given the size, significance and sensitivity of power projects, project designers could also use other analytical tools to model the behavior of stakeholders in a project. For example, it is possible to estimate the statistical

distributions of a project's present value and rate of return, taking into consideration the likely decision paths of key stakeholders under alternative governance arrangements. The results could then be used to develop the project's risk-return profile under alternative governance frameworks.

The sort of analysis just described focuses on a project's internal dynamics vis-à-vis governance framework. It is also desirable to explore what would happen to project dynamics under a variety of external scenarios. Project designers have a responsibility to establish a framework that is flexible enough to facilitate project survival and integrity in widely different circumstances. To achieve this goal, designers should focus on the desired economic and financial outcomes, while undertaking an analysis of the impact of changes in exogenous economic and financial variables⁹ under alternative incentive structures, simulating the relative strength of an array of possible governance arrangements. Certain types of framework would respond better than others when volatility in economic activity is high, while others would be preferred when exchange rate volatility would be an issue. Project designers need to pay special attention to systemic conflicts of interest that emerge under a governance framework and pick one that would prove to be robust across a variety of economic and financial scenarios.

Unfortunately for project designers, not all elements of a governance framework can be designed at will. For example, it may be the case that only changes in national policies would open the door to the possibility of optimal governance arrangements at the project level. In some jurisdictions, new laws and regulations could be needed, for example, to remove restrictions on project financial terms. Second-best scenarios need to be modeled when it is felt that legal

⁹ In this context, project designers need to determine which economic and financial variables are exogenous relative to the project's governance arrangements. For example, economic variables that typically have an impact on project outcomes include GDP growth and inflation in the host country. GDP growth correlates positively with electricity demand, which means that a sharp slowdown in GDP growth would hurt project revenue growth thus putting pressure on all stakeholders. It follows that GDP growth slowdown changes the incentive structure for all project stakeholders. Is the project's governance framework robust under these circumstances? Does it lead to desirable outcomes or instead to heightened project stress?

or regulatory reform is unlikely. Governance arrangements should be as robust as possible even in a relatively adverse environment.¹⁰

In special circumstances, the desire to facilitate the implementation of a high-profile power project may open the door to legal and regulatory reform. Legislators and policymakers may be willing to introduce reforms needed to attract investment in the power sector. For example, there could be laws banning private ownership of facilities in “sensitive” or “strategic” industries; obviously, a government wishing to attract private investment would need to introduce exceptions or even scrap such laws altogether. Another example relates to consumer protection laws with clauses establishing price ceilings or rules for price increases that would allegedly hurt consumer interests; since the viability of a power project may depend on agreement around pricing rules that may sometimes conflict with specific aspects of a consumer protection law, a government may choose to modify that law rather than sacrifice foreign investment in a power project.

In these cases, it could be argued that the legal and regulatory framework becomes partly “endogenous” to project design and planning. In such situations, it may be possible to fine-tune governance arrangements to a greater extent, as more degrees of freedom exist to optimize incentive structures.¹¹ Policymakers should observe certain basic principles, including that any policy reforms or changes in laws and regulations should be general and impartial. Also, there is a need to ensure that adequate implementation mechanisms will be in place: reforming the laws in the books would have no effect unless reforms can be made effective. Needless to say, all legal and regulatory aspects of the proposed project governance framework

should be consistent with the rule of law in all relevant jurisdictions,¹² meeting sound standards of transparency and enforceability.

As mentioned before, a project governance framework may be formulated in various kinds of legal and contractual relations, implicit and explicit. The elements of a governance framework may include informal practices as well as voluntary codes and standards, which can be both external and internal to the project. While such practices and codes can improve project governance arrangements, they may leave some or all stakeholders with a level of uncertainty. To avoid uncertainty, practices, codes and standards used as part of project’s governance structure should be widely recognized and made explicit to the extent possible. To increase their power and credibility, any voluntary codes and standards adopted as part of a project governance framework should command national and international consensus regarding means of application, compliance and verification, and sanctions. In jurisdictions where a tradition of applying voluntary codes and compliance does not exist, project designers should look for alternatives.

In the context of governance arrangements, a common source of dispute relates to which authorities have jurisdiction over a power project. It follows that project designers together with policymakers and government officials should articulate clearly the division of responsibilities among different authorities. Power project governance is influenced by many specific legal domains, including power industry regulations, securities market regulations, accounting and auditing standards, bankruptcy laws, contract laws, labor laws, environmental protection standards, tax laws, and others. Under these circumstances, overlaps and conflicts are almost

¹⁰ Please refer to Deutsche Bank Research, “Corporate Practices and National Governance Systems: What Do Country Rankings Tell Us?” (2004). The paper discusses the linkages between firm-level and national governance arrangements. Note there is also a debate as to which system of governance is optimal, with some of the arguments carrying over to the issue of project governance—see, for example, Chapter 12, Section C of “Institutional Investors and Corporate Monitoring: A Demand-Side Perspective in a Comparative View” in Hopt, K. et al. (1998).

¹¹ It should be noted that the legal and regulatory framework, host country institutions, conventional practices, as well as some international bodies, should be considered part of a project’s governance arrangements to the extent that they influence incentives, dynamics and outcomes within the project itself, including its propensity to come under stress.

¹² This allows for the possibility of cross-border enforcement of laws and regulations, as well as appeals to foreign bodies for some form of intervention.

guaranteed to occur, with projects caught in the middle of turf battles between different national entities. For example, industry regulators may respond positively to the takeover of retail distributors of electricity by a dominant power producer, on the grounds that efficiency and coordination will improve. By contrast, the local competition watchdog may challenge the proposed takeover on the grounds that it will weaken competition at the retail level. Another example relates to approval of a new power plant by national authorities, such as industry regulators and the environmental watchdog, at the same time as local authorities (say, at the municipal level) seek to block construction of the new plant on the grounds that it is inconsistent with their development strategy for that region.

Still in the context of designing a project's governance arrangements, project designers and policymakers need to ensure that regulatory authorities are adequately designed and funded. Poorly funded and understaffed regulators, lacking technical and institutional capacity are guaranteed to become sources of trouble for the industry. Understaffed regulatory bodies will invariably delay technical assessments of project performance and threaten the soundness of the analytical underpinnings of tariff adjustments.

Project designers and policymakers need to consider the possibility that changes in regulations and regulatory institutions, whether justified or not, may also be a source of project stress. For example, the extent to which a regulator is part of a system of checks and balances affects the likelihood of project stress. Lack of regulatory independence allows politicians to manipulate regulators to their advantage, thus opening the door to conflict with investors and project stress. Similarly, a renegade independent regulator can sometimes be a source of problems, perhaps as much as a puppet regulator. It follows that a project's governance framework should

include mechanisms for dealing effectively with regulatory authorities, as well as changes in regulation or regulatory institutions. Broader laws of general application, including well drafted and administered Competition Laws, may permit a check on regulators.

Also, weak analytical reports and flawed recommendations for tariff changes will backfire on the government and project, as independent analysts question the robustness of the proposed tariff changes. Lack of public credibility in tariff adjustment formulae will considerably weaken one of the pillars of project governance and may lead to recurrent stress situations. Finally, proper design of a regulatory authority requires that the regulator pursue its functions without bias or conflicts of interest (avoiding capture by, say, political interests or industry incumbents) thus upholding high standards of behavior and maintaining the public trust.¹³ Transparency of the regulatory framework, of the various processes and representations and the possibility of stakeholders, including consumers, to remain adequately informed and represented, will be an important ingredient. The role of an informed and independent media may also be key.

The Role of Stakeholders in Power Projects

Modern governance frameworks recognize the role of the various groups of stakeholders in a project, including creditors, shareholders, government, consumers, and labor.¹⁴ Moreover, the project governance framework should encourage their active and regular participation, since a key aspect of governance should be concerned with avoidance as well as management of stress situations. The political nature of the power industry makes the principle of stakeholder engagement particularly relevant and urgent. One economic and financial benefit of a governance structure that seeks to engage

¹³ For an introduction to economic design and regulation please refer to Chapter 10 in Viscusi, W. et al. (1996). Estache, A., and Rodriguez-Pardina, M. (1999) provide an overview of the experience with regulatory reform in the power sector in selected Latin American countries. In some situations, improving governance arrangements in state-owned electricity utilities may be necessary, perhaps as a step toward introducing private participation; in this context, Irwin, T., and Yamamoto, C. (2004) explore the options available to reformist policymakers.

¹⁴ Refer, for example, to "The OECD Principles of Corporate Governance" (2004).

all stakeholders is that finance capital is more likely to continue flowing toward the project. In addition, project governance structures should be designed so that they encourage stakeholders to avoid following strategies that would cause project stress. One obvious first step in this direction is respect for the rights of stakeholders, whether or not rights are established by law or through legally binding agreements.¹⁵ Moreover, governance arrangements should provide stakeholders with the opportunity to obtain redress for violation of their rights, through processes that are efficient, predictable, and transparent.

One could go a step further and suggest that stakeholders ought to participate in the process of designing a project's governance arrangement and continue their involvement throughout the project cycle. This may be difficult if the process involves a competitive bidding process. To do so, they should be allowed access to sufficient, accurate information on a timely basis. Stakeholders should also be able to communicate their concerns initially to project designers and policymakers, and later on to project management, government, and investors, through clear and effective procedures. Any agreements or contracts entered into by the government with private investors should be available for public scrutiny and comment, especially sensitive issues pertaining to tariff setting and construction of new facilities. The agreement should include a clear outline of the governance framework and contain a specific commitment of all parties to adhere to these provisions.

The project governance framework should be supplemented by a well-functioning reorganization and insolvency framework, whether formal or informal, national or international in nature. Various options concerning project reorganization and insolvency frameworks will be discussed elsewhere in this document, so suffice it to say here that

they are an important element in governance frameworks.¹⁶ In emerging markets, national and foreign creditors are key stakeholders since continued access to credit on comparatively good terms reduces the likelihood of project stress. Power projects with a good governance record, supplemented by an adequate reorganization and insolvency framework, are less likely to undergo episodes of stress caused by financial difficulties associated with a "credit crunch."

Promoting Disclosure and Transparency

The project governance framework should ensure that adequate and timely disclosure of information is made on all relevant matters.¹⁷ A disclosure regime that promotes transparency is essential to monitoring of power projects by investors and other stakeholders, and can help to attract capital and maintain confidence over the project cycle. By contrast, weak disclosure and nontransparent practices likely contribute to a loss of integrity and credibility, hurting the project's ability to attract financing and damaging stakeholder relations. National policymakers should also be concerned that a loss of confidence in a high profile power project could also lead to a heightened risk perception relative to the economy as a whole. For example, failure of a well-publicized power project as it is built, or heavy-handed intervention or nationalization by government once a project is finished, will inevitably increase uncertainty among investors. Foreign investment projects across the economy, especially those relating to infrastructure, will be scaled down or put on hold.

Wide and liberal disclosure of key information also improves public and government understanding of a power project, its structure, activities, policies, and performance. If a stress situation emerges, it will always be easier to command public support (for example, concerning a potential tariff increase) if adequate

¹⁵ Clearly, there is also a need to ensure that any such agreements are consistent with the rights of other stakeholders too.

¹⁶ Please refer to Chapter 10, "Lenders as a Force in Corporate Governance Enabling Covenants and the Impact of Bankruptcy Law" in Hopt, K. et al. (1998).

¹⁷ Please refer, for example, to "The OECD Principles of Corporate Governance" (2004).

disclosure and transparency policies have been in place for some time. Disclosure policies should include at least the following kinds of information:

- Detailed financial and operating results of the project beyond legal disclosure requirements to shareholders and the Regulator.
- Project objectives and corporate strategy.
- Risk factors anticipated.
- Governance structures and policies.
- Share ownership and voting rights.
- Specific issues regarding employees and other stakeholders.
- Agreed conflict resolution mechanisms.

High-quality information disclosure and transparency policies also improve the ability of investors and other stakeholders to monitor activities, policies, and performance.

It should be kept in mind that the channels for the dissemination of information can be as important as contents. Sometimes gaining access to information can be cumbersome and costly for the average stakeholder in a project. Project designers should therefore seek to integrate different sources of project information, and use the Internet and other information technologies for information dissemination. As mentioned earlier, media access to all relevant information should be encouraged.

Dealing with Conflicts of Interest

Project designers and policymakers need to establish mechanisms for monitoring and managing possible conflicts of interest in any area related to the project. Usually, conflict of interest provisions apply to management and board members, concerning the misuse and abuse of project assets as well as other aspects of decision making. Frequently the regulator constitutes yet another source of potential conflict of interest. The “rotating door” between government, industry, and the regulator creates an atmosphere of “cooperation” and “mutual interest” which can easily slip into behavior neither in the interest of other stakeholders and frequently constitute a clear conflict of interest.

Box 3.2 A Primer on Ethics Committees & Compliances Programs

An Ethics and Compliance Management Committee consists of at least one Ethics and Compliance Officer and at least three other officers in a supporting role. The Committee will monitor the Ethics and Compliance Program as well as other policies, procedures, and processes to set a tone of responsibility for the Program. The tone will be one of support and respect for the Ethics and Compliance Code.

The Committee will provide the oversight necessary to guide senior management, the Ethics and Compliance Officer, and employees in their efforts to encourage good business practices and maintenance of regulatory requirements. The Committee will also assure the existence of adequate internal controls.

The Committee will be informed on a regular basis of all ethics and compliance activities, including training, communications, regulatory agency inspections/outcomes and interactions, compliance audit reports, summaries of assistance hotline calls, and reports of alleged illegal/unethical behavior.

The Committee will coordinate regular audits of ethics and compliance. Allegations of wrongdoing relating to accounting and auditing issues will be reported to the General Counsel and the Chair of the Audit Committee for further investigation and pursuit.

More broadly, the introduction of a project code of ethics would aid in the prevention of conflicts of interest, especially when underpinned by adequate and enforceable legal provisions. In a power project, there could be an audit or ethics committee specified as the contact point for reporting and processing unethical or illegal behavior.

For example, the company responsible for building, operating, and maintaining an energy-delivery infrastructure should do so in a manner that will protect public safety. In doing so, the company should be committed to following all regulations governing the design and operations of infrastructure. In this context, employees should report any safety issues in the energy-delivery system and it is expected that

Table 3.1 Responsibilities of Public and Private Sectors in the Design of Project Governance

| Public Sector | Private Sector |
|---|--|
| Put in place arrangements to prevent moral hazard and abuse of power as public sector's bargaining power increases along the project cycle. | Foresee and prepare for adverse changes in private sector's bargaining power as project cycle matures. |
| Introduce necessary laws and regulations required to ensure project success, while keeping an eye on overall social and economic impact. | Actively participate and assist the government in preparing an adequate legal and regulatory framework. |
| Resolve possible jurisdictional conflicts in the early stages of project preparations. | Assist in the identification and request the resolution of potential jurisdictional conflicts in the early stages of project preparations. |
| Ensure that regulatory bodies are adequately designed, with no potential conflicts of interest and with sufficient technical capacity and funding to carry out their duties. | Monitor the status of regulatory bodies and suggest necessary improvements in the early stages of a project. |
| Endorse the private sector's efforts to introduce voluntary codes and international best practices in project governance. | Lead the introduction of voluntary codes and international best practices in project governance. |
| Ensure that enough safeguards are in place so that the rights of all stakeholders in a project are routinely observed and protected. | Lead the introduction of safeguards meant to protect the rights of all stakeholders in a project. |
| As an aid in project governance, introduce and improve formal mechanisms for the resolution of project stress, including adequate bankruptcy and enterprise restructuring laws and regulations. | Introduce and improve alternative resolution mechanisms, including recourse to mediation and international arbitration fora, as well as laying out criteria and steps for using the "London Approach" in the resolution of project stress. |
| Introduce and enforce minimum mandatory disclosure and transparency requirements in the affairs of a power infrastructure project. | Lead the introduction of disclosure and transparency standards that meet and exceed any minimum requirements set by the government, fostering a culture of compliance. |
| Introduce and enforce formal legal and regulatory provisions dealing with conflict of interest in all its manifestations, within or outside a project. | Introduce and enforce within the project specific rules against conflicts of interest, thus fostering a culture of compliance. |
| Put in place mechanisms to ensure the integrity, transparency and timeliness of accounting and financial reporting systems. | Establish clear lines of responsibility and accountability throughout the project's organization, setting up internal programs and procedures to promote compliance. To be effective, the internal incentive structure of the project needs to be aligned with its ethical and professional standards. |

the company will not take adverse action against those employees. Alleged retaliatory action, however subtle, would have to be reviewed under the code of ethics.

Accounting and Financial Reporting

Project designers and policymakers should establish mechanisms that will ensure the integrity of the accounting and financial reporting systems. The integrity of reporting and monitoring systems requires, among other elements, clear lines of responsibility and accountability throughout the project's organization. Designers of power projects should lay down a requirement for management to set up internal programs and procedures to promote compliance with all applicable laws, regulations and standards. To be effective in promoting the integrity of accounting and financial information, the internal incentive structures needs to be aligned with high ethical and professional standards as defined in the official code of ethics, so that adherence to these values is rewarded while unethical or illegal actions are penalized.¹⁸

External and Embedded Restructuring Mechanisms

The capacity to prevent stress situations in power projects relies on the existence of instruments that facilitate the adaptation of a project to new circumstances. The more effective and diverse the mechanisms available, the more unlikely it is that project stress would cause lasting damage to a project. In order to boost adaptability, the framework for a power project should facilitate recourse to reorganizations and bankruptcy laws, as well as alternative resolution mechanisms, whenever necessary. For example, creditors and suppliers can agree among themselves that disputes surrounding a project could be resolved through alternative

conflict resolution mechanisms, including situations concerning financial or operations restructuring. Such agreements can be cast on formal documents detailing steps to be followed in certain situations, spelling out how the matter would be resolved and in what forum, and how a resolution will be made binding on all parties concerned.

Where the public sector is concerned, a special provision might be made in law or regulations allowing the government to participate directly in reorganization proceedings, including through alternate mechanisms. A specific commitment should be made by governments not to take actions to undermine the implementation of such alternative mechanisms through specific, subsequent, and unilateral laws or regulations prohibiting the participation in such mechanisms. In countries where legal tradition would not permit that the government directly subject itself on specific matters to bodies charged with international reorganizations, bankruptcy, and alternate resolution mechanisms, suitable vehicles may have to be found to allow government representation and participation in such proceedings. For example, a decentralized regulatory body may be allowed to participate while a line ministry would not. These issues should also be explicitly spelled out, to the extent possible, in the legal and regulatory framework for the power sector, so as to avoid uncertainty around who would represent the government in certain situations. Needless to say, a case by case approach is required since every country's legal context is different.

Policymakers ought to keep in mind that aside from formal bankruptcy procedures, other avenues for restructuring are often available, including using automatic renegotiation clauses (e.g., in case of macroeconomic crises) and more or less formal frameworks for mutually agreed renegotiations (e.g., international mediation and arbitration). The exact choice of instruments for reorganizing or restructuring a project depends on its particular circumstances, with few general

¹⁸ For a discussion on the role of disclosure, accounting, and financial reporting in governance arrangements, please refer to Chapter 9, "Disclosure and Auditing" in Hopt, K. et al. (1998).

recommendations possible in this regard other than careful exercise of good judgment.

This chapter focuses on a typology of possible sources of stress and on special means available for dealing with them in the context of a power infrastructure project.¹⁹ Some of the more structured, standard instruments for facilitating project reorganization are discussed in greater detail in Chapter 4.

Setting Up Adequate Restructuring and Bankruptcy Mechanisms

In many countries and under normal circumstances, if a private company defaults on its debt, debt holders would take over, replace incumbent management, and reorganize the company. If it is found that the company simply cannot generate enough resources to service its debts, a formal restructuring takes place where equity investors typically lose a portion of their investment. Many options are available in restructuring a company. In the restructuring process, a debt holder could convert part of its debt into equity, or write down debt, thus lightening the company's debt burden and strengthening its balance sheet. The restructuring may also include asset sales, debt conversions, and other transactions aimed at improving the company's financial health. After the restructuring, investors might choose to sell their equity shares or trade newly acquired financial instruments with a third party, according to their specific needs.²⁰

The story of a typical project restructuring is not the same in every country, for the balance of influence between stakeholders varies greatly across borders.²¹ In certain countries, creditors enjoy much influence and initiative whereas in other countries management or shareholders

hold the upper hand. Similarly, some jurisdictions favor quick moves to liquidation of a bankrupt firm while others allow for relatively prolonged restructurings in the hope that the debtor company may be turned around. Countries also choose different venues for bankruptcy procedures, with some favoring administrative solutions while others lean on judicial avenues. The levels of efficiency in the operation of formal corporate restructuring and bankruptcy systems vary widely from country to country, and it is safe to say that in most emerging economies they tend to be inefficient.

Many emerging economies have underdeveloped legal frameworks for bankruptcy and capacity to process a complex formal restructuring may be limited. Adequate formal restructuring and bankruptcy proceedings are likely to be more the exception than the norm in developing countries. In the context of the power industry with all its nuances and complexity a bankruptcy process working smoothly in an emerging economy may be the exception rather than the norm.

There are other problems with restructuring and bankruptcy in emerging economies, including the capacity and independence of the judiciary. Despite the fact that bankruptcy frameworks can vary widely in their propensity to force a business concern into liquidation, there is a tendency in developing countries to associate "bankruptcy" with "liquidation." In a liquidation proceeding, somebody (e.g., a committee of creditors or perhaps court-appointed administrators) takes control of the company, sells the company's assets, recovers as much value as possible, and finally shuts the company down. Perception that bankruptcy equals liquidation has consequences for public choice. Few elected politicians or public servants would fancy the prospect—however unlikely or

¹⁹ As is often the case in many areas, there is no unique "typology" of risks. For example, Strong, J., et al. in "Managing Risks of Infrastructure Investment in Latin America: Lessons, Issues and Prescriptions" Working Paper, Interamerican Development Bank, propose two alternative typologies of project risk.

²⁰ See Buckley, R. (2004), which explores creative financial restructuring solutions in emerging markets, seeing beyond the Latin American experience with Brady bonds.

²¹ For an introduction to comparative analysis of insolvency systems please see Chapter 10, "Methodological Issues in Cross-Country Comparisons of Commercial Bankruptcy Law" in Ziegel, J. (1994).

unwarranted—of having one of their country’s most important electricity facilities “shut down” following a bankruptcy, for fear of service disruption. They fear that upon liquidation, management of an important power generating facility may on purpose disrupt service, or that service disruption may come about simply through neglect or the inevitable confusion that follows a management shake up. Similar things could conceivably happen with transmission and distribution facilities during or soon after liquidation.

In reality, liquidation is also unattractive for the alleged beneficiaries of liquidation (creditors) since most power infrastructure assets have little alternate use and value other than providing a service in the country where they are located—in many cases recovery rates under liquidation may be rather poor.²²

One possible solution to the risk of service disruption is that government retains the right to intervene in case of bankruptcy in the operation of power infrastructure facilities and ensure continued service provision. In fact, governments often do keep this power, although this may not be enough to help them overcome their reluctance to allow private power providers to go bankrupt. One reason for this is that governments do not really want to take over, out of conviction that the government’s proper place is not to manage business concerns, or simply for lack of skills to retake control of the facilities. Also, lenders often have “step-in rights” which allow them to take over a business if it appears likely to default. To reassure governments that service provision will not be disrupted in the event that creditors exercise their “step-in rights,” there could be a binding requirement in the project’s governance framework that lenders continue to provide the service.

This can be done through a “tripartite agreement” between lenders, the power company, and the government. In such agreement, lenders,

the power company, and the government commit themselves to continued service provision regardless of what goes on in the background with managerial, financial, operational, or other restructuring. Another solution is to work with lenders and other stakeholders under alternative frameworks like arbitration and mediation to facilitate an organized bankruptcy, perhaps the most promising avenue in the case of power projects under stress in emerging markets. In Chapter 4 we discuss the London Approach and other alternatives to formal bankruptcy proceedings.

Dealing with Macroeconomic Shocks, Sector Shocks, and Political Transitions

There are various forms of exogenous shocks that project designers and policymakers have to take into consideration. The most obvious one is a large macroeconomic crisis which reduces electricity demand as well as government revenues, with or without major inflation and exchange rate collapse. In general, episodes of stress in power projects are much more likely to occur following a macroeconomic crisis, exactly the time when government is least capable of lending any financial support.²³ The next chapter explores some mechanisms that can be used to hedge against exchange rate risk (the leading macroeconomic cause of project stress) and increase a project’s capacity to adapt and survive a significant crisis.

Also, project designers and policymakers should take into consideration that large sector-specific shocks may occur, for example, significant changes in industry demand or supply may lead to episodes of stress. Examples of sector-specific shocks include heat waves that lead to unprecedented electricity demand and spikes in the price of fuel (e.g., oil, gas, or coal). Other examples may be driven by government

²² For an analysis of the main characteristics and efficiency of liquidations, please refer to Chapter 14, “The Corporate Bankruptcy Decision” in Bhandari, J., and Weiss, L. (1996).

²³ A leading cause of stress in large infrastructure projects, including in the power sector, is the exchange rate. See Gray, P., and Irwin, T., “Exchange Rate Risk—Reviewing the Record for Private Infrastructure Projects” (2004) and “Exchange Rate Risk—Allocating Exchange Rate Risk in Private Infrastructure Projects” (2004).

policy failures such as significant misjudgment of future demand and the building of excessive generating capacity. An example of this may be found in Pakistan during the last decade.

In each of these cases, unanticipated changes in industry conditions may lead to breach of contracts with private electricity providers, as governments seek to avoid the high political costs of passing adjustments through to consumers. In addition, political transitions also tend to lead to project stress, as reforms are often put on hold or even reversed as a new government tries to distinguish itself from its predecessor. In general, project stress is more likely to occur following a macroeconomic or sector-specific shock, as well as a political transition. To protect against such shocks, minimum power rates will frequently be set in a currency in which most of the debt or investments are denominated. Although this technically hedges the exchange rate exposure for the debt holder or investor, it frequently provokes more stress than it avoids. Governments may simply be unwilling or unable to implement huge tariff increases when their country is already racked by high inflation, unemployment, and economic disaster. In view of this, it would be advisable that projects include mechanisms for adjustment or renegotiation of terms once certain conditions are met (e.g., a pre-established percentage fluctuation in the exchange rate or a significant rise in fuel costs) since flexible but structured arrangements are more likely to prevent project stress, and possibly a total breakdown in the prevailing governance arrangements.²⁴ A pre-established framework for renegotiation of terms can therefore be considered an instrument to increase a project's adaptability. Making provisions for the adjustment of tariffs over a longer period of time, linked with forbearance of creditors, if agreed and planned at the inception of the project, may be possible and avoid the heavy price of default for all concerned.

Relationships Between National and Sub-National Political Institutions

Project designers and policymakers ought to factor into the design of a power project the dynamic relationships between national and sub-national governments in many countries (the degree of decentralization of functions and devolution of power to sub-national governments varies greatly from country to country). In some political systems, the national government has the power to intervene and check the actions of sub-national governments, and vice versa. Frequently in developing countries, sub-national levels of government seem to be sources of unchecked political power. In general, project stress is more likely to occur where sub-national authorities are not or simply do not feel constrained by national policies (e.g., policy toward the power sector). In view of this, project designers and policymakers need to incorporate into a project's governance arrangements binding mechanisms and specific provisions that clarify, from the beginning, the rights and roles of national and sub-national bodies vis-à-vis the project. As the nature of relationships between national and sub-national government varies from country to country, it is almost impossible to set a menu of provisions that would clarify rights and roles vis-à-vis a power project. There is no way around gaining an understanding of the specific circumstances in a country, and incorporating provisions in multi-party agreements aimed at clarifying rights and roles. Under some circumstances, it may be essential to treat such sub-national and other entities as parties in the initial agreements and thus bind them. To increase a project's capacity to adapt to a fluid and volatile relationship between various levels of government, policymakers should include in the project's governance framework mechanisms for renegotiation under certain specific circumstances relating

²⁴ Renegotiation is in fact very common in the case of certain types of private participation in infrastructure projects. See Strong, J. et al., "Managing Risks of Infrastructure Investment in Latin America: Lessons, Issues and Prescriptions."

Box 3.3 Restructuring Mechanisms and Prevention of Stress in Power Projects

Setting Up Adequate Restructuring and Bankruptcy Mechanisms.

Liquidation is unattractive for both governments and creditors. The proposed solution is to work with lenders and facilitate an organized **bankruptcy**, perhaps outside formal channels. Lenders often have “step-in rights” which allow them to take over a project if it appears likely to default: to avoid service disruption, there could be a requirement that **lenders continue to provide services**, cast through a binding “tripartite agreement” between the lenders, the power company and the government.

Dealing with Macroeconomic Shocks, Sector Shocks, and Political Transitions.

Stress in power projects is more likely to occur following a macroeconomic crisis, a sector-specific shock, or political transitions. Projects should include **mechanisms for renegotiation of terms once certain predetermined conditions are met**. Such flexible but structured arrangements are more likely to prevent project stress and a breakdown in governance.

Relationships Between National and Sub-National Political Institutions.

Project designers and policymakers need to incorporate in a project's governance **binding arrangements** that clarify the rights and roles of national and sub-national authorities. Also, there should be **procedures** for renegotiation in special circumstances.

Level of Sector Development

Project stress may occur as sector reforms advance and the industry evolves. Project governance should allow for a **renegotiation before the legacy of early contracts becomes a problem**.

Market Position and Ownership Structure.

There should be enough room in project governance arrangements to allow for **renegotiation in case of a large change in sector equilibrium conditions**.

to the relations between national and sub-national governments. Unfortunately, the specificity of country circumstances makes it almost impossible to provide model clauses for renegotiation of terms following a shift in status between national and sub-national governments. Provisions would have to be tailored to a project's situation on a case by case basis.

Level of Sector Development

Another set of stress factors stems from the specific dynamics of power sector reform. For example, long-term contracts in the provision of electricity tend to lock in prices higher than spot market because they include a risk premium based on risk perception at the beginning of a reform process. Project stress is more likely to occur as sector reforms deepen and the industry evolves from a “market of contracts” (which emerges early in the reform) to a hybrid market (a more mature market that evolves

later in the reform process). Project designers and policymakers should therefore allow for the eventual renegotiation of the terms of contracts once pre-established conditions are met in the state of sector development, and before legacy contracts turn into a source of stress. Triggers for renegotiation could include completion of a round of industry restructuring (e.g., a set of privatizations in generation or distribution), approval of legal and regulatory reforms (e.g., a new framework law for the electricity sector), emergence of a wholesale electricity market, or implementation of connectivity plans with neighboring countries or regions.

Market Position and Ownership Structure

In the electricity industry, bargaining strength is related to a company's market position as well as its ownership structure—who its owners are. In this context, foreign investors may be worried

about the role that domestic firms may play and vice versa. For example, an incumbent System Operator in the electricity sector may have significant market power and enjoy the protection of political agents. By contrast, investors in a developing market may be competing against foreign state-sponsored firms that may enjoy subsidies and other advantages in their home country. It follows that the likelihood, dynamics, and effects of project stress are related—in rather complex and unpredictable ways—to a firm’s ownership structure and market position. Project designers and policymakers may not be able to foresee all classes of events that could put a project under stress as a result of the interplay of market positions and ownership structures in the power sector, but there should be enough room in project governance arrangements to allow for renegotiation in case a significant market entry or other sector development causes a substantial change in equilibrium conditions in the sector.

Creative Use of Risk-Management Tools

Many situations that lead to project stress can be identified in advance and therefore, some actions may be taken to reduce the likelihood of their occurrence.²⁵

Risk Sharing in Power Projects

Project designers and policymakers are able to fine tune the level of risk borne by private sector partners, the government and ultimately the public. This can be done through several means, including the following:

Regulation as a Tool for Risk Management and Sharing. As mentioned earlier in this chapter, regulation and regulatory institutions play an

important role as elements in a project’s governance arrangements. It turns out that regulation also serves as a tool for risk management and sharing. To understand this, let’s review quickly the evolution of broad tariff-setting rules that have been used in the electricity sector. There was some dissatisfaction with early types of utility regulation. For example, policymakers in many developing countries concluded that “cost-plus” regulation, whereby electricity tariffs adjust in accordance with changes in costs, made regulated firms inefficient.²⁶ Also, this approach almost completely shifted the burden of risks toward government and consumers. This issue should be addressed in the design of tariff-setting regulations which is beyond the scope of this paper.

To encourage efficiency and find a more equitable distribution of risks, governments often deregulate the power sector and seek to increase reliance on market competition, to promote technical and economic efficiency, and protect consumers from possible risks and market power based tariff hikes. Nevertheless, some governments also found that competition would be too weak a constraint on the ability of incumbent firms to increase prices and shift risks back to the consumer. This led to the adoption of so called “fixed-price” regulation. The main characteristic of fixed-price regulation is that electricity tariffs adjust less frequently (relative to the cost-plus approach) and only partially to cost increases, as most of the time (but not all the time) tariffs include a fixed part.²⁷ Under this approach, a power utility bears in the short term some risks and it is only after a relatively prolonged period of time that tariffs are reset to account for actual cost structure and demand growth. Of course, there is always pressure from the regulated utilities to shorten the wait until prices are reset. When

²⁵ See Deloitte (2004) for a description of enterprise risk management systems and their importance.

²⁶ This is because power utilities have no incentive to economize resources, including fuel and personnel costs, since tariffs would quickly catch up with rising costs.

²⁷ In an ideal fixed-price approach, prices are set in advance in real terms for a time horizon, with nominal tariffs adjusted according to a predetermined inflation index (e.g., CPI).

²⁸ We would call these “sector shocks” in the terminology used earlier in this chapter. Clearly, other kinds of shocks may be accommodated in a similar fashion.

the authorities give in to demands for an early reset, the beneficial effects of the “fixed-price” approach are diminished.

In reality, tariffs are never absolutely fixed in all scenarios even under the “fixed-price” approach—for example changes in fuel costs or demand often trigger quick, though temporary, price changes within the terms of the “fixed-price” approach.²⁸ Nevertheless, this approach ensures that private utilities still bear significant business risks most of the time, leading to lower costs. Of course, risk never just goes away; it only transforms itself. Project designers and policymakers should keep in mind that this approach allocates most business risks and a significant portion of other kinds of risks to private enterprises, thus increasing the likelihood of stress and possibly of bankruptcy.

Limits on Leverage as Tools for Risk Management and Sharing. The capital structures of regulated power projects can be expected to vary according to governance arrangements, including the kind of regulation to which they are subjected as well as the type of contract under which they sell output. For example, power producers with relatively low-risk, long-term purchase agreements tend to have higher debt burdens, while producers selling exclusively in spot markets have lower debt ratios.²⁹ In principle, policymakers would not need to discriminate between debt and equity and should let private investors find the optimal capital structure for a project.³⁰ In practice, governments do discriminate in favor of debt through several mechanisms:

1. Differentiated compensation policies according to sources of project capital
2. Debt service guarantees without equivalent guarantees on returns on project equity
3. Minimum-revenue guarantees linked to debt repayment

Policymakers often think that there is a need to offer support to debt financing, perhaps to reduce the likelihood of bankruptcy. At the same time, governments have rarely guaranteed returns to equity, thus implicitly encouraging the use of debt rather than equity in power projects. Paradoxically, increasing a project’s leverage actually raises the likelihood of a bankruptcy and transfer of financial obligations to the government—the outcome the government wanted to avoid in first place. It can be argued, therefore, that debt guarantees can be counterproductive.

As a rule, if a government is ready to offer guarantees, it should be guaranteeing specific kinds of risks for all investors rather than guaranteeing all risks for some type of investors. Following this rule, governments would avoid distorting financing choices in power projects. In any case, high debt burdens, whether or not fueled by public policies and guarantees, are indeed acceptable when governments are ready to tolerate bankruptcy and the framework for bankruptcy actually works. As discussed earlier in this chapter, these conditions are not met in many developing countries. In view of these considerations, government authorities in emerging markets may have to choose from the following alternatives:

1. Accept that private providers may go bankrupt in certain circumstances and focus on improving the framework for bankruptcy resolution (including through formal and informal channels).
2. Reduce the likelihood of bankruptcy by setting mandatory minimum equity levels, on-balance sheet financing, project guarantees from private sector partners at the beginning of a power project, and predictable regulation, particularly with regard to tariff setting at a level compatible with sector financial viability

²⁹ This makes sense as a relatively certain income stream can be used for certain debt servicing. By contrast, spot sellers will prefer lower debt ratios because their higher risk income streams may not match debt servicing requirements.

³⁰ Investors have several types of quantitative methods at their disposal for finding optimal capital structures, including but not limited to Monte Carlo and historical simulations.

(however, note that there may still be discrimination in favor of debt through other mechanisms).

3. Reducing the risks borne by power utilities and explicitly allocating more risk to government finances or customers, perhaps letting private investors bear market and business risk, while macroeconomic and sector shocks are handled through some government-sponsored mechanism.

Note that if governments would choose to treat creditors more favorably than other stakeholders in the event of bankruptcy,³¹ effective risk transfer to the private sector invariably requires that equity investment exceed certain levels. Otherwise, the public sector would be picking up most of the bill in case of project bankruptcy. Project designers and policymakers should therefore think about including limits on leverage to ensure that the desired level of risk is transferred to private investors, especially when policies that discriminate in favor of debt are already in place.³²

As we have seen, despite the fact that governments often do not want to see projects with private participation go bankrupt, projects may be unwittingly designed in ways that increase the likelihood of a bankruptcy (e.g., by discriminating in favor of risky debt financing). There are tools, however, that can be used to fine-tune the share of risks borne by private sector partners. Some of these instruments have been mentioned in passing already and we now analyze them in greater detail:

Minimum Equity Levels. One way to transfer risk to private investors, without increasing the likelihood of bankruptcy, is setting minimum equity levels. Equity investors would absorb

an important share of risks, thus reducing the probability of stress and bankruptcy. As always, this benefit is not costless. Besides distorting financing choices, investors would demand higher returns on equity holdings, thus increasing the project's average cost of capital. However, any mechanism that actually transfers risk to private partners will lead to increases in the cost of capital, as higher risk simply has to be compensated by higher returns. Hence, the real problem with minimum equity levels lies elsewhere, in that they also limit investor flexibility to source finance capital in an optimal fashion.³³ For example, foreign tax regimes may discriminate in favor of debt financing (independently of distortions at the national level) and minimum equity levels reduce the ability of foreign investors to take advantage of favorable tax treatment. Moreover, enforcement of minimum equity requirements may be costly on an ongoing basis, as monitoring will have to continue throughout the life of the project.

Full On-Balance Sheet Financing. As many other large infrastructure projects, power projects tend to be project financed, as private investors create new vehicles for each project, thus seeking to cap the parent company's maximum risk. From the perspective of project designers and policymakers, one way to more effectively transfer risks to private investors is to limit the use of special purpose enterprises. One problem with this strategy is that it invariably leads to higher target returns in exchange for the higher risk levels that the parent company is being asked to bear (remember that any mechanism that effectively raises risk will inevitably increase target return). In some circumstances, foreign investors may simply conclude that the risks in a developing country are so difficult to assess and measure that it is impossible to accept a

³¹ This is in addition to treating them more favorably under normal circumstances.

³² Please refer to Chapter 6 in Irwin, T. (2003) for an overview of techniques for estimating the cost of government support to infrastructure projects in the form of guarantees. Needless to say, this type of guarantee is not costless, as it represents a significant contingent liability in public finances. Please refer to Lewis, C., and Mody, A. (1997) for a discussion on public management of contingent liabilities.

³³ In particular, distortions on project capital structure are greatest when minimum equity levels or limits on leverage are introduced to compensate for the distortion caused by existing guarantees on debt or debt servicing. In such situations, it can be argued that one type of distortion is simply being used to offset the distortion caused by other measures—a rather unhappy situation for any project manager.

very large liability—as full on-balance sheet financing requires. In addition, if a power project is placed on-balance sheet, debt issued to finance the project will bear the parent company’s name, implying that its credit ratings will come under scrutiny and its overall cost of borrowing might increase. An increase in the overall cost of capital of a parent company will make investors less willing to accept a project or cause them to demand significantly higher target returns.

Guarantees from Private Partners and Third Parties. Full on-balance sheet financing may prove to be too strong a deterrent for many private investors, so an alternative could be to require some guarantees from the parent company. In this case, the transfer of risk to the parent company is the same as in the case of full on-balance sheet financing, but guarantees offered to the power project will not have the same accounting treatment on the books of the parent company.³⁴ As a result, a guarantee may keep the terms of borrowing by the parent company close to the normal levels and hence, the need for higher target returns on project investment is diminished. Another alternative is that policymakers require performance bonds or third-party guarantees on the project. In this case, a bank, insurance company, or other financial entity accepts some risk, as its resources will be called upon if the private investor fails to meet its obligations. In exchange for taking up some risk, the investor pays the third party a fee for the bond or guarantee; this strategy has the advantage that the cost to the private investor is known in advance and is non-recurrent, thus putting little ongoing pressure on the cost of capital and target investment returns.

Subjecting Private Sector Partners to Less Risk

We have seen earlier that governments often adopt inconsistent or contradictory strategies, increasing the likelihood of project bankruptcy by the very measures aimed at reducing it, and

accepting that the public sector will pick up most of the bill. This led us to the present discussion on how to transfer a share of general project risk effectively to private investors. In some cases, however, the best approach is to incorporate more specific risk-sharing mechanisms that allocate each type of risk directly to the party able to manage and control it. For example, the risk of cost overruns should be allocated to the partner responsible for project construction or operations. By contrast, the risk of unexpected changes in tax regime should be allocated to the government, perhaps by requiring compensation if any kind of discriminatory tax treatment materializes.

Unfortunately, there are risks that nobody is able to control and these are allocated to the private sector (e.g., demand risk); this is because private enterprises have experience managing such risks even though they are not fully under control. Government officials should nevertheless keep in mind that this approach works well in the expectation that the government really is willing to let investors bear the consequences of risk taking and risk management. If government will in fact intervene to protect creditors and other investors when the downside materializes, the approach would fail. If there is an implicit government guarantee, then the public is generally paying more than it should because (1) bidders for a project factored in a full transfer of risks to the private sector; (2) investors keep most of the upside when things go well; and (3) the government and the public keep most of the downside when things go wrong and a bailout is engineered. Therefore, projects should also incorporate explicit and accurate risk sharing mechanisms, such as the following:

Rate-of-Return Bands. Under this mechanism if a project’s total rate of return falls below a pre-specified level over a period of time, tariffs automatically increase to restore profitability. This mechanism is symmetrical, so that if total project returns exceed a predetermined level, tariffs are automatically reduced, in this manner

³⁴ The difference in treatment between guarantees and full on-balance sheet financing and hence the actual impact on investor finances varies from country to country.

the public also shares in favorable outcomes). This arrangement is called a rate-of-return band and it caps upside and downside risks arising from deviations in actual from expected prices, thus reducing the likelihood of bankruptcy and the need for bailouts. The main problem with this mechanism is that the government may in practice be unable to endorse tariff increases, to avoid a political backlash.

Cost Pass-Through. Under this type of mechanism, power utilities are allowed to pass on to consumers cost increases that are beyond their control (e.g., fuel price increases). This mechanism differs from “cost-plus” regulation (mentioned earlier) in that only certain types of costs are passed on to consumers, namely, costs known to be beyond the enterprise’s control. For this reason, a lot of the potential inefficiency associated with “cost-plus” regulation is avoided. Cost pass-through is also a more precise tool than a rate-of-return band in terms of risk targeting, although comparisons with rate-of-return bands rely heavily on time horizon. Cost pass-through shifts less short-term risks to the private partner than a rate-of-return band (as monitoring input prices is easy and can be done quickly), but it shifts more longer term risks (for example, as adverse trends in electricity demand would not lead to adjustment under cost pass-through in the way they would under rate-of-return bands). Exactly as in the case of a rate-of-return band, the main problem with this approach is that the government is like to come under much political pressure to prevent tariff increases called for by cost pass-through. In certain circumstances, protection from external risks such as sustained price increases can also discourage technological innovation (e.g., technology to increase fuel efficiency) and private negotiation of contracts to hedge risks.

Trigger-Point Resets. This mechanism allows adjustments when some variable surpasses a specified limit. For example, consider an agreement where tariffs are set on the basis of expected electricity demand growth. If the actual rate of growth deviates from the projected rate by a critical amount, then tariffs are reset to a level expected to place project returns on a higher path

consistent with initial projections. Trigger-point resets are similar to a cost pass-through mechanism except that private partners bear some risk within trigger points; also, under cost pass-through consumers may often see tariff adjustments whereas under trigger-point resets adjustments are less frequent. The same problem as with earlier mechanisms emerges if governments give in to pressure against tariff increases, thus disabling the adjustment mechanism.

Shipwreck Clauses. In many circumstances, private investors should be allowed to go bankrupt without fear of service disruption. In practice, most governments do not want to see a large power utility go under and they are willing to bail out a private partner even at a high cost. If a government will bail out private partners then “shipwreck clauses” would provide a transparent way to do so. Shipwreck clauses set out, at the beginning of a project, the terms of possible government intervention in case of severe stress or impending bankruptcy. This type of clause has the advantage over an implicit guarantee of letting the government and the public take advantage of private risk reduction by improving financing terms from the private sector. The main disadvantage of shipwreck clauses is the creation of an explicit contingent liability on the balance sheet of the public sector, which in turn contributes to heightened sovereign risk perception and pressure on sovereign risk ratings. Private partners are not completely shielded from all risks, as they stand to make substantial losses if a political backlash or economic crisis follows a bailout.

In light of the earlier discussion, it should be clear by now that the first-best solution to risk sharing with private investors is for bankruptcy to be possible without risk of service disruption. If governments cannot commit to allowing bankruptcy or fail to improve the framework for bankruptcy, then an internally consistent package of alternatives (such as the ones discussed above) needs to be adopted as a second-best solution.

Regardless of the package of risk-sharing mechanisms chosen, it would be to the benefit of government, private partners and other

stakeholders to adopt modern, enterprise-wide risk-management systems beginning at an early stage and continuing throughout the project cycle.

Integrated Risk-Management Systems in Power Projects

At any point in time, a project is subjected to many kinds of risks, including regulatory and political, operational, business, credit, market, and liquidity risks.

The design of power projects should incorporate integrated risk management systems, which aim at: (1) identifying and classifying the risks faced by the project; (2) continuously quantifying project exposures to each category of risk (dynamic risk maps); (3) including the impact of key risks in the project's budgeting and management processes; (4) laying out a project's risk profile; (5) determining consequences for project management, including the optimal level of loss reserves for a project; and (6) continuously managing and controlling all kinds of risk exposures over time. Integrated risk management systems improve the ability to measure, manage and control the many types of risk arising in a power project, facilitating management of the overall level of exposure to be shared among stakeholders as well as the likelihood of bankruptcy. Implementation of a risk management system is also useful since it helps identify the risks that should be borne either by government or private partners.

Identifying and Quantifying Exposures. Identifying every possible source of risk exposure is not feasible, but project designers should at least identify and prioritize the key risks faced by a project. Once a project's risk exposures³⁵ are understood on a qualitative basis, quantification of exposures can begin. Several techniques exist for quantifying risk exposures:

1. **Statistical Techniques.** Where relevant data sets exist, statistical methods can

be used to directly estimate expected loss patterns. The main advantage of pure statistical methods is their fairly wide applicability, but unfortunately they do not provide much insight into the underlying dynamics of a project's risk profile.

2. **Econometric Modeling.** Statistical techniques do not explain expected loss patterns; they just help estimate them. By contrast, econometric methods can show how project expected losses evolve over time, on the basis of the underlying dynamics of one or more risk factors. For example, when a government provides a guarantee (implicit or explicit) on a power project, it exposes itself to the possibility that the project might in fact fail; econometric models can show how the likelihood of failure and the size of the government's risk exposure vary in response to underlying economic and financial variables.
3. **Contingent Claims Analysis (CCA).** Both statistical and econometric methods rely on historical data. Contingent claims analysis estimates the value of financial instruments such as loan guarantees when historical data is not available. "Contingent claims" are financial assets or liabilities whose values can be determined through the prices of assets or variables which have known properties. The same techniques used to value financial options and derivative products can be applied to the valuation of loans, guarantees, and other instruments granted in support of power projects.

Risk-Adjusted Performance Measures. Once risk exposure is quantified using the techniques mentioned above, government and private investors can begin using the new flow of information for risk management and control,

³⁵ The purpose is to elaborate a "dynamic risk map" linking a project's financial variables to the risk factors that have been identified. Once a linkage is established, the next step is to measure risk exposures starting from the statistical behavior of risk factors and then quantifying their impact on the financial variables of interest.

Box 3.4 Exchange Rate Risks in Power Projects

Among the key risks facing foreign investors in power infrastructure in developing countries is currency depreciation or devaluation. Sustainable private investment in power infrastructure depends on a country's capacity to address this risk well. Power projects in developing countries have usually transferred exchange rate risk to customers or the government. But because currency devaluation in developing countries often occurs in the context of severe macroeconomic crises, such risk allocations cannot always be made to work—those who are expected to foot the bill are being asked to do it when they are least capable of doing so. For example, power utilities might raise prices precisely when the economy is suffering the most, thus provoking a political backlash.

Also, if the government bears the risk because it has agreed to purchase power from an independent power producer (IPP) at rates denominated in foreign currency, steep increases in local currency prices are required just when government finances are coming under pressure. In the 1990s, this kind of problems led to defaults on payments to IPPs in Indonesia and Pakistan. Similarly, if the project is a concession that deals with consumers at the retail

end, explicitly linking retail tariffs to the exchange rate will burden consumers right at the time when the economic crisis is diluting real incomes.

Clearly, raising prices at such times is difficult and governments often choose to breach contracts, rather than enforce them and cause political instability. Many attempts to mitigate exchange rate risk therefore transform it into some form of political or regulatory risk—another example of how risk does not disappear but simply transforms itself into something different. Foreign investors not only expect a decline in value of local currencies, but they also face great uncertainty as to the rate of exchange rate depreciation. So even if investors are somehow protected against expected currency depreciation, they still face other kinds of risks. High volatility also implies that the cost to governments of providing exchange rate guarantees is very high. Nevertheless, Mexico's FICORCA and the Indonesian Debt Restructuring Agency (INDRA) are examples of voluntary programs that have provided predictable foreign exchange rates to private corporations. Similar arrangements can be put in place to help in the management of the exchange rate risks faced by power projects in emerging markets.

establishing exposure limits, alarms, or perhaps developing risk-adjusted performance measures for the project. In principle, some of the risk-sharing mechanisms described in earlier chapters can be applied using risk-adjusted performance measures rather than simple accounting ones (e.g., instead of creating a rate-of-return band based on conventional accounting measures of returns, risk-adjusted rates of return could be used as the basis for tariff adjustments).

Risk Preferences and Reserve Policy. Policymakers should also take into consideration the need to set aside public reserves against losses arising from power projects. Preparing for losses also helps prevent a backlash against using public resources to honor government guarantees or otherwise support a project under stress. Ideally, the level of reserves would be kept in a fund and should reflect the government's level of risk aversion as well as its overall ability to withstand

losses that surpass existing reserves. Note that the creation and management of a public reserve fund against losses is not something that normally falls within the realm of a project's integrated risk management framework, as a reserve fund is in fact part of the public sector's asset and liability management (ALM) system. Nevertheless, existence and management of a reserve fund have a direct impact on a project's risk and incentive dynamics.

Another factor that should be taken into consideration in the design of a public reserve fund is the (social or economy-wide) opportunity cost of holding funds in reserve rather than spending public resources immediately. On the upside, reserves increase the liquidity and credibility of government guarantees and thus their value, helping to attract more private funding for the power sector. On the downside, holding resources in a fund reduces the

Box 3.5 Financial Risk Management and Prevention of Stress in Power Projects:

A Menu of Issues and Options

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|--|---|
| Risk Sharing in Power Projects. | <ul style="list-style-type: none"> • View Regulation as a Tool for Risk Management and Sharing. • Use Limits on Leverage as a Tool for Risk Management and Sharing. • Evaluate the Pros and Cons of Supporting Debt Finance. • Evaluate the Pros and Cons of Setting Minimum Equity Levels. • Evaluate the Advantages and Disadvantages of Requiring On-Balance Sheet Financing by Private Sector Partners. • Evaluate the Advantages and Disadvantages of Requiring Guarantees from Private Sector Partners. |
| Adjusting the Level of Risk Borne by Private Sector Partners | <ul style="list-style-type: none"> • Consider the Pros and Cons of Rate-of-Return Bands. • Consider the Pros and Cons of Cost Pass-Through. • Evaluate the Advantages and Disadvantages of Trigger-Point Resets. • Consider Including Shipwreck Clauses in Agreements. |
| Integrated Risk Management Systems in Power Projects. | <ul style="list-style-type: none"> • Identify and Quantify Risk Exposures. • Adopt Risk-Adjusted Performance Measures Together with Private Sector Partner. • Define Risk Preferences and Develop a Reserve Policy. • Draft Clear Contracts. • Reduce Incentives to Call on Project Guarantees. • Monitoring Performance under Guarantee Agreements. • Deal with Implicit Guarantees. |

amount available for public spending.³⁶ If the benefits of more public spending exceed those of keeping reserves, the government should direct more resources toward spending. In any case, once a government has an assessment of risk tolerances and objectives, it can set the level of loss reserves. Policymakers should determine whether reserves are set with reference to an additive loss exposure or instead following a portfolio-wide Value-at-Risk (VaR) approach.^{37,38} Policymakers would also determine the investment policy of the fund, including where reserves should be kept (e.g., invested at home or abroad).

Investing Reserves. As mentioned in an earlier paragraph, policymakers need to determine

how to invest reserves in the fund. A particular feature of an optimal investment policy for a reserve fund against losses is that asset values should rise when government expenses increase (e.g., as a result of project stress). Asset values and government expenditures would be moving in the same direction. In other words, reserve funds should invest in an asset mix that provides a hedge against the kind of developments that could trigger the execution of contingent liabilities. Note, however, that investing of reserves in assets whose value is negatively correlated with the government's contingent liabilities (arising from a portfolio of projects) would require an active asset management policy. Note that simply investing

³⁶ However, the inflow of resources toward the reserve fund adds to aggregate savings in the economy. Higher savings means that more resources are available for investment. This benefit should be taken into consideration when assessing the opportunity costs of creating a public reserve fund.

³⁷ Value-at-Risk (VaR) is defined as the maximum loss of value at a predetermined level of statistical confidence, over the chosen time horizon. It is a statistical indicator whose values and formulas depend on a project's dynamic risk map and the statistical properties of risk variables.

³⁸ A portfolio VaR approach takes into consideration the level of diversification in the country's portfolio of projects for which the reserve fund is being set up. An additive approach does not take risk diversification into consideration.

assets in government securities is equivalent to reducing the government's net debt position but is not likely to provide a hedge against adverse developments in the power sector. When a sector crisis hits and projects come under stress, most likely the market value of government debt will also come under pressure—hence government securities would not provide an adequate hedge in a reserve fund. Note also that if a portion of project liabilities is denominated in a foreign currency—as is often the case with power projects—the government should also be hedging against exchange rate risk.

Complementary Measures

In addition to the mechanisms already discussed, complementary measures help manage the risks arising from power projects. These mechanisms range from writing clear contracts, introducing incentives that tend to reduce calls on project guarantees, and closely monitoring management of a project.³⁹

In general, policymakers have to determine who can access the information needed to assess a specific type of risk. For example, when the government has the best access to information on certain risks, it may provide assistance in the form of a specific guarantee (rather than providing credit) since targeting guarantees is relatively easy.

Governments can reduce contingent liabilities in other ways too. For example, private investors can be required to hold a minimum level of collateral, thereby giving them an incentive to remain vested in the project (together with the government) in stress situations. In addition, policymakers can introduce requirements on the management of cash and highly liquid assets, to ensure that the value of such reserves is maintained when projects come under stress. Policymakers should also consider the introduction of pro rata risk sharing, whereby private partners bear risks together with the government, but the government takes advantage of private sector pricing of risks

(when the private sector has more experience pricing that type of risk). Finally, the government may simply charge private sector partners for agreeing to bear certain risks, for example, risk-based guarantee fees can be levied, to offset costs to the government and align the incentives of private sector partners.

Summary

This chapter explored project governance arrangements that may prevent the emergence of stress situations. To aid in the prevention of project stress, governance arrangements need to be based on reliable and predictable sector regulation. Experience suggests that transparency, wide disclosure of information, and open communication with the public are important to establish a climate of mutual trust that will reduce the risk of stress due to sociopolitical backlash, which is the second most frequent cause of stress. Communication and consultation strategies with all stakeholders are especially important in the case of high profile projects and, given the nature of the industry. The prevention of stress situations in power projects also relies on the capacity to set up procedures and mechanisms embedded in the project to reorganize it before stress reaches a critical level and to avoid the risk of liquidation or disruption of operations. For example, although there should be recourse to bankruptcy laws, other avenues for restructuring should be preferred, including using automatic renegotiation clauses, which can prevent or resolve stress situations. As a number of situations that can lead to project stress can be identified *ex ante*, action may be taken to reduce the probability of their occurrence.

Projects should have comprehensive risk management frameworks and make use of risk mitigation tools. In the structuring of power projects, compliance with certain principles, shown below, can reduce the probability of stress.

³⁹ This takes us back to the issue of optimization of a project's governance arrangements.

1. Flexibility in price revision mechanism: fixed prices over a long period are rarely sustainable and equitable, either for the host country or for the investor. Pricing mechanisms including triggers for fair readjustment should be preferred.
2. A minimum level of equity should be required, and guarantees against certain categories of risks are advisable, but they should cover not only lenders, as it is often the case, but also equity investors.
3. Some comfort should be provided by the parent company of the investor, although recognizing that full recourse is not recommended. The right level of backing by the parent company should be determined by the level of risk attached to the project.
4. Though the commercial risk is generally better managed by the investor, some sharing of the commercial risk with the host government is recommended, as the commercial risk in the power sector is often linked to the macroeconomic risk (the first cause of power projects' distress), which is better managed by the government.

Instruments for the resolution of project stress are explored in the next chapter.

4 Strategies for Addressing Stress Situations

Facing Stress

Time for Action—Stress Has Taken Over

The first step toward a successful resolution is recognition that a project is actually under stress. Pretending that there is nothing wrong with the project will only delay the onset of a satisfactory solution. Both parties must endeavor to remind each other that no matter how critical the situation, a solution is always possible. Complex and seemingly hopeless projects and companies have been turned around in the past all over the world, and there is no particular reason a specific project would be an exception. Naturally, there are also failed projects, and some of them have failed in spectacular ways. Following some simple steps, parties involved in a troubled project can ensure that theirs is not going to be among the “spectacular” failures but, instead, in the group of projects that have successfully weathered temporary difficulties.

Roles of Parties to Address Stress

To enhance the chances of a successful resolution, each party to a project must follow some basic steps. Although simple and some would say “obvious,” these basic actions are very often forgotten in the middle of an emergency, so they cannot be repeated too often. Below are recommended actions for the government:

- Individuals and organizations should be appointed, with clear terms of reference, to address the problem (core government team).
- These individuals and organization should study the nature of the problem and scope its magnitude.
- The core government team may request an intervention team (defined later in this chapter).
- The intervention team should be given a clear, detailed mandate.
- The core government team and the intervention team should work together to define a tentative strategy and agenda.
- The government calls (or accepts a call) for a negotiation.
- The government addresses any issues that other parties are using to stay away from negotiation.
- Negotiation actually starts.
- Negotiation is concluded successfully.
- A complete, detailed report is filed by the intervention team as well as the core government team. This document will be useful in case there is a relapse and project stress returns, or, it may serve as a blueprint for stress resolution in a similar project.

Private parties should

- Appoint high-level managers or decision makers to oversee the process of negotiation (the core team).
- The core team carries out a preliminary analysis of the situation.
- The core team hires external advisers on the basis of a preliminary analysis of the situation (advisers).
- Advisers should be given a clear, detailed mandate.

- The core team and its advisers work together to define a tentative strategy and agenda.
- The private party calls (or accepts a call) for negotiations.
- Any issues being used by government as an excuse to stay away from a negotiation are resolved.
- Negotiation begins.
- Negotiation is concluded successfully.
- A complete, detailed report is filed by the high-level team and its advisers.

Guiding Principles for the Involvement of a Neutral Partner

This chapter has two main objectives: First, provide guidance to potential intervention teams in identifying issues related to their involvement in the renegotiation of power infrastructure contracts between public and private sectors, and in assessing when and in what form they can get involved in the renegotiation of projects under stress; and second, summarize for intervention teams the range of practical tools for assisting in the renegotiation of PPI contracts in accordance with good practice.

In this chapter, the term “neutral partner” is meant to include foreign governments or IFIs, without excluding the role that other neutral parties may play. This chapter addresses instances of renegotiation of contracts for the private provision of infrastructure services, but much of the guidance equally applies to situations where clients request assistance related to the initial negotiation or the renewal (by means of negotiation) of public/private infrastructure contracts. Renegotiations are complex, potentially contentious and often take a long time to conclude. But just as there are risks, the potential exists for high returns if renegotiations can be concluded quickly and amicably without the cost and acrimony of

litigation or arbitration. Usually, much political will and financial capital are invested in reforms leading to public-private partnerships and this is invariably wasted whenever the private sector withdraws from contracts rather than successfully renegotiating their terms.

There are legitimate institutional concerns, including policy, legal, and reputational considerations, about the manner in which IFIs or other donors get involved in, and therefore lend support to, the renegotiations of PPI contracts.

In all cases, such engagement needs to be contingent on a transparent and candid assessment of: (1) risks and their effective mitigation and management; as well as (2) the possible development benefits in terms of stabilizing private sector involvement where clients view termination and re-bidding as either not warranted or an unfeasible alternative.

Guiding Principles

In deciding whether and how to approach a distressed PPI contract, intervention teams should be guided by the following interrelated principles, not least to preserve the institutional reputation of their sponsors:

Client ownership: As with any type of assistance, involvement in the renegotiation of a PPI contract should be based on unambiguous client ownership, and a clear mandate for the intervention team as authorized at least by the client.⁴⁰ Any decision about whether to renegotiate and how to renegotiate an existing contract must rest unambiguously with the client government.⁴¹

Minimizing moral hazard: Renegotiations of infrastructure contracts raise moral hazard concerns. These arise both for the private party and the government, if renegotiation

⁴⁰ More specifically, a “clear mandate” requires exact definition of who is part of the intervention team; precise articulation of its purposes, powers, and responsibilities; well-defined chains of command and accountability within the team and between the team and its client; adequate resources to function and access to high-level decision makers when needed. Support for the intervention team should come from the highest levels of authority.

⁴¹ Ideally, in its decision-making process the government has already taken into consideration the interests and views of interest groups in society. In any case, to avoid confusion and eventual failure, the intervention team would be answerable to the government only, unless the government has clearly decided otherwise and determined so in the intervention team’s terms of reference.

becomes the norm rather than the exception.⁴² In addition, moral hazards may arise because both parties may want to turn to IFIs or donors for assistance during the renegotiations. In addition to wanting the intervention team to play the role of conciliator in the renegotiation process, both parties may also perceive the IFIs or donors as part of the solution in so far as they may be persuaded to help finance a restructured contract (possibly, for example, in place of write-offs by investors or a commitment to more stringent tariff adjustments by the government).⁴³ In each instance, therefore, intervention teams must carefully explore the existence of moral hazards and suitable ways to minimize them.

Transparency: Transparency implies notice and, where possible, agreement with the involved parties on the nature of the intervention team, IFIs, donor assistance during renegotiation of PPI contracts.

Effective mitigation of conflicts of interest: Due to the wide array of roles played by IFIs and donors, the investment instruments offered, including financing and risk insurance extended to private providers, investment guarantees, sovereign lending, and arbitration services, the team frequently faces real or perceived conflicts of interests.⁴⁴

Proportionality/consistency: One size does not fit all. Different issues that may lead to renegotiation will require different methods of dispute resolution. The PPI contract renegotiation mechanism suitable in one circumstance may not be appropriate in another. Therefore, the response to contract negotiations needs to be flexible.⁴⁵

Quality: Assisting clients in major contract renegotiation requires skills often quite

different from those needed in routine project management. For example, in projects with national significance an intervention team needs to be aware of the political influences and consequences of its actions, as well as trends in public opinion. Since the stakes are very high, the tactics used by actors in a dispute will be quite different from anything that emerges in routine project management. Lines of authority within a project are often diluted and unexpected alliances may emerge, say, between workers and managers that would not normally arise in routine project management. An inexperienced or unaware intervention team would be highly ineffective, even counterproductive, in such exceptional circumstances.

Sunk investments and opportunistic renegotiation by governments: Although recent empirical evidence suggests that the majority of renegotiation requests have been initiated by incumbent firms, a significant share of renegotiations is being initiated by governments. While there may well be sound policy arguments for government-initiated renegotiations, including the desire to pursue second generation reforms in infrastructure, such efforts may raise the perception among international investors of insufficient government commitment to contractual rights and obligations and discourage private investment.

Renegotiation, transparency, and legitimacy: Many governments have sought to award infrastructure contracts through transparent and competitive auction processes not only to secure the most efficient bid, but also to increase the political legitimacy of such deals by encouraging scrutiny by stakeholders,

⁴² Frequent renegotiation defeats the very purpose of having a contract, as every time an adverse adjustment needs to be made by one of the parties, compliance with the rest of the terms in the contract may be called into question, thus forcing a renegotiation that effectively delays or even blocks the adjustment.

⁴³ In particular, IFIs risk becoming a sort of “lender of last resort” for troubled projects, with parties to the project asking for intervention by IFIs in the hope that “fresh” funds will be provided, thus softening or avoiding necessary adjustments.

⁴⁴ As IFIs actually are groups of entities, conflicts do arise in practice. One part of an IFI may wish to promote solutions that strengthen public finances and keep public debt low, while another unit of the IFI may be more willing to accept public expenditures that would save a private enterprise where they have invested. Also, units responsible for guarantee transactions are not always the same as units responsible for loans to the public, or private, sectors. A natural division of work within an IFI thus becomes a source of conflicts of interest and moral hazard.

⁴⁵ For example, a dispute over pay and benefits in a country’s most important power plant is not like an emerging conflict over tariff adjustments, fuel subsidies, or debt restructurings. Intervention teams and resolution strategies need to be consistent with and reflect the substance of the dispute.

including the public. Transparency is viewed as a fundamental tenet of good economic regulation of infrastructure and, sometimes, heightened public scrutiny has legitimized contractual arrangements. Sometimes, however, vocal opposition to a project arises, or perhaps to adjustments required under contract. In some cases, public opinion may be swayed by misguided leaders or manipulated by interest groups. Despite this possibility, it must be borne in mind that limiting the flow of information to the public makes it even easier for interested parties to manipulate public opinion. Adequate information should continue flowing at all stages of a renegotiation, at least concerning the facts on the table.⁴⁶

Defining an Appropriate, Limited Mandate

There are various ways IFIs and donors can provide assistance to clients in the renegotiation of contracts.⁴⁷ The following section outlines the range of services that may be of use to clients in a renegotiation situation and have, in the past, been provided by IFIs and donors in the context of contract renegotiations.

1. Advisory support to governments with the objective of reducing the incidence of renegotiation by improving the design of reforms and the structure of individual contracts and transactions at the drafting and negotiation stage.
2. Advisory support to governments with the objective to enhance government capacity to better manage existing contractual relationships, to detect and address areas of dispute early and to prepare for requests for renegotiation prior to specific requests for renegotiation.
3. Advisory support to the government with the objective of establishing a suitable institutional framework and broad renegotiation policies prior to, or in response to, specific renegotiations. Such assistance may also include the development of back-up options should renegotiations not come to fruition, including strategies for how to deal with the withdrawal of the private sector or the termination of the contract.
4. Advisory support to the government in terms of technical, financial and legal advice with the objective to enhance government capacity to engage with private firms in renegotiations. Given the fact that private firms are often in a better position to mobilize funds for technical advisors quickly and early in the course of renegotiations, governments might rightly be concerned that, by failing to secure high-quality advice quickly, they will be at a disadvantage in the renegotiations. Failing to secure good advisors early on may also prevent the government from comfortably engaging in negotiations at all and may cause minor technical issues to evolve into major disputes and private sector frustration about the lack of government commitment to a workable process.⁴⁸
5. Advisory support to both the government and the private firm, with the objective of facilitating a specific renegotiation.
6. Advisory support to the government and the private firm to provide an independent evaluation of facts and mediation services.
7. Advisory support to the government, with the objective of providing an ex-post review and third-party opinion to

⁴⁶ Logically, the parties to a negotiation should not have an obligation to reveal tactical information prematurely, as that would make negotiation itself impossible. The nitty-gritty of negotiations is largely irrelevant from the public perspective, as a lot of what takes place in a negotiation is probably no more than bluffing or posturing. Revealing details of this to the public would only confound public opinion.

⁴⁷ See "Toolkit—A Guide for Hiring and Managing Advisors for Private Participation in Infrastructure," Public-Private Infrastructure Advisory Facility, The World Bank, August 2001.

⁴⁸ Both parties to a negotiation should have detailed understanding of the technical issues involved. Otherwise, communication may break down as there would be no common language between the two parties. Often, governments lack in-house technical capacity, reliable and trustworthy, to provide advice at the time of renegotiation. By the time the government has secured advisory services from outside, negotiations could have broken down or gone off track. IFIs often maintain a team of experts on the power sector within their ranks, a resource that could be tapped by governments. These experts stand ready to assist governments at their request and at short notice, and effort must be made to ensure that governments are aware that the facility is available.

government as to the actual or proposed outcome of renegotiations. This role may be particularly important where it is essential to develop a broad consensus among various stakeholders as to the merits of any particular renegotiation.

8. Financing for capital expenditure or subsidy obligations assumed by the government as part of the renegotiations. In many such cases, clients may view the IFIs or donors not only as a source of technical assistance but also as a source of financing.

Resolution Approaches

Mediation

Whenever the parties involved in a power project have provided for mediation or conciliation of existing or future disputes under the auspices of an appropriate national or international forum, they make certain procedures a part of their agreement. The details of the procedures depend on the chosen venue for conflict resolution. Normally, any party or parties to a dispute may initiate mediation by filing submission of a request. Where there is no previous agreement or contract providing for mediation, a party may request an impartial entity or body to invite another party to join in a submission to mediation. Upon receipt of a request for mediation, a qualified⁴⁹ mediator should be appointed. Normally, a single mediator is appointed unless the parties agree otherwise.

A mediator should have no financial or personal interest in the result of the mediation, and it should be required that prior to accepting an appointment, the prospective mediator disclose any circumstance likely to create a presumption of bias or conflict of interest. In mediation proceeding, parties may be represented by persons of their choice, which should be communicated in writing to all. In standard procedure, the mediator fixes the date and the time of mediation sessions, which are held at a convenient and preferably neutral

location. Prior to the first mediation session, each party is expected to provide the mediator with a memorandum setting forth its position with regard to the dispute and such memoranda may be mutually exchanged by the parties at the discretion of mediator.

The mediator does not have the authority to impose a settlement on the parties but will attempt to help them reach a satisfactory resolution. However, the mediator is authorized to conduct joint and separate meetings with the parties and to make recommendations for settlement. Whenever necessary, mediators seek expert advice concerning technical aspects of a power project, at the expense of parties to the conflict.

Mediation sessions are private and information disclosed to a mediator remains confidential. In some jurisdictions, mediators are protected and cannot be compelled to divulge such records or to testify in regard to the mediation in a judicial forum. The parties to a mediation proceeding also agree to maintain the confidentiality of the mediation and will not introduce as evidence in any arbitral, judicial, or other proceeding views, admissions or proposals made by another party in the course of the mediation proceedings.

Mediation is terminated by the parties' signing a settlement or by the mediator reaching the conclusion that further efforts are not worthwhile, or by a declaration to this effect by a party or parties to the dispute. The expenses of witnesses for either side are paid by the party producing such witnesses. All other expenses of the mediation, the expenses of any witness and the cost of any proofs or expert advice requested by the mediator, are normally borne equally by the parties unless otherwise agreed.

Arbitration

The parties to a dispute select a national or international arbitration forum. Specialized bodies maintain rosters of arbitrators, from which arbitrators are appointed. In this context,

⁴⁹ A "qualified" mediator should have several years of experience as a mediator, preferably at an international level. The mediator should also be a member of an internationally recognized mediation and arbitration body.

it is understood that the term “arbitrator” refers to an arbitration panel constituted for a particular case, composed of one or more arbitrators. If the contract names an arbitrator or specifies a method of appointing an arbitrator, that designation or method has to be followed. When the parties agreed that each party is to name one arbitrator, the arbitrators so named must meet the standards of the arbitration forum that has been selected or mandated by contract (unless it is understood and agreed that the party-appointed arbitrators are to be non-neutral and need not meet those standards).

The initiating party (referred to as the “claimant”) starts arbitration proceedings by giving to the other party (the “respondent”) notice of its intention to arbitrate (the “demand”). The claimant also files with the appropriate body the demand and copies of the arbitration provisions of the contract. The respondent may file an answering statement with the arbitration forum and send a copy of the answering statement to the claimant. In standard practice, if no answering statement is filed within a predetermined period of time, the respondent is deemed to have denied the claim. In general, failure to file an answering statement does not delay the arbitration. In an arbitration procedure and after an initial filing of a claim, if either party desires to make any new or different claim or counterclaim, it shall be made in writing and filed with the arbitrator. However, after an arbitrator is appointed, no new or different claim may be submitted except with the arbitrator’s consent.

An arbitrator has the power to rule on his or her own jurisdiction, including any objections with respect to the existence, scope or validity of the arbitration agreement. Also the arbitrator has the power to determine the existence or validity of a contract of which an arbitration clause forms a part. Such an arbitration clause shall be treated as an agreement independent of the other terms of the contract. A decision by the arbitrator that the contract is null and void does not for that reason alone render invalid the arbitration clause.

At any stage of the arbitration proceedings, the parties may agree to conduct mediation in order to facilitate settlement, although the mediator should not be an arbitrator appointed to the case.

The parties mutually agree on the locale where the arbitration is to be held. If any party requests a specific locale and the other party files no objection thereto, the official locale is the one requested initially. By contrast, if a party objects to the locale requested by the other party, the arbitrator shall have the power to determine the locale and its decision is accepted as final and binding. Also, when the parties are nationals of different countries, which is often the case in case of large power projects in emerging markets, the arbitration forum will appoint (at the request of either party) arbitrators of nationalities other than that of any of the parties should be appointed.

The London Approach

The London Approach involves a “workout,” that is, a financial and operational rehabilitation or restructuring of a project which takes place outside a statutory insolvency process. This approach addresses the need to resolve coordination and conflict of interest problems between creditors while avoiding potential problems with statutory regimes—when these exist. Notably, the London Approach reduces the risk of unnecessary liquidation of projects facing short-term financial problems but which are viable in the longer run, and it also reduces the danger of reorganizing projects in manners favorable to one interested party at the expense of others.

Prior to the 1980s there was no internationally recognized approach for organizing corporate workouts. The Bank of England, in the late 1980s took the lead in developing a set of principles for corporate workouts which came to be known as “the London Approach.”⁵⁰ Largely, this approach amounted to a codification of a set of practices which were already widely accepted in multi-lender corporate workouts in the United

⁵⁰ For an introduction to the “London Approach” see G. Meyerman (2000).

Kingdom. The approach gained international recognition and has been widely applied in many countries, including in East Asia at the time of crisis in the late 1990s. The London Approach also has great potential to help in the resolution of power project stress situations in emerging markets.

The key features of the London Approach when applied to power projects are these:

1. A willingness by creditors to consider a non-statutory resolution.
2. The commissioning by creditors of an independent review of the project's long-term viability.
3. Operating an informal standstill to preserve the confidence of suppliers and customers and allowing the project to continue operating normally.
4. Working to reach a joint view on whether a project is worth supporting in the longer term (there is no presumption that a project will necessarily be rescued).
5. To facilitate discussions, a lead creditor is designated and a steering committee of creditors formed.
6. Recognition of seniority of claims and sharing of loss on an equal basis between creditors in a single category.

In addition to the maintenance of existing financing facilities (exposures at the date of entry into the informal standstill) it may be necessary to allow the project to overcome an immediate liquidity shortfall. Under the London Approach, fresh resources may be provided by existing lenders or by the release of asset disposal proceeds. If there is agreement among the creditors that the project is viable in the long term, creditors consider more lasting forms of financial support for the company. Such longer-term financial changes are usually conditional on the implementation of a business plan which may involve management changes, sales of assets or even the takeover of the project.

Implementation of the London Approach often requires mediation and facilitation by an impartial body or entity, at the invitation of the parties involved.

The trend toward financial disintermediation tends to increase the number of creditors involved in a project workout, which may make it more difficult to establish a view on how to resolve project stress. This raises a key question—the degree of influence to be accorded to minority creditors. Traditionally, the London Approach has been based on unanimity, which may be practicable when the creditors comprise a small group but is less workable when the creditor group is large, perhaps including non-banks. More recently, majority voting at the pre-insolvency stage has been suggested, as a large and diverse workout group may be prepared to tolerate a departure from unanimity if a failure to achieve unanimity would mean the end of the project.

Although the London Approach generally entails an informal standstill, it does not necessarily involve a moratorium extending over the period of resolution, as a voluntary agreement to remain supportive of the project can come under strain as time passes. Nevertheless, a formal moratorium potentially increases the chances of a successful workout for viable projects, even in cases where a large group of banks and non-banks is involved.

A different set of issues is raised by innovations in finance, notably the growth of securitization and credit derivatives. The impact of securitization of project loans on workouts depends on the extent to which a creditor really does shed the credit risk in a securitization deal. A bank that has securitized part of its loan book may remain exposed to reputational risk if it walked away from a loan which it had initiated and a large bank may have other exposures to the project outside the securitization package, and therefore a commercial interest in the company's survival.⁵¹

⁵¹ See, for example, Chapter 4 in Strong, John et al., Interamerican Development Bank.

Similar considerations apply to credit derivatives, although these appear to offer a clearer route to transfer risk effectively from the lender to another institution.⁵² In theory, credit derivatives might potentially give a bank that has transferred credit risk an incentive to force a company or project into liquidation to obtain a certain payment from its counterparty, though bankers dispute this, arguing that the reputational risk is too high. More generally, the growing use of each of the techniques described above is part of a shift from relationship to transaction-based banking, and from banking to capital market finance. To the extent that this weakens the relationships between projects and their bankers, non-bank players become increasingly involved in discussions on project workouts.

Instruments to Be Used in Stress Resolution

Financial Restructuring

Governance and restructuring arrangements can be conceived of as different parts of a continuum in the life of a power project. This continuity can be seen more clearly by looking at three key attributes of a restructuring system:

1. Its close relationship to project finance arrangements.
2. As a benchmark for attitudes toward risk.
3. As a governance framework for projects in need of restructuring.

Experience suggests that large projects often do restructure successfully, including power projects. This is encouraging, to the extent that real-world projects rarely conform to a simple “single debtor/single shareholder” model, enjoying instead more sophisticated financing structures. There are various reasons that sophisticated financing structures enhance the probability of successful restructuring:

1. Financial markets and the pricing of capital are now globalized, and investors are now less likely to settle for project failure, as this reflects negatively on their ability to select risks.
2. Market finance has become more important, particularly, innovations in structured finance are providing opportunities to raise funds secured by future income streams. This has brought in new types of investors, including bondholders, who tend to design their strategies around the functioning of bankruptcy and restructuring systems.
3. Moral hazard is weakening. Investors restructuring facilities became used to believe that power projects always enjoyed an implicit government guarantee but governments are now subjected to financial discipline to a much greater extent with less concern for their “implicit” guarantee.

This does not imply that there can or should be a single model for project restructuring arrangements worldwide. Yet such arrangements need to address certain basic issues:

1. Value preservation, which rests on early access to the restructuring framework and a stay of execution (as a collective action process, the framework should aim at stopping individual creditors from impairing key assets).
2. Market conformity, which means respecting absolute priority.
3. Credibility through effective implementation.

The restructuring framework has an impact on the way governance mechanisms handle default risk:

1. Lack of credibility has a negative effect on the quality of governance. The mis-pricing of debt because of weak restructuring

⁵² See, for example, Chapter 4 in Strong, John et al., Interamerican Development Bank.

Box 4.1 Elements of Financial Restructuring

There are many strategies that can be followed in a financial restructuring. A typical financial restructuring is a combination of several actions that together restore the financial viability of a project. Some of these mechanisms are listed here:

Debt for equity swap. In a debt for equity swap a debt holder gets an equity position in a project in exchange for cancellation of all or part of its credit exposure. This can help avoid project bankruptcy, or simply help change capital structure to reduce risks or take advantage of stock valuation.

Debt write-down or write-off. In a debt write-down, the lender agrees to reduce the present value of debt to a level consistent with the financial viability of a troubled project. This mechanism is sometimes referred to as the creditor taking a “haircut.” This clearly involves a capital loss to the lender but, as part of a package of measures, overall losses to lenders may be reduced. An extreme form of debt write-down is a write-off, where debt is entirely forgiven.

Refinancing, rollover, or “evergreening.” Rather than reducing the present value of debt, lenders agree to refinance loans (or exchange bonds) that improve financing terms without necessarily writing down the value of debt. For example, a refinancing may result in partial or no debt amortization in the first few

years, which gives a project some “breathing space” while conditions improve. The term “evergreening” is sometimes used to describe a type of refinancing meant mainly to improve the appearance of the balance sheets of creditors unwilling to recognize their credit losses; clearly, this kind of window dressing is not advisable.

Deeply embedded debt. The debt/equity distinction is determined by the contingency principle. Modern hybrid financial arrangements may be structured by combining different instruments—debt with equity, equity with derivatives, debt with derivatives, and derivatives with derivatives. Such instruments may entail periodic or nonperiodic payments and may be contingent or noncontingent and may have different tax treatments. Converting debt to a category of equity may significantly enhance the debt equity ratio of the enterprise and yet preserve some of the debtor prerogatives and priorities. Some jurisdictions permit the creation of such instruments as a class of special shares with fixed interest rate payments if yearly profit and loss results meet stated criteria only. In case of default or liquidation however this class of share typically ranks behind all creditors but ahead of all other shareholders.

mechanisms further distorts an already dysfunctional governance framework, starting a vicious circle.

2. There should be a possibility for a troubled project to restart on a clean slate after a successful restructuring. Otherwise, governance will be distorted towards reckless risk-taking and possibly corruption, once the possibility of bankruptcy emerges.⁵³
3. Project restructuring systems should provide for stakeholders to claw back transfers, in cash or in kind, that have been made during a period preceding a bankruptcy, if there is a suspicion that such transaction may have been meant to siphon away resources.

Another important area relates to project governance arrangements under restructuring proceedings:

1. There is a choice to be made between the possibility for the debtor’s management to remain in possession and the appointment of a professional administrator or trustee.
2. The project restructuring system needs to recognize the information asymmetries between insiders and outsiders. This may be especially problematic in power projects, since outside opinions and audits may not be credible. Where feasible, this makes market-based valuation of assets through auctions processes an attractive option.

⁵³ Parties involved would sense that they have “nothing to lose” or that cooperation does not make sense because the project is already “dead.”

3. Creditors should play a leading project governance role once stress begins, through an active creditors committee.⁵⁴ Creditor committees may also hire restructuring specialists who are then appointed to the boards of troubled projects.

In this connection, the decentralized, creditor-led workout approach to restructuring power projects relies on banks and other creditors to provide a leading role. Lenders have some knowledge of the borrower and since their own interests depend on maximizing asset values, they are highly motivated to ensure the success of the workout. This approach has the following advantages:

1. It ensures that the information that lenders have is preserved.
2. It may provide incentives for recovery and for avoiding future losses.
3. It avoids a deterioration of payment discipline.
4. Lenders can provide additional financing in the restructuring process.

The creditor-led workout approach to project restructuring should adopt a number of basic principles, explained below.

Organization and Representation

Project managers should engage advisers experienced in restructuring. A restructuring process may be started by either the company or its creditors, and creditors should form a steering committee. The steering committee should select its officers on the basis of their experience with restructuring processes. Costs will be borne by the project under stress, unless otherwise agreed. Senior managers from the project will participate in the restructurings. These managers should have proven authority and decision-making power.

Standstill and Interim Financing

Subject to reasonable conditions, the creditors should agree to a standstill. During standstill periods, there is a set of special rules detailing what creditors and project management can and cannot do.

Creditors should subordinate their claims to any fresh funds advanced after the beginning of the standstill, especially for the provision of working capital necessary during these negotiations. Access to information should be provided for an evaluation of requests for interim financing. Conditions for disbursement and monitoring interim financing arrangements should be agreed between creditors and project managers

Information

Committee members and their professional advisers should sign confidentiality agreements. Project management would submit financial information to the steering committee and its advisers. Actual information to be provided can be determined on case-by-case basis, but generally it would include these:

1. A description of the project structure and a description of all outstanding financial arrangements (including borrowings, shareholdings, guarantees, and encumbrances).
2. A balance sheet as of the standstill date and for previous period (e.g., during the three-year period before the standstill date) as well as a forecast for several years.
3. Collateral security documents, guarantee agreements, subordination agreements.
4. Income and cash flow statements for several years before the standstill date and a forecast for the following years.
5. Each of the project's major contracts (including with creditors, suppliers, and customers).
6. Other information deemed necessary for the restructuring.

⁵⁴ A "creditor committee" is a group representing investors with claims on a project or company facing bankruptcy or financial distress.

Box 4.2 Alternatives for the Resolution of Stress in Power Projects

Dealing with the Incentive Structures for a Successful Resolution

Choosing a Strategy for the Resolution of Stress Situations

- Identify all interested parties (usually more than just government and private investors).
- Identify and address changes in incentive structures required to bring about a resolution.
- Depending on available tools, it may be possible to choose between voluntary and involuntary resolutions.
- It may also be possible to choose from various formal and informal mechanisms to resolve stress situations (e.g., London approach vs. alternatives).
- In addition, whenever the framework allows, there may be a choice between court-based vs. administrative resolution mechanisms.
- Another choice that needs to be made relates to the jurisdiction or forum where resolution proceedings will take place (domestic or foreign, fully private, or sponsored by official bodies).
- Make sure that there are enough financial engineering tools on the table (e.g., securitization).

Project Restructuring Proposal

Project managers should propose a restructuring plan to the steering committee, built on the project's business plan and forecasts, paying attention to all contractual priorities including collateral positions.

Committee's Advisory Report

Project managers should grant to the steering committee's advisors access to examine the project's business and financial situation, to prepare an advisory report. The advisory report should include an analysis of operations and future prospects, as well as recommendations and conclusions.

Negotiation of a Restructuring Plan

Using the restructuring proposal prepared by project managers and the committee's advisory report, the troubled project and its creditors should enter into negotiations to achieve a restructuring plan. The plan should respect contractual positions, including creditors' collateral rights and subordination agreements.

Negotiations are voluntary, with commercial considerations controlling each party's decision making.

As unanimity between all creditors is unlikely, project covenants may be designed to accommodate "pre-negotiated" plans, making them binding on all creditors including those who would not consent to it. However, "pre-negotiated" plans should always respect the principle of non-discrimination (e.g., between foreign and domestic creditors, or within comparable classes of creditors).

Credit Enhancement Guarantees

Investment guarantee agencies backed by official sources often guarantee cross-border investments, including power projects, indeed, and investments associated to the financial restructuring of projects.⁵⁵ Investment guarantee agencies are flexible regarding eligible types of investments, which include equity, shareholder loans, senior loans, and loan guarantees issued by equity holders. Other eligible investments

⁵⁵ Some are government agencies such as the Overseas Private Investment Corporation (OPIC) in the United States. Other agencies enjoy multilateral backing, such as the Multilateral Investment Guarantee Agency (MIGA), an arm of The World Bank Group, and the Partial Risk Guarantee instrument of the World Bank.

include management contracts, leases, and franchising and licensing agreements, provided the remuneration of the investor is ultimately tied to the project's operating results. Normally, applicants must be nationals of a member country other than the country in which the investment is to be made, although sometimes agencies may also insure an investment made by a national of a host country provided the funds originate from outside the country.

Guarantees typically protect against the following kinds of risks:⁵⁶

1. *Currency inconvertibility and transfer restrictions.* They protect against losses arising from an investor's inability to convert local currency (capital, interest, principal, profits, royalties, and other remittances) into foreign exchange for transfer outside the host country. The coverage also insures against delays in acquiring foreign exchange due to host government action, although currency depreciation is usually not covered. We consider this in section Exchange Risk Mitigation, below.
2. *Expropriation.* Guarantees often protect against losses arising from host government actions that weaken or eliminate ownership of, control over, or rights to the insured investment. In addition to outright nationalization and confiscation, "creeping" expropriation is also covered.
3. *War and civil disturbance.* Agencies provide protection against loss or damage to tangible assets caused by politically motivated acts of war or civil disturbance in the host country. In many cases, war and civil disturbance coverage also extends to events that result in an interruption of project completion or operations.
4. *Breach of contract.* Guarantees also protect against government's breach or repudiation of a contract with the investor. In the event of a breach or repudiation, the investor must first be able to invoke a dispute resolution mechanism (e.g., arbitration) and seek to obtain an award for damages. If, after a specified period of time the investor has not received payment or if the dispute resolution mechanism fails, the investment guarantee agency may pay compensation.
5. *Policy and regulation.* Such a guarantee provision may also be included under the Breach of Contract provision and protects against government not respecting the provisions establishing and/or maintaining regulatory agencies, the agency's independence or government issuing laws or directives contradicting the provisions of the underlying contract, especially as related to tariff policy, taxation and subsidies.
6. Guarantees are also frequently sought to protect against other collateral issues, including fuel price fluctuation risk, project completion risks, national partner debt repayment risk and force majeure.

The leveraging capacity of guarantee mechanisms and their flexibility are significant. Many of the guarantee instruments available in the market or offered by the WBG and other IFIs, have demonstrated that they can efficiently contribute to stress alleviation and even to preventing the emergence of stress situations. Experience suggests that guarantees from multilateral institutions act as a stress deterrent rather than a post-stress recourse: as an illustration, very few Bank Group-issued guarantees have been called ever, not because of the intrinsic nature of the projects, but because the involvement of a multilateral institution as guarantor may facilitate the dialogue between the various stakeholders. One criticism addressed to guarantees offered by IFIs is that the procedure to call a guarantee may be slow, as the nature, extent, and magnitude of the risk needs to be fully documented before the guarantee can kick in. This drawback has been addressed in the more recent operations through a mechanism based on irrevocable Letters of Credit with a local bank, which considerably shortened the time needed to action the guarantee, when it

⁵⁶ See MIGA "Investment Guarantee Guide."

Box 4.3 Indonesia Applies Learning from East Asia Crisis

The East Asia Financial crisis hit Indonesia hard. Recovery has led to the realization that continued economic growth will require more infrastructure and that the private sector has a major role to play. The "Indonesia Infrastructure Summit 2005" allowed the government of Indonesia set out 91 priority infrastructure projects with an estimated value of US\$22.5 billion over the next five years. The priority list included 12 power sector projects with an estimated value of US\$5.9 billion. Private sector speakers highlighted long-running concerns regarding pervasive legal ambiguity, the lack of strong, independent regulators, inconsistent tariff policies, and difficulties acquiring land. In the power sector, the Electricity Law 20/2002, which liberalized the power sector, was nullified by the Constitutional Court in December 2002. A stop-gap measure was immediately enacted and a new law was promised for end-2005. Except for exceptions for renewable energy, marginal natural gas, and mine-mouth coal, excess power or "emergency" projects require private investors to partner with the state-owned power company (PLN) under an open tender process. Potential investors pointed out that

the legal instability, new regulations, the absence of an independent power regulator, and the weak financial status of PLN would hinder new projects "without adequate government guarantees."

The government outlined a new "Risk Sharing Framework." Prior to the financial crises, the government issued guarantees or "letters of comfort" purporting to insure investors against a variety of commercial risks. Since the crisis, the government had refused to issue such guarantees because of the large losses it suffered during and after the financial crisis. The new policy is to be "adaptive and pragmatic" and will "only extend a guarantee on government performance and regulatory risks in well-defined areas and where it is absolutely necessary." All such guarantees will only be offered after a complete assessment of the risk, including contingent liabilities and when "no other forms of mitigating instruments are available to cover such risks." The government has requested help from the World Bank and the Asian Development Bank in developing a detailed risk-allocation and mitigation framework.

has to be called. Moreover, MIGA, the IFC, the Bank and most other IFIs have the requisite in-house expertise to provide advice and deploy guarantee instruments to help fix or exit stress situations. As part of the mainstreaming of IBRD and IDA guarantees, and in addition to MIGA, IFC, and other IFI guarantee instruments, diagnoses should systematically be made to assess whether guarantee instruments may and should be deployed to remediate stress situations.

Especially in the power sector, some countries offer such limited guarantees directly as part of their own, national risk-sharing framework. Frequently such guarantees take the form of "letters of comfort" issued to investors to protect against stated commercial risks. This mechanism is not acceptable to many investors since the

guarantee is issued by the very sovereign which may have triggered the call under the letter of comfort by not implementing or respecting contractual obligations. The nature of such limits of interest also frequently mean they were entered into without adequate review and without a complete risk analysis, including contingent liabilities. Perhaps because of this, many projects suffered large losses, especially during and following a macroeconomic crisis.

Risk assessment and the assumption of such defined commercial risks is a highly technical area and should not be offered lightly, although their complexity should not be overestimated in reality as evidenced by the increasing number of energy projects which have benefited from guarantee instruments, particularly in the Middle East and in Africa. The issuance of any

guarantee, whatever it may be called, should be undertaken after a full and complete assessment of all risks, direct or contingent and including the reputational risk to the issuing agency or government in case a call is made under the guarantee instrument.

Exchange Risk Mitigation

Exchange risk mitigation is frequently considered as a major factor in the reluctance of power sector investors to invest in developing country infrastructure projects. This reluctance was enhanced by the East Asia Crisis and subsequent currency crises in Argentina and Brazil. As described earlier, there are two broad categories of causes of project stress, namely, country-specific issues related to the behavior of the host government vis-à-vis the power sector and macroeconomic shocks which are not specifically related to the power sector. Most power projects seem to come under stress as a combination of both kinds of shocks both kinds of stress are generally closely related to the exchange rate.

Frequently the investment and related debt are denominated in a currency other than the cash flow created through the tariffs approved by regulators in accordance with the agreement between the investor and the government. Such industry regulation and pricing, is frequently specified as being in, or directly related to, a currency in which the investment and debt are mostly denominated. This was generally considered “a perfect hedge” against exchange rate fluctuations. Experience has shown that governments, notwithstanding their contractual obligations, are unwilling and frequently unable to raise tariffs sufficiently rapidly to keep pace with rapidly changing exchange rates. Especially at the time of rapid, macro-shock-induced collapse of the local currency and exchange rate, governments are entirely unable to impose large, harsh tariff raises on the already suffering population. As a result, the most frequent cause of stress was industry regulation and pricing.

Shocks cannot be handled through sector-specific strategies, but instruments may be made available to soften the impact of macroeconomic shocks on power projects. However, one needs to be careful since risk management instruments that were expected to help deal with contract compliance under extreme circumstances may fail to do so in real-life situations. Hence, designers should include the possibility of contract renegotiation under severe macroeconomic shocks as a last resort. Another approach is the use of hedging mechanisms underwritten by a third party—commercial credit granting agencies or, for less credit-worthy countries, most likely international financial institutions

Securitization

Securitization is the process of converting loans or receivables into negotiable instruments. It enables non-tradable assets that range in marketability, credit-worthiness, and size to become liquid secondary instruments through repackaging, credit-risk enhancements, and cash-flow structuring. Securitization facilitates the separation of different risk and reward expectations, broadens the investor base, and allows loans to be more efficiently priced.⁵⁷ Securitization, though, is not without its weaknesses. In addition to interest-rate risk and credit risk, prepayment risks exist and are major concerns for investors on the secondary level. The placement of securitized products with investors generally requires giving adequate protection against risk of default to eliminate the need for them to monitor the collateral directly.

Foreign investors seeking to participate in a project-related securitization are faced with several dilemmas:

1. *Differentiation of asset quality.* Investors are unfamiliar with the business practices of a project and feel they may be misguided by project managers who possess insider knowledge. One way around this problem

⁵⁷ An introduction to securitization as well as further reference can be found in Ergungor, O., “Securitization,” Federal Reserve Bank of Cleveland (2003).

is by taking advantage of a project's valuable assets, which should be separated out by setting up a new legal entity. Through this act of differentiation, the asset quality of collateral becomes more transparent.

2. *Uncertainty over legal concerns.* The underlying claim to the transferred assets is plagued by uncertainty over the true-sale nature of the collateral. Because any securitization will rely heavily on how the cash flow from the debtor project will be accounted for by the creditor, it is important to regulate the transfer of receivables in the transaction. Since most asset securitizations will create a Special Purpose Vehicle (SPV) which will issue securities to foreign investors, there would have to be guarantees that cash can be passed from the project onto third parties. Securitization structures also rely on bankruptcy remoteness. Specifically, it is important to cleave the assets from the originators' balance sheets, to ensure that in the event of a bankruptcy the "true sale" of the assets is legitimate.
3. *Stability of the cash flow.* Investors are wary over fluctuations in credit ratings and desire credit enhancements over the annuities. The ability to obtain a reliable credit rating is a vital component of securitization in developed markets. While no credit rating agency would have an easy time assessing the risks, some form of credit enhancement through both internal and external collateralization is nonetheless necessary to give investors a sense of security. Concerns about the Stability of Cash Flow might be assuaged by the mobilization of alternative WBG workout instruments, mixing traditional WBG guarantee products (for example project-specific workout technical assistance package combined with a PCG), to financial or legal technical assistance support to help critical projects exit stress situations.

Although not adapted to every stress situation multilateral institutions can facilitate project loan securitization. World Bank Group (WBG)- or IFI-assisted project loan securitization may, under the right circumstances, provide sound

alternative risk transfer mechanisms with such agency acting as the *de facto* (umbrella effect) or *de jure* guarantor for large energy projects but do not want to—or cannot—keep the full loan exposure on their books. That institution may then securitize all or part of a loan or loan participation to refinance it, thereby both managing its own risk exposure and freeing up debt capacity for additional lending (an example of such a securitization can be found in a 1995 transaction that IFC structured on behalf of Mexican cement producer, Apasco SA in the wake of the peso devaluation).

Summary

The first step for the workout of power projects is to organize the process. The international experience suggests that the government and the investors should have a parallel workout structure with, on the government side, a Government Team leading the process for the government, and an intervention team dealing with the technical aspects of the workout. On the investor's side a Core team should be appointed to lead the process, supported by a team of Advisers. With the government as well as with the investor, the separation between the leading and decision-making team, and the technical or advisory team dealing with technical matters and implementing the instructions from the higher-level team can be expected to accelerate the workout process and to produce better quality results.

The workout process can follow several routes. Traditionally, the mediation and arbitration approaches have produced good results, particularly when their rules of operation have been embedded in the project documentation. More recently, the London Approach for unexpected stress situations has produced good results in the financial sector and could be applied to the power sector.

The workout instruments are becoming more and more complex over time, particularly with the irruption of securitization and derivative instruments. Each of the restructuring instruments, discussed below, can involve IFIs in various capacities:

- Financial restructuring instruments, including debt for equity swaps, debt write-down, refinancing, rollover (“evergreen”).
- Credit enhancement, mainly guarantees against currency inconvertibility, expropriation, war and civil disturbances, breach of contract and policy/regulatory risk, fuel price provided by bilateral or multilateral guarantee agencies including the WBG, and completion risks.
- Exchange risk management is a major risk for power projects; the revision of pricing formula to match the exchange risk on loans, has not functioned well in practice; no fully satisfactory alternative has been found, except using hedging instruments, when available, and allowing for renegotiation in case of wide exchange rate fluctuations.
- Securitization is an increasingly popular instrument, but the assessment of the quality of the underlying assets poses a number of issues; the diverse legal regime applicable to the collaterals can also make the securitization complex for foreign investors who are not familiar with the power markets. IFIs and particularly the WBG can contribute to stabilize the underlying cash flow and facilitate the securitization of project loans as part of a workout.

The workout process remains a case specific process. Nevertheless, the rules procedures and instruments reviewed in this chapter are susceptible to facilitate the process in the power sector.

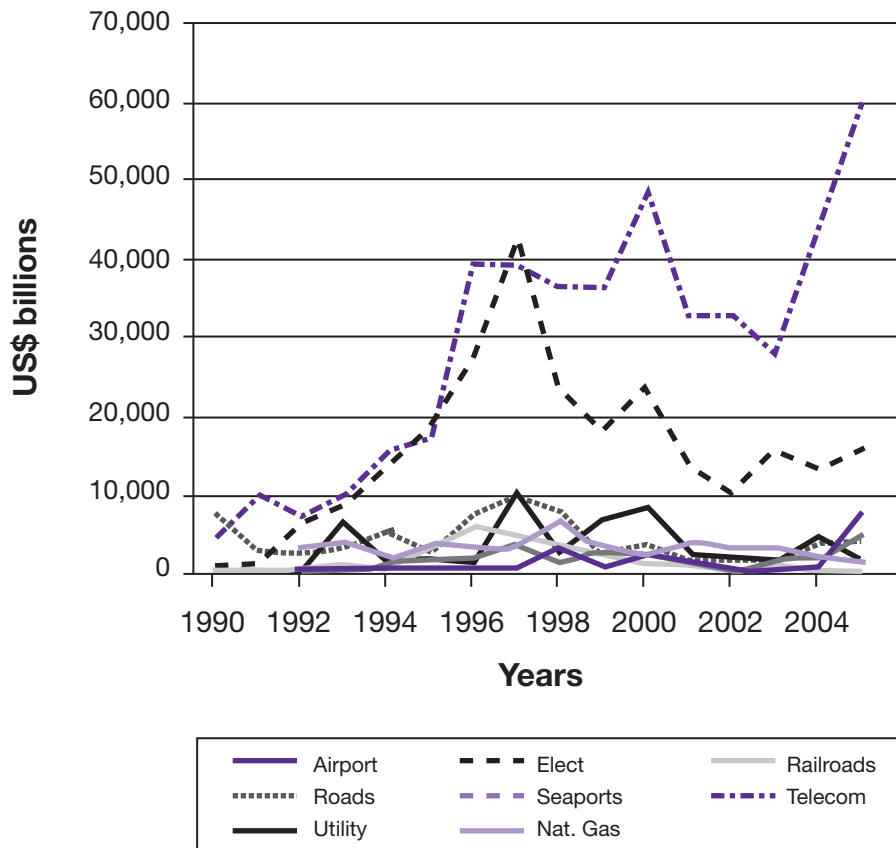
5 Conclusion

The trend in private investment in infrastructure indicates that private investment in the electricity sector, to the difference of the telecom and natural gas sectors, has not recovered yet from the 1998 confidence crisis. The decrease in private investment in electricity therefore does not result from an overall flight of investors from emerging markets, but from considerations intrinsic to the power sector and the perception

of a high risk compared to the potential return. The need to take action to restore investors' confidence in power sector investment is clear.

The preceding chapters have presented detailed information on the characteristics of power projects that have been or are under stress. An analysis of and typology of the types of stress situations observed in reality and of their

Figure 5.1 Private Investment in Infrastructure by Sector, 1990-2005



frequency of occurrence has been presented, and the most frequent consequences of stress for investors, lenders, and governments were identified and discussed. The results show that power projects with private investment are in fact low risk: they have a low probability of stress or failure, with only 5% of the project affected. This conclusion contradicts the general perception that private power projects in emerging markets are higher risk than other types of investment because of their capital intensive nature, their long time horizon, and the immovability of the assets. Clearly, infrastructure projects suffer from a communication bias, through which a few problem projects attract more attention than the numerous successful projects. The analysis, though, indicates that a determining factor in the risk level of power project is whether in the normal course of business the project interacts with the general public. Interaction with the public clearly increases the risk of stress due to sociopolitical problems.

Chapter 3 discussed how to prevent the occurrence of stress by taking into account a number of principles and applying a number of preventives measures to be built in the project design. These principles and measures are the following:

- Awareness and acceptance of the fact that long-term arrangements that underpin most power projects, even if tightly written and legally waterproof, are likely to need adjustment at some point in time, in the interest of the investor or the government, and reasonable adjustment should be integrated in the project life rather than resisted.
- Liberal disclosure to the public of information concerning agreements between the investor and the government and the operation of the project should be encouraged and implemented to build trust and awareness of shares interest between the investors, the government, and the public.
- Procedures need to be built in the project structure to handle transparently unforeseen events and situations. The emphasis should be on flexibility and procedures rather than

on trying to anticipate all possible events and deciding ex ante how they would be handled.

- The project structure should be considered as a partnership in risk management preferable to an exercise to transfer risks to other parties. Key risks that are mainly outside of the control sphere of any of the parties, such as macroeconomic risk, currency risk, price risk, and demand risk may need to be shared between the host country and the private parties, preferably to being assigned entirely to one party.
- The involvement of the parent company of the investing entity (most of the time an Special Purpose Company), as well as some backing from the host government should be recognized as necessary. Their support or level of guarantee should be reduced to the minimum needed for the project creditworthiness, but it should be recognized that some form of involvement and guarantee from both parties is likely to be required.

The menu of procedures and instruments available to facilitate a workout, if the approach and principles mentioned above could not prevent the emergence of a project crisis, is expanding. New and flexible procedures and instruments have been successfully tested in the power sector and in other infrastructure sectors. The London Approach offers an internationally recognized procedure for handling transparently and fairly crisis situations, as an alternative to the traditional mediation and arbitration procedures when they were not built into the project structure. New instruments are available, such as securitization for financing project workout, calling on the financial market and investment funds rather than commercial banks for new loans or lines of credit. The positive role of IFIs as facilitators of workout, source of additional financing under risk structures that commercial banks are not prepared to accept, or guarantor for certain risks for financial restructuring, securing fresh money, or for securitization is recognized by investors as well as lenders and governments.

The power sector is special, compared to other industrial activities, in that the continuity of service and operations is essential. The reputational risk of an interruption is significant for the government, because of the political fallout of an interruption, and for the investors and lenders, as the liquidation of a project would affect their business reputation and their chances to be involved in future projects in the sector. These are strong incentives for the governments, the investors, and the lenders to work out their differences in case of project stress. Ultimately,

the skillful integration of workout procedures in power project design and the recourse to flexible workout instruments can be a positive risk-limiting and management factor. The propose of the present study was to demonstrate that in the rare instances where project workout is necessary, there are procedures and instruments that can make the process acceptable from the business and political standpoint, and therefore, the limited risk of stress should not be a deterrent to investing in well-structured power projects.

Annex 1

Changing Incentives in the Project Cycle: Hungary's Electricity Privatization

In the fall of 1994, the newly elected government in Hungary announced plans for the liberalization of the country's electricity sector. Urgent needs for rehabilitation investments combined with budgetary pressures, translated into the need to introduce foreign investment by privatizing generation and distribution assets. During 1995, however, disputes within the government and pressure by interest groups resulted in delays of the privatization program. Nonetheless, the need to generate privatization revenues to bolster the general budget forced the government to move ahead.

In October 1995, the government announced tenders for 14 electricity generation and distribution companies, with a bidding deadline in December. However, this short timeframe did not allow the government to address key regulatory issues, in particular the development of a long-term pricing formula. At the same time, potential bidders complained of having received unclear and incomplete tender documentation. The government therefore was forced to make last-minute changes in the tender procedures and requirements.

In order to compensate for the lack of a long-term pricing formula, the government guaranteed investors 8 percent return on their investment to be implemented in January 1996. The pricing uncertainty needed to be resolved after the privatization sale through studies by the regulatory authority. In August 1996, however, the Cabinet rejected a 39 percent price increase as proposed by the electricity regulator, yielding to protests by consumers. Instead of relying on the regulator, the government established a separate commission to reinvestigate the tariff question. The review resulted in a tariff increase of only 22 percent, which investors claimed fell far short of the promised 8 percent return.

During the next election campaign in 1998, the new government threatened a possible renegotiation of all electricity tariffs, and when in power announced possible further limitations to tariff increases. By December 1998, the dispute had finally been settled following a series of tariff adjustments that eventually brought the electricity price to a level acceptable to the market. However, during the years immediately following privatization, investors had to absorb substantial initial losses.

Annex 2

How Reliable Are Sovereign Guarantees?

In March 1994, the government of Pakistan announced a policy regarding private infrastructure investment in order to boost the country's electricity generation capacity. Prior to this policy, attempts to introduce IPPs failed because of a cap on the rate of return imposed on every potential project. According to the new policy, sponsors were invited to propose individual projects with their own choice of technology, location, and fuel type for a set tariff per kWh. In addition, the government established a private power board to facilitate the implementation of IPPs. The government provided guarantee packages for political, force majeure, change-in-law and currency convertibility risk.

In response, the government received proposals for 7,000 MW of generating capacity, and 21 projects were approved and were under construction or operational by end-1998. Under this policy, the 1,292 MW Hub River project was the first to be implemented. It was also the largest IPP in the country with project cost of US\$1.5 billion and stood out through substantial involvement of the World Bank Group with a \$225 million loan as well as a \$240 million guarantee facility.

A new government, elected in February 1997, immediately started a review of these IPP contracts. The government came under pressure while the state-run Water and Power Development Authority (WAPDA) ran losses, making it increasingly difficult to meet the take-or-pay arrangements with the IPPs coming on line. WAPDA could not complete transmission lines to get some projects connected and failed to make the contractual penalty payments. The government claimed fraudulent practices and corruption were involved in the negotiations. The previous Managing Director of WAPDA was temporarily jailed, charges were filed against several executives, a special review committee was put in place and the military took control of WAPDA. The Prime Minister demanded a 30 percent cut in tariffs by all IPPs, refusing to pass on these costs to consumers through tariff increases. In October 1998, a termination notice was sent to HUBCO, the Hub power project company and the government claimed that the company had received excess payments worth US\$370 million. HUBCO in response claimed breach of contract by the government and initiated international arbitration proceedings at the International Chamber of Commerce in London.

Annex 3

The Role of International Arbitration

In 1994, the government of the eastern Caribbean island of Grenada sold a 50 percent stake in the island's electricity company to the U.S. company WRB Enterprises for US\$5.6 million. WRB received an exclusive license to generate, transmit, and distribute electricity, as well as a waiver on outstanding tax debts prior to the sale and duty concessions for the import of machinery. The agreement was heavily criticized by the country's labor union and the political opposition. When the opposition party came to power in a subsequent election, the government refused to approve the privatization in Parliament, claiming that the deal had been unfair and that the company had been sold at half its value.

In July 1997 the government finally threatened to renationalize the company by buying out WRB, but without any indication of the valuation method to be applied. WRB refused to renegotiate the agreement, maintaining that its 1994 agreement was legally binding, and brought the case for arbitration before the International Centre for the Settlement of Investment Disputes (ICSID) at the World Bank. Upon hearing from its legal advisors that it had no legal basis for challenging the sales agreement, the government finally accepted the privatization in May 1998 and promised to pass the contentious bill.

(a) PPI and Power Projects under Stress

BESANT-JONES, John and TENENBAUM, Bernard, "Lessons from California's Power Crisis," *Finance & Development*, Vol. 38 (3), September 2001.

This article is based on a longer paper, "California Power Crisis—Lessons for Developing Countries," published by the Energy Sector Management Assistance Program, a joint program of the World Bank and the United Nations Development Program, and the World Bank Energy and Mining Sector Board, in April 2001. The paper assesses whether the crisis could have been avoided through better market design and management.

COVINDASSAMY, Ananda M. "Analysis of Power Projects with Private Participation Under Stress," *Energy Sector Management Assistance Program, The World Bank*, 2005/10/01.

Abstract: This report aims to (1) understand what economical, political, or contractual events affecting power projects in a region or a specific country led to project distress; and (2) establish how they affected the various private power projects. The report describes and analyzes the trends in private participation in the electric power sector in developing countries over the 1984–2003 period. The analysis is based on the survey of 63 electricity projects under stress. It identifies the most significant causes of stress, describes the most frequent stress factors and their combination in "stress patterns," and presents the consequences of the stress patterns on power projects. Beyond the presentation of

stress patterns, the report provides insights in the relationship between power sector reforms, privatization of power utilities and success/failure of private power projects.

DECLERCQ, Eddy, "The Concept of Public-Private Partnerships," *Terra et Aqua* No. 75, June 1999.

Abstract: Implementation of a trans-European transport network is of the highest priority in the European Union. Since inter-European dredging projects are essential to the realization of a trans-European transport network, the European Dredging Association (EuDA), with the co-operation of Directorate General VII, Transport, sponsored a study to determine the feasibility and form of utilizing public-private partnerships. This article is based on the study commissioned by the EuDA and executed by the Centre for Intermodal Research (CIR).

EUROPEAN COMMISSION, *Guidelines for Successful Public-Private Partnerships*, European Commission, March 2003.

Abstract: This document was designed as a practical tool for PPP practitioners in the public sector faced with the opportunity of structuring a PPP and of integrating or "blending" European Communities grant financing in PPPs. The report is to focus on a number of critical issues influencing the successful integration of public grants, private funds, IFI loans (such as the EIB or EBRD) and European Commission financing. Reference is made to a number of analytical techniques which are well known and documented. These are not presented with the objective of promoting a standard methodology but rather in an attempt to highlight areas in

which particular care and analysis needs to be observed. The Guidelines are not designed to provide an exhaustive list of PPP structures nor present any structures as having the endorsement of the Commission. The Guidelines present five thematic parts dealing in turn with: 1. PPP structures, suitability and success factors. 2. Legal and regulatory structures. 3. Financial and economic Implications of PPPs. 4. Integrating grant financing and PPP objectives. 5. Conception, planning, and implementation of PPPs.

FITCH RATINGS, “Public-Private Partnerships: The Next Generation of Infrastructure Finance,” Special Report, August 2004.

Abstract: This August 2005 report presents a synthesis of a comprehensive database of highway infrastructure projects from around the world financed or delivered through some form of public-private partnership (PPP). This synthesis provides insights into the nature and extent of highway infrastructure projects that have and are being advanced through various types of PPP contractual arrangements. They also reveal the predominant types and sizes of PPP contracts used in various regions and countries around the world for developing different types of highway infrastructure, including roads, bridges, and tunnels. The results of this synthesis are intended to inform those involved in the development, funding, or delivery of highway infrastructure regarding the worldwide use of PPPs to delivery highway and other forms of public use infrastructure.

GRAY, Philip, “Colombia’s Gradualist Approach to Private Participation in Infrastructure,” *Public Policy for the Private Sector* No. 113, The World Bank, May 1997.

Abstract: Like the model adopted by many Asian countries, the Colombian approach to private participation in infrastructure aims to attract project financing for new facilities, leaving most existing assets in state hands. While the approach has been successful on attracting substantial private capital to Colombia, it has been less successful in delivering the potential

efficiency gains or the reforms that will ensure that assets remain private and that private sector actions are constrained by the stable set of rules and regulations. Recently, Colombia has moved toward the model adopted by other countries on Latin America—privatizing existing assets—a policy likely to provide a more enduring basis for reform.

HARRIS, Clive, *Private Participation in Infrastructure in Developing Countries: Trends, Impacts, and Policy Lessons*. Washington, D.C.: The World Bank, 2003.

Abstract: The rapid growth of private participation in infrastructure (PPI) in developing countries during the 1990s was followed by a subsequent decline in investments and the re-negotiation and cancellation of some prominent projects. This has led to controversy as to the impact and the future of PPI. This report attempts to explain the factors behind the growth and decline of PPI, its impact and the policy lessons that have been learnt from this experience. It concentrates on the experience with the private provision of infrastructure over the last 15 years.

Private Participation in Infrastructure in Developing Countries assesses the impact that the private provision of infrastructure has had on service delivery. Finally, this book reviews the main policy lessons that can be drawn, and what governments need to do moving forward if they are to ensure that the supply of infrastructure services does not become an impediment to growth.

IZAGUIRRE, Karina, “Private Infrastructure: A Review of Projects with Private Participation, 1990–2001,” *Public Policy for the Private Sector* No. 250, The World Bank, 2002.

Abstract: Drawing on the World Bank’s Private Participation in Infrastructure Project Database, this Note reviews developments in 2001 and summarizes trends in 1990–2001. Data for 2001 show that total investment in projects with private participation was US\$57 billion—back to 1995 levels—and 150 projects reached financial closure.

IZAGUIRRE, Karina, "Private Power Projects—Annual Investment Flows Grew in 2003," *Public Policy for the Private Sector* No. 281, The World Bank, December 2004.

Abstract: Drawing on the Bank's Private Participation in Infrastructure Project Database, this Note reviews developments in the electricity sector in 2003. Data for the year show that total investment in electricity projects with private participation amounted to US\$14 billion. Private activity grew strongly in East Asia and Pacific, but remained stable, or fell in other regions. After the boom of 1996–2000, investment flows to electricity fell significantly after peaking in 1997, but are still comparable to pre-boom levels. Annual investment flows in 2001–03 averaged US\$12.9 billion, slightly higher than the US\$12.2 billion in 1990–95. During the boom of 1996–2000 annual flows averaged US\$29.8 billion. The decline in private activity played out differently across the developing regions. Latin America, the most active region in the late 1990s, sustained investment flows at levels higher than those of the early 1990s, while East and South Asia saw annual flows fall below those levels.

KAHN, Alfred, *The Economics of Regulation: Principles and Institutions*, MIT Press, 1995.

Abstract: As chairman of the Civil Aeronautics Board in the late 1970s, Alfred E. Kahn presided over the deregulation of the airlines and his book, published earlier in that decade, presented the first comprehensive integration of the economic theory and institutional practice of economic regulation. In his lengthy new introduction to this edition Kahn surveys and analyzes the deregulation revolution that has not only swept the airlines but has transformed American public utilities and private industries generally over the past 17 years.

While attitudes toward regulation have changed several times in the intervening years and government regulation has waxed and waned, the question of whether to regulate more or to regulate less is a topic of constant debate, one that *The Economics of Regulation* addresses incisively. It clearly remains the standard work

in the field, a starting point and reference tool for anyone working in regulation.

Kahn points out that while dramatic changes have come about in the structurally competitive industries—the airlines, trucking, stock exchange brokerage services, railroads, buses, cable television, oil and natural gas—the consensus about the desirability and necessity for regulated monopoly in public utilities has likewise been dissolving, under the burdens of inflation, fuel crises, and the traumatic experience with nuclear plants. Kahn reviews and assesses the changes in both areas: he is particularly frank in his appraisal of the effect of deregulation on the airlines.

His conclusion today mirrors that of his original, seminal work—that different industries need different mixes of institutional arrangements that cannot be decided on the basis of ideology.

KISHI, Masumi, "Foreign Direct Investment by Japanese Firms and Corporate Governance in Relation to the Monetary Policies of China, Korea and Japan," *Journal of Asian Economics*, 13 (741–748), 2003.

Abstract: Reflecting upon the lessons from the Asian currency crises, more attention is being paid to the importance of consolidation for the domestic financial and capital markets, as well as international cooperation to avoid disturbing factors from abroad, such as massive inflows of speculative capital. The aim of financial reforms being executed in the East Asian countries, such as Japan, Korea, and China, is to improve the managerial efficiency of the business corporations and financial institutions.

Recently, foreign direct investment by Japanese firms in the rest of East Asia has been recovering. However, the existence of a financial system to realize optimal corporate governance is indispensable for the enhancement of direct investment. Namely, it is necessary to improve corporate profitability, and to distribute the increment of such profits between the host and the investor countries, in order to boost the welfare of the respective citizens, notwithstanding the type of foreign direct investment.

LYNCH, David, "Financing Private Infrastructure Projects—Australian Investment Bank's Experience," Briefing Paper for the APEC Financiers Meeting, Tokyo, Japan, February 1996.

Abstract: This briefing note examines the experience of Australian investment banks (domestic and foreign owned) in private infrastructure financing, both in Australia and in the Asia-Pacific region as a whole. Discussion in the paper draws on a range of material, including interviews conducted with key players in the market, government reports, bank annual reports, media reports and papers by industry participants. A broad overview of banks' private infrastructure business is given to provide insights that are useful to countries in APEC.

Infrastructure is important because it is an essential input to economic growth. Private sector finance of infrastructure in the region has expanded rapidly over the past five years and this trend is expected to continue over the remainder of the decade. Banks play an important role in this process by raising the amount of finance available for infrastructure development and lifting the quality of projects undertaken. Australian investment banks have developed a strong expertise in infrastructure finance domestically, which they now apply to countries across the region.

Section Two provides background for the brief by reviewing important infrastructure concepts. Section Three outlines investment bank's experience with private sector infrastructure financing in Australia. Section Four examines their corresponding experience in the Asia-Pacific region. Concluding comments are given in Section Five.

MANIBOG, Fernando, Power for Development: A Review of the World Bank Group's Experience with Private Participation in the Electricity Sector, Washington, D.C.: The World Bank, 2004.

Abstract: Power for Development evaluates the performance of the World Bank Group (WBG) during the 1990s in promoting private sector

development in the electric power sector. This joint review aims to inform the implementation of the WBG's 2001 Energy Business Renewal Strategy and the 2003 Infrastructure Plan. It is based on an evaluation of the WBG's assistance for private sector development of the electric power sector in 80 countries.

The main messages of the report are these:

1. The WBG should continue to support private sector development in the electric power sector as a key objective. Well-implemented Bank Group activities in this area can improve sector efficiency in countries politically committed to the advancement of power sector reforms.
2. Outcomes of International Finance Corporation and Multilateral Investment Guarantee Agency transactions have been positive, but the Bank's project-level outcomes were disappointing, mostly because the Bank underestimated the complexity and time required for reforms to achieve lasting and equitable outcomes. At the sector level, outcomes have been poor or, at best, mixed, except in countries fully committed to reforms.
3. Private sector development of the electric power sector is a work in progress because the power sector reform process is complex, takes time, is resource-intensive, and requires phasing and careful sequencing to create the conditions for sector transformation.
4. Much work remains to integrate poverty reduction and environmental mainstreaming into the design of power sector reform and related strategies, which to date have focused mostly on sector efficiency and macro-fiscal objectives.

NIKOMBORIRAK, Deunden, "Private Sector Participation in Infrastructure—The Case of Thailand," Institute Discussion Paper No. 19, ADB, December 2004.

Abstract: Thailand is one of the economies of the region where there has been the strongest level of private interest in infrastructure, particularly in telecommunications.

This paper examines the details of the contracts issued by the regulatory authorities in different sectors. It highlights some of the key problems faced by private investors and points to the inconsistency of treatment in some cases. Nonetheless, Thailand is one of the most favored locations for private infrastructure investment in the Asian region.

RECTOR, Jeff, "The IPP Investment Experience in Malaysia," Working Paper No. 46, Program on Energy and Sustainable Development, Stanford University, August 2005.

Abstract: Malaysia serves as a useful example of a highly self-contained model of IPP program implementation: the composition of project investors was almost exclusively domestic; debt financing for the projects came exclusively from domestic sources and was based in local currency; and fuel, the largest component of total project cost in the gas-fired thermal plants that Malaysian IPPs employed, came solely from domestic sources. These features made Malaysia's IPP sector less vulnerable to the shock of the Asian financial crisis than its neighbors, but by no means immune. Malaysia's partially privatized but state controlled off-taker had high levels of foreign currency debt for which repayment obligations became enormously burdensome as a result of the currency devaluation that Malaysia experienced during the crisis. Additionally, the Asian financial crisis led to a contraction in the Malaysian economy, which resulted in a slow-down of electricity demand growth and exacerbated an overcapacity problem that was already causing serious financial strain on the government off-taker. The outcome of subsequent negotiations between the off-taker and the IPPs during the Asian financial crisis and its aftermath raise interesting questions regarding the sources of reliability of state-entity commitments made to private power investors.

SADER, Frank, "Attracting Foreign Direct Investment Into Infrastructure—Why Is It So Difficult?" Foreign Investment Advisory Service, Occasional Paper 12, 2000.

Abstract: During the 1990s, the developing world witnessed a massive increase in private sector involvement in infrastructure investments. Driven by foreign direct investment, areas that had traditionally been defined as public sector responsibilities benefited from substantial commitments of capital and resources. The World Bank PPI Project Database indicates that an estimated total of 1,707 private infrastructure projects worth US\$458.2 billion were concluded from 1990 to end-1998. A dataset compiled by FIAS shows that foreign direct investment was the engine behind this development, with foreign investors involved in over 80 percent of transactions. During this period developing countries received an estimated US\$138.3 billion in foreign direct investment from these infrastructure investments.

However, despite this rapid growth, this new industry has been beset with difficulties. Delays in project startups, contract cancellations, and legal disputes have frequently overshadowed success stories and efficiency gains. Governments have tended to find it difficult to structure and design these new types of investments, being unfamiliar with the complicated nature of project finance transactions. Nonetheless, it remains true that, supported by a strong policy framework, private sector financing and operation of infrastructure facilities can result in significant efficiency gains while alleviating budgetary pressures.

SHAW, M. N., *International Law*, 5th ed., Cambridge University Press, 2003.

Abstract: This fifth edition of Malcolm Shaw's best-selling textbook on international law provides a clear, authoritative and comprehensive introduction to the subject, fully revised and updated to spring 2003. Basically preserving the structure that made the previous edition so successful, a new chapter on Inter-state Courts and Tribunals considers the role of the International Court of Justice and the International Tribunal on the Law of the Sea, and there is a new chapter on international humanitarian law. Also examined are arbitration tribunals and the role of international institutions such as the WTO in resolving conflicts. The

prosecution of individuals for violations of international law is examined. Additional coverage of events in Kosovo and Iraq analyzes the questions of humanitarian intervention and the role of the UN. Written in a clear and accessible style, setting the subject firmly in the context of world politics and the economic and cultural influences affecting it, this book remains a highly readable and invaluable resource for students and practitioners alike. The scope of the text makes this essential reading for students of international law, international relations and the political sciences. The book is also valuable to professionals and governmental and international civil servants.

THE WORLD BANK, *Private Participation in Infrastructure: Trends in Developing Countries in 1990–2001*, Washington, D.C.: The World Bank.

Abstract: Drawing on data from the World Bank's Private Participation in Infrastructure (PPI) database, this new book provides an overview of the nearly 2500 private infrastructure projects that were implemented between the period 1990–2001 in 132 developing countries and mobilized investment of some \$754 billion. It covers projects in the transport, energy (electricity and gas), telecoms, and water and sewerage sectors that received private investment through management and lease contracts, concessions, greenfield projects, or divestitures.

Overall, the trend in PPI illustrates a dramatic increase in investment flows between 1990–1997 as governments around the world turned to the private sector for innovative and cost-effective solutions to increasing coverage, raising quality standards, and aiming for cost recovery and sustainability in infrastructure service provision. However, since the economic crises of the late 1990s, a few (but high-profile) cases of cancelled projects, visible corporate governance and accounting problems, and a general global economic slowdown led to a chilling effect on investors and resulted in declines in investment so that 2001 levels paralleled that of the mid-1990s.

THE WORLD BANK, "Study on Investment and Private Sector Participation in Power Distribution in the Latin American and Caribbean Region," Energy Sector Management Assistance Program, The World Bank, April 2005 (draft).

Abstract: In the 1990s, there has been a significant involvement of private investors in the electricity sector in the Latin America and the Caribbean, which was interrupted abruptly near the end of the decade. It appears that investment in the region as still not recovered, while future energy needs for funding in the sector cannot be met without significant re-animation of private sector interest in the region and the sector—most countries operate under tight fiscal constraints that preclude extended public investment.

There are a number of lessons learned through experiences in the various countries in the last 15 years that argue for further studies in more detail on what happened and why it went wrong in some places, or worked well in others. The desk study presents the results of a survey and analysis of the data available on private participation in the power sector in the period 1990–2002, pointing to a series of preliminary findings, and identifies areas where deeper policy analysis is needed so that modalities for public-private partnerships can be proposed and the sector can again attract the needed investments. The final goal of this desk study is to select two or three countries for further analysis. It would be the objective of a subsequent phase, to analyze case studies and present key lessons learned in selected countries and compare them with international experience.

THE WORLD BANK, *The World Bank's Role in the Electric Power Sector*, Washington, D.C.: The World Bank, 1993.

Abstract: The World Bank is changing the way it does business in the energy sector. This Policy Paper is one of two that outlines the Bank's new policies for the sector.

The review was prompted by concern about the effects of power generation on the environment and on populations that may be

resettled to make way for projects. Another stimulus was the macroeconomic reality of fewer investment resources in many countries. And many developing countries are becoming more receptive to reforming the way energy is produced and consumed.

This paper credits the “public monopoly” approach of the last 30 years with facilitating expansion of power supplies, capturing technical economies of scale, and making effective use of scarce managerial and technical skills. Nonetheless, it recommends several new policies to improve the performance of the electric power sector in developing countries. These reforms will guide future Bank activities in the sector.

Bank loans for electric power will go first to countries clearly committed to improving the performance of their power sectors. The Bank will also discourage subsidies on energy prices and will encourage private investment in utilities. And it will provide financing to help the least developed countries import power where local generation is not practical.

The efficiency of production and use of electric power in developing countries is examined in a companion paper, *Energy Efficiency and Conservation in the Developing World: The World Bank’s Role*.

THE WORLD BANK, *World Development Report, Entering the 21st Century: The Changing Landscape of Development*, Washington, D.C.: The World Bank, 1999.

Abstract: This report, the twenty-second in the annual series, addresses the changing development landscape of the early 21st century, particularly the broad pragmatism that moves beyond economic growth to encompass important social goals—reduced poverty, improved quality of life, enhanced opportunities for better education and health, and more. Experience teaches that sustainable progress toward these goals requires integrated implementation and that progress must be firmly anchored in processes that are open, participatory, and inclusive. The report focuses on two clusters of change—globalization and localization—recognizing them as forces that

bring new opportunities but also raise new or greater challenges in terms of economic and political instability. Containing this instability and providing an environment that will help implement a development agenda will be major institutional challenges. The discussion focuses on three main aspects of globalization: trade in goods and services, international flows of capital, and global environmental issues. The examination then shifts to three aspects of localization: the decentralization of political power to sub-national levels of government, the movement of population and of economic energy toward urban areas, and the provision of essential public services in growing cities. To discuss the appropriate institutional response, the report draws on an array of national examples and cross-country empirical evidence.

ZIEGEL, Jacob, and CAUTHIE, Susan I., eds., *Current Developments in International and Comparative Corporate Insolvency Law*, Oxford University Press, 1994.

Abstract: The last decade has witnessed an unprecedented growth in insolvency law in many parts of the world. A deep and prolonged recession in Europe, the United States, Japan, and beyond has fueled the development of sophisticated and conceptually complex sets of laws aimed at coping with the consequences of business failure. The existence of an almost simultaneous program of reform proposals and pressure for further changes in a number of jurisdictions is therefore not mere coincidence, but reflects the global character of the problems caused by corporate collapse. It is of immense importance to lawyers and insolvency practitioners that they are able to understand recent developments in insolvency law in a number of jurisdictions, and that they are aware of what is happening internationally to improve procedures and methods to deal with new problems.

This collection of essays covers recent developments in a number of jurisdictions and looks, also, at developments of the leading corporate insolvency specialists in the United States, the UK, Australia, Japan, and Canada.

This volume will be a vital source of reference on up-to-date matters of law for insolvency specialists everywhere in the world.

(b) Project Governance Arrangements

AOKI, Masahiko, and KIM, Hyung-Ki, *Corporate Governance in Transitional Economies: Insider Control and the Role of Banks*, Washington, D.C.: The World Bank, 1995.

Abstract: When socialist planned economies were first being transformed into market economies, a naive optimism ruled. The transition could be achieved, it was thought, by simply privatizing state-owned enterprises and by introducing the equity market as a means of corporate control. This textbook notion of the capitalist system disregarded issues of political economy, as well as the historical development of national institutions. Recommendations based on such beliefs have proved either unrealistic or simplistic: no single model is appropriate for every country. This volume presents the results of research on corporate governance in transitional economies from the new perspective of comparative institutional analysis. Under this approach, banks and other outside institutions can play an important role in providing corporate governance. In the traditional model, efficient governance is meant to enable stockholders to exercise corporate control. The volume discusses (1) theoretical foundations of corporate governance structures, (2) comparative country experiences, and (3) the relevance of lessons from Germany and Japan. By comparing and evaluating various systems of governance, the authors seek to uncover the factors that support or impede effective corporate control, including historical and socioeconomic conditions and institutional environments. In designing corporate governance structures, economists should identify the specific conditions under which each model of corporate control (or combination of models) can work, the availability of these conditions in the transitional economies, and the most efficient way of achieving these conditions.

BOUBAKRI, Narjess et al., "Post-Privatization Corporate Governance—The Role of Ownership Structure and Investor Protection," *Journal of Financial Economics*, 76 (369–399), 2005.

Abstract: We investigate the role of ownership structure and investor protection in post-privatization corporate governance. We find that the government relinquishes control over time, mainly to the benefit of local institutions and foreign investors. We also show that private ownership tends to concentrate over time. In addition to firm-level variables, investor protection, political and social stability explain the cross-firm differences in ownership concentration. We find that the positive effect of ownership concentration on firm performance matters more in countries with weak investor protection and that private domestic ownership leads to higher performance.

BROGI, Riccardo, and SANTELLA, Paolo, "Two New Measures of Bankruptcy Efficiency," draft presented at the 2003 Annual Conference of the European Association of Law and Economics, September 2003.

Abstract: This study is aimed at developing new empirical models for evaluating the efficiency of bankruptcy and creditor protection legislations.

The paper is divided in three parts. In the first part, we analyze from a conceptual point of view the effects on debtor firms of the lack of creditors' powers in bankruptcy. In the second part, we develop a new rating method for bankruptcy legislations according to their degree of creditor protection and apply it to five European countries. In the third part, we introduce a new approach for empirically estimating the efficiency of bankruptcy legislation based on the cost of banking credit and we test it on the Italian case.

BUBNOVA, Nina B., *Governance Impact on Private Investment: Evidence from the International Patterns of Infrastructure Bond Risk Pricing*, Washington, D.C.: The World Bank, 2000.

Abstract: During the last decade, infrastructure finance and provision graduated from traditional means to more innovative ones, primarily initiated by private companies and supported through their equity and debt. Capital markets increasingly became the main funding source for infrastructure projects worldwide, including investments in developing and transition countries where infrastructure penetration still falls considerably short of needs. Infrastructure bonds served as the most popular method of oil, gas, electricity, telecommunications, and transport project financing in these countries throughout 1990–1999, thereby substituting government funding.

Using an innovative methodological approach, this research paper provides a thorough examination of the effect that governance frameworks, both political and regulatory, have on investors' risk perceptions and on associated costs for infrastructure financing. It identifies those political and regulatory risks that most concern investors. It offers a unique comparative analysis of developed and emerging infrastructure bond markets. The analysis demonstrates how the factors that drive infrastructure finance in the two country groups differ, which helps to identify the policy implications of these factors.

BUCK, Trevor, and SHAHRIM, Azura, "The Translation of Corporate Governance Changes Across National Cultures: The Case of Germany," *Journal of International Business Studies*, 36 (42–61), 2005.

Abstract: Contrasting systems of corporate governance persist internationally but are subject to regulatory and firm-level institutional change. Such changes may be viewed as organizational innovations, often imported from the United States in the face of different national cultures. This paper analyzes the implications of national culture for the translation of innovations and provides case study illustrations of regulatory and firm-level governance changes experienced in Germany. These illustrations demonstrate that the diffusion of both kinds of change has

been subject to substantial translation that is consistent with German national culture.

CASTREN, Olli, and TAKALO, Thomas, "Capital Market Development, Corporate Governance and the Credibility of Exchange Rate Pegs," Working Paper No. 34, European Central Bank, October 2000.

Abstract: This paper introduces a framework for analyzing the role of financial factors as a source of instability in small open economies. Our basic model is a dynamic open economy model with one tradeable and one non-tradeable good with the non-tradeable being an input to the production of the tradeable. We also assume that firms face credit constraints, with the constraint being tighter at a lower level of financial development. The two basic implications of this model are the following: first, economies at an intermediate level of financial development are more unstable than either very developed or very underdeveloped economies. This is true both in the sense that temporary shocks have large and persistent effects and also in the sense that these economies can exhibit stable limit cycles. Thus, countries that are going through a phase of financial development may become more unstable in the short run. Second, in economies at an intermediate level of financial development, full financial liberalization may actually destabilize the economy. On the other hand, foreign direct investment does not destabilize.

CORNERLIUS, Peter, "Corporate Governance and National Governance Systems: What Do Country Rankings Tell Us?" Deutsche Bank Research, Working Paper No. 16, November 2004.

Abstract: Nations compete for investment capital, and the assurances investors seek as they decide to provide that capital are universal. Motivated by the growing appetite for a global benchmark of corporate behavior, this paper examines the relationship between the measured quality of corporate governance at the firm level and national competitiveness. It begins by analyzing the perceived quality of institutions in

the 23 largest capital markets. Hypothesizing that good corporate governance at the company level may compensate for perceived weaknesses in the institutional framework, the paper then focuses on the pilot governance index developed by the Financial Times and ISS and compares it with new survey evidence from the World Economic Forum's Global Competitiveness Report. Finally, the paper discusses corporate governance in the EU accession countries and the extent to which the quality of governance has affected the mode of entry for foreign investment.

DOIDGE, Craig et al., "Why Do Countries Matter so Much for Corporate Governance?" NBER Working Paper Series No. 10726, August 2004.

Abstract: This paper develops and tests a model of how country characteristics, such as legal protections for minority investors, and the level of economic and financial development, influence firms' costs and benefits in implementing measures to improve their own governance and transparency. The model focuses on an entrepreneur who needs to raise funds to finance the firm's investment opportunities and who decides whether or not to invest in better firm-level governance mechanisms to reduce agency costs. This paper shows that, for a given level of country investor protection, the incentives to adopt better governance mechanisms at the firm level increase with a country's financial and economic development. When economic and financial development is poor, the incentives to improve firm-level governance are low because outside finance is expensive and the adoption of better governance mechanisms is expensive. Using firm-level data on international corporate governance and transparency ratings for a large sample of firms from around the world, we find evidence consistent with this prediction. Specifically, this paper shows that (1) almost all of the variation in governance ratings across firms in less developed countries is attributable to country characteristics rather than firm characteristics typically used to explain governance choices, (2) firm characteristics explain more of the variation in governance

ratings in more developed countries, and (3) access to global capital markets sharpens firm incentives for better governance, but decreases the importance of home-country legal protections of minority investors.

ENGERMAN, Stanley, and SOKOLOFF, Kenneth, "Digging the Dirt at Public Expense—Governance in the Building of the Erie Canal and Other Public Works," NBER Working Paper Series No. 10965, December 2004.

Abstract: The Erie Canal was a mammoth public works project undertaken largely because the scope of the investment was beyond what a private firm could manage during the early 19th century. As with most public works, there were ample opportunities for public officials to realize private gains from the effort, and many did. On the whole, however, the construction of the Erie Canal (and most other major public works projects of the era) appears to have been well conceived and executed; it not only paid off more than its costs through tolls, but also generated substantial welfare improvements for the residents of the state of New York in the form of producer and consumer surplus and a wide range of positive externalities. Although there was obviously some fraud and mismanagement, the public authorities carried out the work at costs relatively close to those projected at the point of authorization. In an effort to try to place this episode in a broader perspective, we compare the ratio of actual expenditures on construction relative to the estimated costs at the time of authorization for the Erie Canal, to those for a range of other public works throughout American history up to the present day. It is our contention that this measure, albeit quite narrow in focus, is informative about the quality of governance of public resources. We highlight how, by this standard, the governance of public resources during the canal era stands up well in comparison with what we have seen since. Indeed, the cost overrun ratios have risen sharply over the last half-century, coinciding with both a marked increase in the relative size of the government sector as well as sustained economic growth. These patterns suggest how

important it is that better measures and other means of systematically studying how the prevalence and effects of corruption vary across different contexts be developed.

FLEMING, Alexander, LLEWELLYN, David T., and CARMICHAEL Jefferey, eds., *Aligning Financial Supervisory Structures with Country Needs*. Washington, D.C.: The World Bank.

Abstract: The financial sector industry has undergone major changes in recent years. Technological innovation, deregulation, and liberalization are changing the context in which financial supervisors operate. Selecting the right supervisory model is an important strategic decision for a government or financial authority, and should be done in a way that fits with the institutional setting and resource capacity of the particular country. While an increasing number of countries are planning to integrate financial supervisory agencies, others have adopted a partially integrated supervisory structure, and many maintain completely separate agencies.

Aligning Financial Supervisory Structures with Country Needs examines experiences from a variety of supervisors and policymakers from different countries to cross-fertilize ideas on issues of financial supervisory structure and to better understand why and how some countries have initiated structural changes. This timely book also identifies the pros and cons of different financial supervisory models.

GUGLER, Klaus Peter, MUELLER, Dennis C., and YURTOGLU, B. Burcin, "The Impact of Corporate Governance on Investment Returns in Developed and Developing Countries," *Economic Journal*, Vol. 113, F511–F539, November 2003.

Abstract: The authors shed light on three conundrums in the literature on investment: why investments out of different sources of finance earn different returns, why different studies report different patterns of returns across sources of finance, and why companies in developing countries make greater use of external equity capital to finance their investment than do companies in developed countries. They show

that the strength of corporate governance systems affects the preferred source of financing, which in turn helps to explain why investments financed in different ways exhibit significantly different rates of return. They find considerable differences between developed and developing countries in the effectiveness of corporate governance systems in aligning managers and shareholders' interests.

HANSMANN, Henry, and KRAAKMAN, Reiner, "The End of History for Corporate Law," *The Center for Law, Economics and History, Harvard Law School Discussion Paper No. 280, March 2000.*

Abstract: Despite the apparent divergence in institutions of governance, share ownership, capital markets, and business culture across developed economies, the basic law of the corporate form has already achieved a high degree of uniformity, and continued convergence is likely. A principal reason for convergence is a widespread normative consensus that corporate managers should act exclusively in the economic interests of shareholders, including non-controlling shareholders. This consensus on a shareholder-oriented model of the corporation results in part from the failure of alternative models of the corporation, including the manager-oriented model that evolved in the United States in the 1950s and 60s, the labor-oriented model that reached its apogee in German codetermination, and the state-oriented model that until recently was dominant in France and much of Asia. Other reasons for the new consensus include the competitive success of contemporary British and American firms, the growing influence worldwide of the academic disciplines of economics and finance, the diffusion of share ownership in developed countries, and the emergence of active shareholder representatives and interest groups in major jurisdictions. Since the dominant corporate ideology of shareholder primacy is unlikely to be undone, its success represents the end of history for corporate law.

The ideology of shareholder primacy is likely to press all major jurisdictions toward similar

rules of corporate law and practice. Although some differences may persist as a result of institutional or historical contingencies, the bulk of legal development worldwide will be toward a standard legal model of the corporation. For the most part, this development will enhance the efficiency of corporate laws and practices. In some cases, however, jurisdictions may converge on inefficient rules, as when the universal rule of limited shareholder liability permits shareholders to externalize the costs of corporate torts.

HOPT, Klaus et al., “Comparative Corporate Governance—The State of the Art and Emerging Research,” Oxford University Press, 1998.

Abstract: The purpose of this contribution is to outline elements of the structure of large business corporations in Europe, mainly on the European continent. The first part deals with the overall characteristics of the factual structure of the corporate world in Western Europe. Differences in legal form are striking, while the use of the public securities markets points to fundamental differences in ownership. In the second part, the legal structure of the board of directors is analyzed. The analysis concentrates on the unitary board as the most frequently found model. The two-tier board is described, both with and without employee participation. The third part focuses on the differences in ownership structure. On the basis of the author’s research, the concentration of ownership in the different systems within Europe has been mapped. Further investigation is aimed at identifying the different classes of shareholders: institutionals do not play a predominant role, shares being mainly owned by other companies, by individuals, or by foreign investors. The role of the equity markets is a direct function of the differences in the use of the markets as a financing source. A final point of comparison relates to the market for corporate control, both in its private segment and in the public takeover market.

IRWIN, Timothy, “Public Money for Private Infrastructure—Deciding When to Offer Guar-

antees, Output-Based Subsidies, and Other Fiscal Support,” World Bank Working Paper No. 10, July 2003.

Abstract: When governments seek private investment in infrastructure projects, they usually find themselves asked to provide grants, guarantees, or other forms of fiscal support. Often they prefer to provide support in ways that limit immediate cash expenditure but sometimes generate large costs later. Seeking to provide support without any immediate spending of cash, for example, governments often agree to shoulder project risks and sometimes encounter fiscal problems later. For example, in the 1970s and 1980s in Spain, the government was obliged to pay \$2.7 billion when the exchange-rate guarantees it had given private toll roads were called. More recently, the Indonesian government agreed to pay \$260 million as a result of its agreements, through the electricity company it owns, to bear demand and foreign-exchange risks in private power projects. Yet even when governments have chosen to provide cash subsidies they have not always achieved their apparent goals: for example, over 80% of the Honduran government’s “lifeline” electricity subsidies go to customers who aren’t poor. In still other cases, governments’ decisions not to provide support may have caused problems.

KERF, MICHEL et al., “Concessions for Infrastructure: A Guide to Their Design and Award,” World Bank Technical Paper No. 399, 1998.

Abstract: This report provides a guide to the complex range of issues and options related to design, award, implementation, monitoring, and modification of concessions. The main rationale for concessions is that they can facilitate the regulation of natural monopolies. They can be used to create competition for the market under conditions in which the service provider has significant market power. Concession arrangements can take any number of forms involving the shifting of risks and responsibilities from the public to the private sector. They also entail legal and economic issues, including the

organization of government entities responsible for concession programs and the adequacy of the legal and regulatory environment. The design and implementation of concession contracts that allocate risks and responsibilities and the mechanisms for evaluating and awarding projects are also of paramount importance. The report also assesses the government's role as a regulator and as a provider of support for infrastructure concessions.

KLEIN, Michael, "Bidding for Concessions—The Impact of Contract Design," *Public Policy for the Private Sector* No. 158, World Bank, November 1998.

Abstract: Infrastructure concession contracts set out the performance obligations and rights of concessionaires and the incentives and risks under which they operate, including pricing arrangements. The clarity with which these terms can be defined determines whether there is likely to be renegotiation after contract award, which may undermine the significance of the initial auction. The design of incentives and risk allocation will affect first the intensity of competition and then the sustainability of the original contract. This note examines these issues.

KLEIN, Michael, "Transactions Costs in Private Infrastructure Projects—Are They Too High?" *Public Policy for the Private Sector* No. 95, World Bank, October 1996.

Abstract: While the number of private infrastructure projects continues to grow, tales of endless delays and exorbitant development costs still scare both developers and governments. The authors show that these costs are related not to project size but to the characteristics of the policy environment. As governments gain experience and clarify policy, these costs will inevitably fall.

LEWIS, Christopher, and MODY, Ashoka, "The Management of Contingent Liabilities—A Risk Management Framework for National Governments," Chapter 6 in *Dealing with Public Risk in Private Infrastructure*, Washington, D.C.: The World Bank, 1997.

Abstract: Many infrastructure privatizations still leave governments—and thus taxpayers—exposed to significant financial risks. This book examines these risks and considers how governments should respond to investors' requests for guarantees and other forms of government support. The report examines how governments can decide which risks to bear and which to avoid, how they can reduce the risks that private investors face without giving guarantees, and how they can measure, budget, and account for the risks they do take on.

MEYERMAN, Gerald et al., "Corporate Restructuring and Governance in East Asia," *Finance & Development*, Vol. 36 (1), March 1999.

Abstract: Corporate restructuring involves restructuring the assets and liabilities of corporations, including their debt-to-equity structures, in line with their cash-flow needs to promote efficiency, restore growth, and minimize the cost to taxpayers. Corporate governance refers to the framework of rules and regulations that enable the stakeholders to exercise appropriate oversight of a company to maximize its value and to obtain a return on their holdings. Both corporate and financial sector restructuring are central to ongoing reform programs in East Asia. This article focuses on reform efforts in Indonesia and Korea, as well as Malaysia and Thailand.

Corporate restructuring and improved corporate governance are essential parts of economic reform programs under way in many countries. How can corporations be restructured to promote growth and reduce excessive debt without placing undue burdens on taxpayers? What framework is needed to promote better corporate governance?

"The OECD Principles of Corporate Governance," OECD Policy Brief, August 2004.

Abstract: The OECD Principles of Corporate Governance provide specific guidance for policymakers, regulators, and market participants in improving the legal, institutional, and regulatory framework that underpins corporate governance, with a focus on publicly

traded companies. They also provide practical suggestions for stock exchanges, investors, corporations, and other parties that have a role in the process of developing good corporate governance. They have been endorsed as one of the Financial Stability Forum's 12 key standards essential for financial stability. The OECD Principles were originally issued in 1999 and have since become the international benchmark for corporate governance, forming the basis for a number of reform initiatives, both by governments and the private sector. The Principles were revised in 2003 to take into account developments since 1999, through a process of extensive and open consultations, and drawing on the work of the Regional Corporate Governance Roundtables for non-OECD countries. The new Principles were agreed by OECD governments in April 2004. This Policy Brief outlines the salient features of the Principles and illustrates how they address key corporate governance issues.

"The OECD Principles of Corporate Governance," OECD, 2004.

Abstract: The OECD Principles of Corporate Governance were endorsed by OECD Ministers in 1999 and have since become an international benchmark for policymakers, investors, corporations, and other stakeholders worldwide. They have advanced the corporate governance agenda and provided specific guidance for legislative and regulatory initiatives in both OECD and non-OECD countries. The Financial Stability Forum has designated the Principles as one of the 12 key standards for sound financial systems. The Principles also provide the basis for an extensive programme of cooperation between OECD and non-OECD countries and underpin the corporate governance component of World Bank/IMF Reports on the Observance of Standards and Codes (ROSC). The Principles have now been thoroughly reviewed to take account of recent developments and experiences in OECD member and non-member countries. Policymakers are now more aware of the contribution good corporate governance makes to financial market stability, investment and

economic growth. Companies better understand how good corporate governance contributes to their competitiveness. Investors—especially collective investment institutions and pension funds acting in a fiduciary capacity—realize they have a role to play in ensuring good corporate governance practices, thereby underpinning the value of their investments. In today's economies, interest in corporate governance goes beyond that of shareholders in the performance of individual companies. As companies play a pivotal role in our economies and we rely increasingly on private sector institutions to manage personal savings and secure retirement incomes, good corporate governance is important to broad and growing segments of the population.

SINGH, Ajit, "Competition, Corporate Governance and Selection in Emerging Markets," *The Economic Journal*, 113 (443–464), November 2003.

Abstract: The paper introduces the three articles in this feature, concerned respectively with competition, corporate governance, and selection in emerging markets. Apart from being important in their own right, it is shown how these topics have recently acquired urgent domestic and international policy significance. This overview also provides the intellectual background to the issues raised in the papers and examines their interrelationships in analytical, empirical and methodological terms. It outlines a research program, which would not only have direct policy relevance for both emerging and mature countries but would also have broader analytical significance for many areas of economic theory.

STILPON, Nestor, "Insolvency Systems and Corporate Governance: Some General Remarks," presented at the Third Meeting of Latin American Corporate Governance Roundtable, Mexico City, April 2002.

Abstract: The Latin American Corporate Governance Roundtable, established April 2000, aims to facilitate public and private sector policy dialogue. It provides a forum for the exchange of experiences between senior policymakers,

regulators, and market participants with firsthand experience of present developments and ongoing work. The Roundtable has also established a Companies Circle to provide policy and practical input to the Roundtable's work and to promote good corporate governance practices at the company level. The Third Meeting of the Latin American Corporate Governance Roundtable took place in Mexico City, Mexico, April 2002, and focused on the Board of Directors, Stakeholders and Transparency and Disclosure.

TENEV, Stoyan, and CHUNLIN Zhang. *Corporate Governance and Enterprise Reform in China: Building the Institutions of Modern Markets*, Washington, D.C.: The World Bank, 2002.

Abstract: As China continues in its evolution from a planned economy to a market economy, and from an agricultural to a manufacturing and service-oriented economy, issues arising from owner diversification, corporate governance, and labor resource allocation have come to the forefront. Most particularly, corporate governance is being focused on as the state continues its withdrawal from direct ownership.

This study evaluates short- and medium-term corporate governance issues impacting companies involved in ownership diversification. It examines problems associated with governance such as cost and framework design and makes recommendations concerning the many facets of corporate governance.

VISCUSI, Kip et al., *Economics of Regulation and Antitrust*, 4th ed., MIT Press, 2005.

Abstract: This new edition of the leading text on business and government focuses on the insights economic reasoning can provide in analyzing regulatory and antitrust issues. Departing from the traditional emphasis on institutions, economics of regulation, and antitrust asks how economic theory and empirical analyses can illuminate the character of market operation and the role for government action and brings new developments in theory and empirical methodology to bear on these questions.

The fourth edition has been substantially revised and updated throughout, with new material added and extended discussion of many topics. Part I, on antitrust, has been given a major revision to reflect advances in economic theory and recent antitrust cases, including the case against Microsoft and the Supreme Court's Kodak decision. Part II, on economic regulation, updates its treatment of the restructuring and deregulation of the telecommunications and electric power industries, and includes an analysis of what went wrong in the California energy market in 2000 and 2001. Part III, on social regulation, now includes increased discussion of risk analysis and extensive changes to its discussion of environmental regulation. The many case studies included provide students not only pertinent insights for today but also the economic tools to analyze the implications of regulations and antitrust policies in the future.

The book is suitable for use in a wide range of courses in business, law, and public policy, for undergraduates as well as at the graduate level. The structure of the book allows instructors to combine the chapters in various ways according to their needs. Presentation of more advanced material is self-contained. Each chapter concludes with questions and problems.

THE WORLD BANK, "Toolkit—A Guide for Hiring and Managing Advisors for Private Participation in Infrastructure, Public-Private Infrastructure Advisory Facility," The World Bank, August 2001.

Abstract: Increasingly governments worldwide are turning to the private sector to assist them in meeting their countries' infrastructure needs. The toolkit will assist governments in hiring and managing economic consultants, financial advisers, and legal experts, as well as other specialists required to increase the role of the private sector in all infrastructure services. The boxed Toolkit, funded by the Public-Private Infrastructure Advisory Facility (PPIAF) and designed by the World Bank's Private Sector Advisory Services Department, includes a CD-ROM self-guided tour of the material, an Executive Summary for senior officials, and

three volumes that contain detailed information on the following subjects: What is PPI and how can advisers help?; donor agencies and the funding of PPI advisory services; how to select and manage PPI advisers.

(c) Risk Management in Power Projects

BANK FOR INTERNATIONAL SETTLEMENT, "The Role of Ratings in Structured Finance: Issues and Implications," Committee on the Global Financial System, Bank for International Settlements, January 2005.

Abstract: Structured finance, which involves the pooling of assets and the subsequent sale to investors of tranching claims on the cash flows backed by these pools, has become an important part of the financial system. Issuance volumes have grown steadily over recent years and the dynamics of market development, together with the benefits afforded to issuers and investors, suggest that growth is likely to continue. Given this and the prominent role played by the rating agencies in structured finance markets, the Committee on the Global Financial System established a Working Group on the Role of Ratings in Structured Finance to explore the rapidly evolving markets for these instruments. This report documents the Group's main findings. It highlights several of the characteristics of structured products and the challenges arising for the rating agencies and other market participants.

BESANT-JONES, John, and TENENBAUM, Bernard, "Lessons from California's Power Crisis," *Finance & Development*, Vol. 38 (3), September 2001.

Abstract: This article is based on a longer paper, "California Power Crisis—Lessons for Developing Countries," published by the Energy Sector Management Assistance Program, a joint program of the World Bank and the United Nations Development Program, and the World Bank Energy and Mining Sector Board, in April 2001. The paper assesses whether the crisis could

have been avoided through better market design and management.

BROGI, Riccardo, and SANTELLA, Paolo, "Two New Measures of Bankruptcy Efficiency," draft presented at the 2003 Annual Conference of the European Association of Law and Economics, September 2003.

Abstract: This study is aimed at developing new empirical models for evaluating the efficiency of bankruptcy and creditor protection legislations.

The paper is divided in three parts. In the first part, we analyze from a conceptual point of view the effects on debtor firms of the lack of creditors' powers in bankruptcy. In the second part, we develop a new rating method for bankruptcy legislations according to their degree of creditor protection and apply it to five European countries. In the third part, we introduce a new approach for empirically estimating the efficiency of bankruptcy legislation based on the cost of banking credit and we test it on the Italian case.

BUCKLEY, Ross, "Turning Loans into Bonds: Lessons for East Asia from the Latin America Brady Plan," *Journal of Restructuring Finance*, Vol. 1, No. 1 (185–200), 2004.

Abstract: The Brady Plan provided a partial solution to the Latin American debt crisis of the 1980s. This article revisits and analyzes the Plan in considerable detail and explores the potential application in East Asia today of the ideas behind the Plan, and of the lessons that can be drawn from it. Seven lessons are identified. The Brady Plan was conceived and developed in Latin America and the principal lesson is that although it may not be replicated, developing nations may learn from it. Innovative domestic solutions are recommended for the resolution of financial problems and debt crisis.

DELOITTE, "Assessing the Value of Enterprise Risk Management," (<http://www.deloitte.com/dtt/budget/0,2299,sid%253D20241%2526cid%253D67267,00.html>), 2004.

Abstract: Changing business practices and burgeoning regulatory requirements mean that financial services institutions require a broader and clearer perspective on company-wide risk than ever before. As a result, enterprise risk management (ERM) is fast ascending the corporate agenda.

Yet there remain tremendous variations in how institutions define, measure, and implement ERM. The differences extend even to the objectives of ERM. For some firms, ERM is simply the logical answer to meeting a compliance challenge. But for others, ERM delivers concrete and competitive advantages over and above mere compliance.

This white paper, written in co-operation with the Economist Intelligence Unit, is a timely effort to assess the benefits that enterprise risk management can offer financial institutions and to identify the building blocks of the business case for ERM. From more efficient capital allocation to an improved culture of risk awareness, how are leading institutions deriving value from their ERM programs?

EHRHARDT, David, and IRWIN, Timothy, "Avoiding Customer and Taxpayer Bailouts in Private Infrastructure Projects," World Bank Policy Research Working Paper 3274, April 2004.

Abstract: Many private infrastructure projects mix regulation that subjects the private company to considerable risk, a government or regulator that is reluctant to see the company go bankrupt, and high leverage on the part of the company. If all goes well, equity holders make a profit, debt holders are repaid, customers pay no more than they expected, and the government is not called on to bail the company out. On the other hand, if things do not go as well as hoped for, the prospect of bankruptcy will loom. Unwilling to see the company go bankrupt, the regulator will have to permit an unscheduled price increase, or the government will have to inject taxpayers' money into the firm. In other words, the combination means customers and taxpayers bear more risk than would appear from the regulations governing the private infrastructure project.

The authors examine how these problems have played out in five cases. Then they describe how governments and regulators can quantify the extent of the problems and, using option-pricing techniques, value the customer and taxpayer guarantees involved. Finally, the authors analyze three options for mitigating the problem: making bankruptcy a more credible threat, limiting the private operator's leverage, and reducing the private operator's exposure to risk. The authors conclude that appropriate policy depends on the tax system, the feasibility of enforcing bankruptcy, and the benefits of risk transfer from taxpayer to the private sector.

ERB, Claude et al., "Political Risk, Economic Risk, and Financial Risk," *Financial Analysts Journal*, 52, Nov.–Dec. 1996.

Abstract: How important is an understanding of country risk for investors? Given the increasingly global nature of investment portfolios, the authors believe it is very important. Their paper measures the economic content of four different measures of country risk: the International Country Risk Guide's political risk, financial risk, economic risk and composite risk indices, and Institutional Investor's country credit ratings. First, they explore whether any of these measures contain information about future expected stock returns by conducting trading simulations. Next, they conduct time-series-cross-sectional analysis linking these risk measures to future expected returns. Second, they investigate the relation between these measures and other, more standard, approaches to risk exposures. Finally, they analyze the linkages between fundamental attributes within each economy, such as book-to-price ratios, and the risk measures. Their results suggest that the country risk measures are correlated future equity returns. They find that the country risk measures are correlated with each other; however, financial risk measures contain the most information about future equity returns. Finally, they find that country risk measures are highly correlated with country equity valuation measures. This provides some insight into the reason for higher returns for value-oriented strategies.

GRAY, Philip, and IRWIN, Timothy, "Exchange Rate Risk—Reviewing the Record for Private Infrastructure Contracts," *Public Policy for the Private Sector* No. 262, The World Bank, June 2003.

Abstract: Over the life of a typical contract for an infrastructure project—say, 25 years—the value of developing country currencies is likely to fall substantially. Sometimes the decline is gradual, but sometimes it is precipitous. Many contracts have been structured so that taxpayers or customers bear the exchange rate risk. During crises the result has often been traumatic: governments breach contracts, adversely affecting their access to capital markets, or customers must bear large price hikes, undermining support for privatization. This Note tracks the record. A companion Note proposes better ways to manage exchange rate risk.

HENISZ, Withold, and ZELNER, Bennet, "Managing to Keep the Lights On (and the Profits Flowing)—Political Risk Identification, Mitigation and Analysis in Electricity Generation," presented at the Fifth Annual Conference of the International Society for New Institutional Economics, September 2001.

Abstract: This paper adds to the burgeoning literature on privatization by moving beyond the increasingly refined studies that have been done of privatization "triggers" and efficiency consequences to consider the ongoing challenges faced by private infrastructure investors as a result of the inherently political nature of the industries in which they operate. We draw our insights from interviews with over 150 managers, political officials, bureaucrats and consultants in the electricity sectors of 10 nations. We begin by examining the decision by politicians to open the sector to private participation in order to avert increasingly severe power shortages and public unrest. We then highlight politicians' subsequent attempts to redistribute investor returns to consumers during episodes of broader economic or political crisis. We examine the set of precipitating factors that were responsible for the shift from "favorable" to "adverse" bargaining

with political actors, and offer a detailed analysis of how country-level institutions, firm-level positions and actions, and commonly employed strategies at the project level affect investor fortunes during periods of adverse bargaining. We also suggest that a pattern of alternating favorable and adverse bargaining periods is an intrinsic feature of doing business in infrastructure industries. We refer to this pattern as the "infrastructure bargaining cycle."

KERF, Michel et al., "Concessions for Infrastructure: A Guide to Their Design and Award," World Bank Technical Paper No. 399, 1998.

Abstract: This report provides a guide to the complex range of issues and options related to design, award, implementation, monitoring, and modification of concessions. The main rationale for concessions is that they can facilitate the regulation of natural monopolies. They can be used to create competition for the market under conditions in which the service provider has significant market power. Concession arrangements can take any number of forms involving the shifting of risks and responsibilities from the public to the private sector. They also entail legal and economic issues, including the organization of government entities responsible for concession programs and the adequacy of the legal and regulatory environment. The design and implementation of concession contracts that allocate risks and responsibilities and the mechanisms for evaluating and awarding projects are also of paramount importance. The report also assesses the government's role as a regulator and as a provider of support for infrastructure concessions.

KREPS, David, *A Course in Microeconomic Theory*, Harvester Wheatsheaf, 1990.

Abstract: Placing unusual emphasis on modern non-cooperative game theory, it provides the student and instructor with a unified treatment of modern microeconomic theory—one that stresses the behavior of the individual actor (consumer or firm) in various institutional settings. The author has taken special pains to

explore the fundamental assumptions of the theories and techniques studied, pointing out both strengths and weaknesses.

The book begins with an exposition of the standard models of choice and the market, with extra attention paid to choice under uncertainty and dynamic choice. General and partial equilibrium approaches are blended, so that the student sees these approaches as points along a continuum. The work then turns to more modern developments. Readers are introduced to non-cooperative game theory and shown how to model games and determine solution concepts. Models with incomplete information, the folk theorem and reputation, and bilateral bargaining are covered in depth. Information economics is explored next. A closing discussion concerns firms as organizations and gives readers a taste of transaction-cost economics.

LEWIS, Christopher, and MODY, Ashoka, "The Management of Contingent Liabilities—A Risk Management Framework for National Governments," Chapter 6 in *Dealing With Public Risk in Private Infrastructure*, Washington, D.C.: The World Bank, 1997.

Abstract: Many infrastructure privatizations still leave governments—and thus taxpayer—exposed to significant financial risks. This book examines these risks and considers how governments should respond to investors' requests for guarantees and other forms of government support. The report examines how governments can decide which risks to bear and which to avoid, how they can reduce the risks that private investors face without giving guarantees, and how they can measure, budget, and account for the risks they do take on.

MARRISON, Chris, *The Fundamentals of Risk Measurement*, McGraw-Hill, 2002.

Abstract: The simple realization that default events could be correlated increases the complexity of approaches to measuring the credit risk of a portfolio over approaches to measuring the credit risk of a single position. This book begins by discussing that there are five common approaches to measuring portfolio

credit risk (the covariance model, the actuarial model, the Merton-based simulation model, the macroeconomic default model, and the macroeconomic cash-flow model) and then focuses on the details of the covariance model, as understanding this method lays the foundation for understanding the other approaches. The other approaches are discussed in Chapter 21. Although the topic necessitates some technical detail, this chapter carefully steps through the algebra making it easier to follow.

UNCITRAL, "Legislative Guide on Insolvency Law," UNCITRAL, June 2004.

Abstract: Placing unusual emphasis on modern non-cooperative game theory, it provides the student and instructor with a unified treatment of modern microeconomic theory—one that stresses the behavior of the individual actor (consumer or firm) in various institutional settings. The author has taken special pains to explore the fundamental assumptions of the theories and techniques studied, pointing out both strengths and weaknesses.

The book begins with an exposition of the standard models of choice and the market, with extra attention paid to choice under uncertainty and dynamic choice. General and partial equilibrium approaches are blended, so that the student sees these approaches as points along a continuum. The work then turns to more modern developments. Readers are introduced to non-cooperative game theory and shown how to model games and determine solution concepts. Models with incomplete information, the folk theorem and reputation, and bilateral bargaining are covered in depth. Information economics is explored next. A closing discussion concerns firms as organizations and gives readers a taste of transaction-cost economics.

UYEMURA, Dennis, and VAN DEVENTER, Donald, *Financial Risk Management in Banking—The Theory and Application of Asset & Liability Management*, McGraw-Hill, 1993.

Abstract: An in-depth review of the tremendous risk and volatility in bank financial management. *Financial Risk Management in Banking* provides

a practical and comprehensive overview of aggressive asset and liability management (ALM) which highlights the nuances that set ALM apart from basic financial concepts and practices as they are taught even at the MBA level. It demonstrates how ALM apart from basic financial concepts and practices as they are taught even at the MBA level. It demonstrates how ALM can strengthen the capital position of today's financial institution. Topics include: how accounting concepts can interfere with ALM; currency and international funds risk; the multi-dimensional aspects of bank financial risk; the relationship between cash flow, market value and risk.

(d) Arrangements for Project Restructuring and Reorganization

BHANDARI, Jagdeep, and WEISS, Lawrence, *Corporate Bankruptcy—Economic and Legal Perspectives*, Cambridge University Press, 1996.

Abstract: This collection is the first comprehensive selection of readings focusing on corporate bankruptcy. Its main purpose is to explore the nature and efficiency of corporate reorganisation using interdisciplinary approaches drawn from law, economics, business, and finance. Substantive areas covered include the role of credit, creditors' implicit bargains, non-bargaining features of bankruptcy, workouts of agreements, alternatives to bankruptcy, and proceedings in countries other than the United States, including the United Kingdom, Europe, and Japan.

- First collection of its kind covering economic and legal issues in bankruptcy.
- Classic and recent papers in law and economics have been highly edited to focus on bankruptcy.
- Includes foreword by Richard A. Posner, the leading economist-turned-judge in the United States, who has considerable name recognition.

BORNSTEIN, Morris, "Post-Privatization Enterprise Restructuring," Working Paper No. 327, Department of Economics, University of Michigan, July 2000.

Abstract: Post-privatization restructuring of former state-owned enterprises (FSOEs) encompasses both shorter-run "defensive" actions and longer-run "strategic" measures. Restructuring involves changes in corporate governance, organizational structure, management, labor, capital, technology, output, and sales. Various performance indicators may measure the results of restructuring, but care is required in the selection and interpretation of indicators. In the restructuring of FSOEs foreign strategic investors have many advantages over domestic investors. The study includes examples from experience in the Czech Republic, Hungary, and Poland.

Committee on the Global Financial System, "The Role of Ratings in Structured Finance: Issues and Implications," Bank for International Settlements, January 2005.

Abstract: Structured finance, which involves the pooling of assets and the subsequent sale to investors of tranching claims on the cash flows backed by these pools, has become an important part of the financial system. Issuance volumes have grown steadily over recent years and the dynamics of market development, together with the benefits afforded to issuers and investors, suggest that growth is likely to continue. Given this and the prominent role played by the rating agencies in structured finance markets, the Committee on the Global Financial System established a Working Group on the Role of Ratings in Structured Finance to explore the rapidly evolving markets for these instruments. This report documents the Group's main findings. It highlights several of the characteristics of structured products and the challenges arising for the rating agencies and other market participants.

IAE, *Lessons from Liberalised Electricity Markets*. The International Energy Agency, 2005.

Abstract: After a decade or more of experiences in reforming electricity markets in several pioneer regions, some important lessons can now be drawn. This book gives an assessment of these developments, focusing on the issues that are critical for successful electricity market liberalization. One lesson is that it is a long process which requires strong ongoing government involvement and commitment.

Experiences and examples in the study are mainly drawn from the UK, Australian, Nordic, and North Eastern United States (the PJM interconnection) markets, which have all operated with some success for a number of years. They have improved efficiency without substantially jeopardizing system security. These markets are described in greater detail in annexes of the book but the main analysis focuses on key issues rather than on specific countries and regions or specific market models. The study explores different solutions used in those markets and the remaining challenges.

The issues covered in the study are the rationale and benefits of liberalization; the governance required to create effective competition; the role of prices and transparent wholesale markets; consumer protection; incentives for investment, and; impact of addressing security of supply and environmental policy.

IRWIN, Timothy, and YAMAMOTO, Chiaki, "Some Options for Improving the Governance of State-Owned Electricity Utilities," Energy and Mining Sector Board Working Paper No. 11, The World Bank, February 2004.

Abstract: Most government-owned utilities in developing countries perform poorly when judged as providers of electricity, in part because politicians and officials use their power, not to encourage the utilities to increase sales, improve the collection of bills, and cut costs, but to transfer resources to politically influential groups and, sometimes, extract bribes. To improve the performance of government-owned electricity utilities as electricity utilities, rules and practices must be changed in a way that reduces politicians' willingness or ability to use the utilities for political purposes and

subjects the utilities to new sources of pressure to perform well. This paper considers ways in which a government might seek to achieve this goal without privatizing. It focuses on changes in corporate governance—that is, changes in the rules that structure the relationship between the company and the government as its owner. It concludes that governments should be cautious about the prospects for improvement without privatization—since, among other things, creating a truly arms-length relationship between the government and the utility will always be difficult as long as the government remains the utility's owner but that improvements in corporate governance are still worth pursuing.

KESSIDES, Ioannis, "Reforming Infrastructure: Privatization, Regulation, and Competition," World Bank Policy Research Report, World Bank, Washington, D.C., January 2004.

Abstract: Infrastructure industries and services are crucial for generating economic growth, alleviating poverty, and increasing international competitiveness. Safe water is essential for life, and health. Reliable electricity saves businesses and consumers from having to invest in expensive backup systems, or more costly alternatives, and keeps rural women and children from having to spend long hours fetching firewood. Widely available and affordable telecommunications and transportation services can foster grassroots entrepreneurship, and thus are critical to generating employment, and advancing economic development. In most developing and transition economies, private participation in infrastructure, and restructuring have been driven by the high costs, and poor performance of state-owned network utilities. Under state ownership services were usually under-priced, making it difficult to expand services. The report indicates that although privatization, competitive restructuring, and regulatory reforms improve infrastructure performance, several issues must be considered and conditions met for these measures to achieve their public interest goals. First, reforms have significantly improved performance,

leading to higher investment, productivity, and service coverage and quality. Second, effective regulation—including the setting of adequate tariff levels—is the most critical enabling condition for infrastructure reform. Regulation should clarify property rights, and assure private investors that their investments will not be subject to regulatory opportunism. Third, for privatization to generate widely shared social benefits, infrastructure industries must be thoroughly restructured and able to sustain competition. Thus restructuring, to introduce competition should be done before privatization, and regulation should be in place to assure potential buyers of both competitive, and monopoly elements.

MULLER-JENTSCH, Daniel, *The Development of Electricity Markets in the Euro-mediterranean Area: Trends and Prospects for Liberalization and Regional Intergration*, Washington, D.C.: The World Bank, 2001.

Abstract: Electricity markets world-wide are undergoing a transformation, as state-owned and vertically integrated monopolies are being replaced by competitive dynamics and private participation. Policy reforms driving this transformation include the corporatization and restructuring of state-owned utilities; the unbundling of generation, transmission, and distribution; the creation of independent regulators; and the promotion of private sector involvement in investment and management.

This study reviews international reform trends and best practice in sector policy, with specific reference to Latin America. It documents how regulatory reform, privatization, and cross-border integration are unfolding throughout the European Single Market, triggered by EU legislation. This study also shows that sector performance and sector reforms in the southern Mediterranean countries are lagging considerably behind international trends. Finally, it argues that a number of reform initiatives at the national and regional level should be taken to promote policy reforms and cross-border integration in this sector. This would help the countries of North Africa and the Middle East to

increase economic efficiency, consolidate public finances, attract foreign direct investment, and to more effectively “plug into” the European Single Market on the northern shore of the Mediterranean Sea.

NEWBERY, David, *Privatization, Restructuring and Regulation of Network Utilities*, MIT Press, 1999.

Abstract: Network utilities, such as electricity, telephones, and gas, are public utilities that require a fixed network to deliver their services. Because consumers have no choice of network, they risk exploitation by network owners. Once invested, however, a network’s capital is sunk, and the bargaining advantage shifts from investor to consumer. The investor, fearing expropriation, may be reluctant to invest. The tension between consumer and investor can be side-stepped by state ownership. Alternatively, private ownership and consumers’ political power can be reconciled through regulation. Either way, network utilities operate under terms set by the state.

David Newbery argues that price-setting rules comprise only part of the policy agenda. Network utilities pose special problems of ownership and regulation. He discusses the history of ownership and regulation, privatization, and theories of regulation. Examining three network utilities in detail—telecoms, electricity, and gas—he contrasts the regulatory approaches of Britain and the United States. He also looks at liberalization in a variety of other countries.

History shows that the mature forms of regulatory institutions are remarkably similar under both public and private ownership. This raises obvious questions such as, Will the forces that caused convergence to regulated vertical integration in the past reassert themselves? Can the benefits of competition be protected against the pressure to reintegrate? Will different utilities differ in their form and structure? A full understanding of the forces shaping regulatory institutions is necessary to answer these important questions.

POHL, Gerhard, ANDERSON, Robert E., and DJANKOV, Simeon. *Privatization and Restructuring in Central and Eastern Europe: Evidence and Policy Options*, Washington, D.C.: The World Bank, 1997.

Abstract: Because privatization methods show similar results, the extent of restructuring is compared across firms in the seven countries and used for determining which country's policies have been most effective in encouraging restructuring.

Measures of restructuring are examined, including profitability, proportion of the firms with a positive operating cash flow, average operating cash flow as a percent of revenue, growth of labor productivity, growth of total factor productivity, and growth of exports. Econometric analysis was also used to identify the government policies that most encouraged firms to restructure.

PPIAF, Labor Issues in Infrastructure Reform: A Toolkit, Washington, D.C.: The World Bank, 2003.

Abstract: A universal concern in reforms involving private participation in infrastructure is the effect such reforms have on labor. Fears of job loss and changes in employment status have often led enterprise workers and unions to be among the most vocal and organized opponents of privatization and to take actions that delay or block reforms. Many developing country governments have been reluctant to undertake reforms because of labor opposition and the political costs involved. Such difficulties are often compounded by concerns about the social impact of reforms, particularly in countries where social safety nets and labor markets are lacking.

It is thus important that ways be found to deal with labor issues in infrastructure privatization. The objective of the Toolkit, which includes a CD-ROM, is to provide practical tools and information to help policymakers and practitioners deal with these sensitive issues. The Toolkit helps governments identify and select appropriate strategies and approaches, offers guidelines for design and implementation

based on best practice and actual experience, and indicates the factors influencing the choice of strategy and options. The Toolkit is illustrated with examples, checklists, and templates that walk decision makers through best practice methodologies. Users of the Toolkit should be better placed to understand the benefits and risks of dealing with labor issues and choose among available strategies and options.

SUNITA, Kikeri, KENYON, Thomas, and PALMADE, Vincent, *Reforming the Investment Climate: Lessons for Practitioners*. Washington, D.C.: The World Bank, Coming soon.

Abstract: Most people agree that a good investment climate is essential for growth and poverty reduction. Less clear is how to achieve it. Drawing from more than 25 case studies, this book shows that reform often requires paying as much attention to dealing with the politics and institutional dimensions as to designing policy substance. While there is no single recipe or "manual" for reform, the authors highlight three broad lessons. The first is to recognize and seize opportunities for reform. Crisis and new governments are important catalysts, but so is the competition generated by trade integration and new benchmarking information. The second is to invest early in the politics of reform. Public education can help gain wide acceptance for reform, while pilot programs can be valuable for demonstrating the benefits and feasibility of change. And the third is to treat implementation and monitoring as an integral part of the reform process and not merely as an afterthought. In the absence of public sector reform, reformers can draw on private sector change management techniques to revitalize institutions and put in place mechanisms to monitor and sustain reform. The book provides an emerging checklist for reformers and identifies areas for future work.

TIROLE, Jean, *The Theory of Industrial Organization*, MIT Press, 1992.

Abstract: The Theory of Industrial Organization is the first primary text to treat the new industrial organization at the advanced-undergraduate

and graduate level. Rigorously analytical and filled with exercises coded to indicate level of difficulty, it provides a unified and modern treatment of the field with accessible models that are simplified to highlight robust economic ideas while working at an intuitive level.

Tirole begins with a background discussion of the theory of the firm. In part I he develops the modern theory of monopoly, addressing single product and multi-product pricing, static and intertemporal price discrimination, quality choice, reputation, and vertical restraints.

In part II, Tirole takes up strategic interaction between firms, starting with a novel treatment of the Bertrand-Cournot interdependent pricing problem. He studies how capacity constraints, repeated interaction, product positioning, advertising, and asymmetric information affect competition or tacit collusion. He then develops topics having to do with long-term competition, including barriers to entry, contestability, exit, and research and development. He concludes with a “game theory user’s manual” and a section of review exercises.

WORENKLEIN, Jacob, “The Global Crises in Power and Infrastructure—Lessons Learned and New Directions,” *Journal of Structured and Project Finance*, Vol. 9, Issue 1, Spring 2003.

Abstract: As a result of high-profile, power-project defaults in the developing world; the collapse of power prices and asset values in markets such as the U.K. and the United States; and continuing ripple effects of the failure and fraud of Enron, major portions of the power and infrastructure sectors are convulsed by crisis and a resulting loss of investor and lender confidence. To attract investors when new capacity is needed in the future, regulators need to help create a climate of stability in which reasonable investor expectations can be fulfilled. For the poorest countries, where capital for infrastructure investment is so badly needed, the author proposes a new public-private partnership model. Such a model would put the initiative and creativity of the private sector to work supported by the resources of multilaterals, ECAs, and other government

agencies as aid donors and providers of credit support.

THE WORLD BANK, *Doing Business 2007: How to Reform*. Washington, D.C.: The World Bank, 2006.

Abstract: *Doing Business 2007* focuses on reforms, identifies top reformers in business regulation, and best practices in how to reform. This volume is the fourth in a series of annual reports investigating global regulations that enhance business activity and those that constrain it. Co-sponsored by the World Bank and the International Finance Corporation—the private sector arm of the World Bank Group—this year’s report measures quantitative indicators on business regulations and their enforcement compared across 175 countries—from Afghanistan to Zimbabwe—and over time. *Doing Business 2007* updates indicators developed in the three preceding reports.

The ten indicators are starting a business, dealing with licenses, hiring and firing, registering property, getting credit, protecting investors, trading across borders, paying taxes, enforcing contracts, and closing a business. The indicators are used to analyze economic and social outcomes, such as informality, corruption, unemployment, and poverty. This annually published report gives policymakers the ability to measure regulatory performance in comparison to other countries, learn from best practices globally, and prioritize reforms. This year’s report covers 20 additional countries.

(e) Project Restructuring and Reorganization in the Real World

BOONE, Audra, and MUHLERIN, Harold, “Valuing the Process of Corporate Restructuring,” *Claremont Colleges Working Papers in Economics*, May 2001.

Abstract: The authors study the process of corporate restructuring for a sample of 298 firms during the 1989–98 period that announce that they are considering restructuring alternatives.

We find that restructuring is a lengthy process, with the majority of the restructuring period occurring prior to any definitive proposals for corporate change. Only 70% of the firms that initially propose restructuring later make a definitive proposal to sell either all or part of the firm, with other firms taking themselves out of play or declaring bankruptcy. Hence, the market reaction to the initial restructuring announcement underestimates the full wealth effects of completed restructurings. The estimate of the full value of restructuring across the sample firms averages 7.5%, with the greatest gains of 30% accruing to firms that are acquired. The average gain for the full restructuring period for firms divesting a unit is 5%, which is roughly double that estimated for the initial announcement in prior studies of corporate divestitures.

BUCKLEY, Ross, "Turning Loans into Bonds: Lessons for East Asia From the Latin America Brady Plan," *Journal of Restructuring Finance*, Vol. 1, No. 1 (185–200), 2004.

Abstract: The Brady Plan provided a partial solution to the Latin American debt crisis of the 1980s. This article revisits and analyses the Plan in considerable detail and explores the potential application in East Asia today of the ideas behind the Plan, and of the lessons that can be drawn from it. Seven lessons are identified. The Brady Plan was conceived and developed in Latin America and the principal lesson is that although it may not be replicated, developing nations may learn from it. Innovative domestic solutions are recommended for the resolution of financial problems and debt crisis.

DADO, Marinella, and KLINGEBIEL, Daniela, "Decentralized Creditor-Led Corporate Restructuring—Cross Country Experience," Policy Research Working Paper No. 2901, The World Bank, October 2002.

Abstract: Countries that have experienced banking crises have adopted one of two distinct approaches toward the resolution of non-performing assets—a centralized or a decentralized solution. A centralized approach

entails setting up a government agency—an asset management company—with the full responsibility for acquiring, restructuring, and selling of the assets. A decentralized approach relies on banks and other creditors to manage and resolve nonperforming assets. The authors study banking crises where governments adopted a decentralized, creditor-led workout strategy following systemic crises. They use a case study approach and analyze seven banking crises in which governments mainly relied on banks to resolve nonperforming assets. The study suggests that out of the seven cases, only Chile, Norway, and Poland successfully restructured their corporate sectors with companies attaining viable financial structures. The analysis underscores that as in the case of a centralized strategy the prerequisites for a successful decentralized restructuring strategy are manifold. The successful countries significantly improved the banking system's capital position, enabling banks to write down loan losses; banks as well as corporations had adequate incentives to engage in corporate restructuring; and ownership links between banks and corporations were limited or severed during crises.

ESTACHE, Antonio, and RODRIGUEZ-PARDINA, Martin, "Light and Lightning at the End of the Public Tunnel: The Reform of the Electricity Sector in the Southern Cone," World Bank Working Paper 2074, March 1999.

Abstract: This paper provides an overview of the recent privatization experiences in Argentina, Brazil, and Chile. The paper focuses on achievements but also on outstanding problems, in particular with respect to the capacity of regulators to enforce compliance and to ensure that the spirit of the reform—i.e., to unleash the forces of competition in the sector—can remain the guiding force through the unavoidable adjustments and fine-tuning that effective regulation requires.

FARUQI, Shaki, *Financial Sector Reforms, Economic Growth, and Stability: Experiences in*

Selected Asian and Latin American Countries, Washington, D.C.: The World Bank, 1994.

Abstract: These papers provide valuable information for analysis of financial system reforms undertaken over the past decade in many Asian and Latin American countries. The reform policies were designed to restore domestic economic stability and to strengthen an economy's capacity to address favorable and unfavorable external shocks. The specific reform packages vary from country to country, as do the policy responses of individual countries. This diversity of experiences provides lessons from which the countries engaged in reform can benefit and which can be useful as models for countries currently contemplating reform.

The papers were presented at a senior policy seminar held in Bali, Indonesia, in February 1993. The Asian countries represented at the seminar were Bangladesh, India, Indonesia, Japan, Malaysia, Pakistan, the Philippines, Thailand and Vietnam; Latin American participants came from Chile, Colombia, Mexico, and Paraguay.

INTERNATIONAL FINANCE CORPORATION, *Project Finance in Developing Countries: IFC's Lessons of Experience.* Washington, D.C.: The World Bank, 1999.

Abstract: IFC Lessons of Experience No. 7. "Project finance to developing countries surged in the decade before the Asian crisis. The financial crisis that began in East Asia has brought a dramatic slowdown in this trend." Project finance structuring techniques were used to attract international financing for many large-scale projects, helping to meet investment needs in infrastructure and other sectors. However, the crisis in East Asia has created stresses and strains for many projects, raising concerns about the viability of some and highlighting the importance of careful structuring and risk mitigation. IFC was one of the early pioneers of project finance in developing countries 40 years ago, and project finance remains an important core of IFC's activities today. In just the past decade, IFC has supported over 230 greenfield projects in 69 developing countries with limited-recourse project finance. This volume is written

for the benefit of a wider audience. It provides useful information for policymakers and banks in developing countries on these project finance activities. It describes the essentials and some of the complexities of project structuring and explains the importance of "getting it right." A primary message is the importance of clearly identifying and addressing project risks up-front and the potential costs of complacency in dealing with critical issues, such as foreign exchange or market demand risks. In addition to strong fundamentals, the projects most likely to succeed are those that are conservatively structured and that carry strong sponsor support. The report concludes that project finance can play an important role in an appropriate environment. It does not, however, offer a "free lunch," but demands a rigorous framework if it is to be successful.

KAREKEZI, Stephen, and MAJORO, Lugard, "Improving Modern Energy Service for Africa's Urban Poor," *Energy Policy*, 30 (1015–1028), 2002.

Abstract: The urban population of most sub-Saharan African countries is growing rapidly. It is estimated that urban growth rates are almost double the national population growth rates. As expected, urban energy consumption is growing rapidly, driven by the fast growth of urban centres. Although urban poor households in most cities of the region constitute over 50% of the total households, the provision of modern energy services to these households does not seem to be receiving the requisite attention from policymakers. This article provides a brief overview of the urban energy sector in Africa, with special emphasis on energy services for the urban poor. The energy-consumption patterns among the urban poor households and small and micro-enterprises are assessed and options for improving the provision of modern energy services to the urban poor are proposed. The article is based on field survey studies of energy services for the urban poor undertaken in Ethiopia, Tanzania, Uganda and Zimbabwe. Supporting data and information from other

sub-Saharan African countries is used to validate key conclusions and recommendations.

KHATHATE, Deen, and ISMAIL, Dalla, *Regulated Deregulation of the Financial System in Korea*, Washington, D.C.: The World Bank, 1995.

Abstract: World Bank Discussion Paper No. 292. Examines the anatomy of the Republic of Korea's financial reform policy since 1979 in order to place the nation's financial reform plan of 1993 in a proper context. Financial deregulation in the Republic of Korea, initiated in 1979, coincided with similar programs in South America and East Asia. The reforms were successful in spite of a mild form of financial repression and a deregulation policy that ran an erratic course. The republic moved decisively in 1993 toward a conventional type of financial liberalization by announcing a blueprint of reforms to be implemented over a five-year period ending in 1997. This paper examines the anatomy of the Korean financial reform policy since 1979 in order to place its financial reform plan of 1993 in the proper context. The report presents a conceptual framework of the Korean financial system and policies, examines interest rate reforms on various levels, and discusses changes in the credit allocation system that were undertaken in earlier phases of the reforms. The book goes on to review the rationale of the final financial reform phase, the sequencing of its various elements, and the assessment. Broad conclusions are presented.

LAMPIETTI, Julian, et al., *Revisiting Reform in the Energy Sector: Lessons from Georgia*, Washington, D.C.: The World Bank, 2003.

Abstract: An English-Russian bilingual edition. *Revisiting Reform in the Energy Sector: Lessons from Georgia* is part of the World Bank Working Paper series. These papers are published to communicate the results of the Bank's ongoing research and to stimulate public discussion.

One of the harsher realities of independence for the former Soviet republics has been the loss of subsidized transfers from the center for fuel and utilities. In the years since independence,

Georgians, with other "energy poor" republics, have been subject to higher costs and declining service levels for household utilities, particularly energy. The combination of low household incomes, high international prices for fuel, the need for utilities to rely on internally generated funds for capital investment, low household incomes, and the political ramifications of removing subsidies at a time of general economic decline have led to a "worst of all worlds" situation.

Revisiting Reform in the Energy Sector reviews the changes in the supply of electricity and gas in Georgia from the perspective of households, utility operators, and the government. It highlights lessons from the reforms implemented and applies them to the future reform program planned for the rest of the energy sector. The title concludes that improved service quality and the increased supply of clean and subsidized natural gas have offset the potentially negative impact of higher electricity prices.

MEYERMAN, Gerald et al., "Corporate Restructuring and Governance in East Asia," *Finance & Development*, Vol. 36 (1), March 1999.

Abstract: Corporate restructuring involves restructuring the assets and liabilities of corporations, including their debt-to-equity structures, in line with their cash-flow needs to promote efficiency, restore growth, and minimize the cost to taxpayers. Corporate governance refers to the framework of rules and regulations that enable the stakeholders to exercise appropriate oversight of a company to maximize its value and to obtain a return on their holdings. Both corporate and financial sector restructuring are central to ongoing reform programs in East Asia. This article focuses on reform efforts in Indonesia and Korea, as well as Malaysia and Thailand.

Corporate restructuring and improved corporate governance are essential parts of economic reform programs under way in many countries. How can corporations be restructured to promote growth and reduce excessive debt without placing undue burdens on taxpayers?

What framework is needed to promote better corporate governance?

MEYERMAN, Gerald, "The London Approach and Corporate Debt Restructuring in East Asia," Chapter 10 in *Managing Financial and Corporate Distress: Lessons from Asia*, Brookings Institution Press, 2000.

Abstract: More than three years have elapsed since the East Asian financial crisis erupted, threatening economic and financial stability in the region and beyond. Although many of the region's economies have since staged a remarkable turnaround, much additional restructuring and reform is needed. *Managing Financial and Corporate Distress: Lessons from Asia*, stands out from other works on the East Asian crisis by moving beyond macroeconomic assessments to offer an institutional treatment of the microeconomic aspects of the corporate and bank restructuring. Contributors draw on their practical, hands-on expertise in various aspects of finance to provide complementary perspectives on how best to set in place strong and responsive institutions that might be able to resolve and avoid future crises in other emerging markets.

PAREDES, Ricardo, "Redistributive Impact of Privatization and the Regulation of Utilities in Chile," World Institute for Development Economics Research, Discussion Paper No. 2001/19, June 2001.

Abstract: Privatization has been one of the primary factors generating changes in the Chilean economy over the last decade. Privatization has faced some opposition due in part to its uncertain effect on employment and prices. Despite the importance of the topic, only few attempts have been made to analyze empirically the gains and losses associated with the privatization process and its concomitant regulatory framework. The purpose of this paper is twofold. First, to provide an idea of the effect of privatization on efficiency and then, to understand whether those who oppose further privatization, can justify their position on the grounds that privatization, in fact, negatively affects the poorest.

PPIAF, *Private Solutions for Infrastructure in Honduras*, Washington, D.C.: World Bank, 2003.

Abstract: This book is designed to promote the development of infrastructure services in Honduras, with the aim of improving the country's competitiveness and contributing to poverty reduction. Its central argument is that Honduras needs a significant increase in private investment in infrastructure services, which should take place in more competitive environment and be subject to an adequate legal and regulatory framework.

The study details the progress to date in Honduran infrastructure sectors, identifying the principal problems that exist and outlining a strategy for their solution. It proposes a general set of principles that should guide the provision of infrastructure services. In addition, it recommends specific policies for each sector. The document's scope includes the following services: transportation, water and sanitation, electricity, and telecommunications.

PPIAF, *Private Solutions for Infrastructure in Mexico*, Washington, D.C.: The World Bank, 2003.

Abstract: During the past two decades, Mexico has proven itself a pioneer in Latin America in encouraging private sector participation in the economy. In the last decade, Mexico has also made major gains in infrastructure service provision. However, for Mexican enterprises to compete effectively and profit from open trade particularly within NAFTA, they will increasingly require higher quality infrastructure services, particularly in the water and energy sectors.

Private Solutions for Infrastructure in Mexico begins with a review of Mexico's recent macroeconomic performance and the business environment. This book considers various sources of financing for infrastructure investment, and reviews recent legal and regulatory reforms that are critical to attracting private sector financing. The remainder of the book explores current issues as well as prospects and concerns regarding private entry and investment in each

infrastructure sector's telecommunications, natural gas, urban water and sanitation, toll roads, railroads, ports, civil aviation and airports.

PPIAF, *Private Solutions for Infrastructure: Opportunities for the Philippines*, Washington, D.C.: The World Bank, 2000.

Abstract: The Philippines has led many of its East Asian neighbors in creating a policy environment that is conducive to private sector participation in infrastructure. Together with a strong commitment to generating results, this policy environment produced an impressive record of private sector transactions in a relatively short period of time. However, some problems remain. This report, prepared at the request of the Philippine government, describes and assesses the current status and performance of key infrastructure sectors and the policy, regulatory, and institutional environment for involving the private sector in those sectors. Its purpose is to assist policymakers in framing future reform and development strategies for infrastructure and to assist potential private sector investors in assessing investment opportunities.

TEICHMAN, Judith, "Private Sector Power and Market Reform: Exploring the Domestic Origin of Argentina's Meltdown and Mexico's Policy Failure," *Third World Quarterly*, Vol. 23, No. 3 (491–512), 2002.

Abstract: The failure of market reforms in Latin America to produce sustained growth and equitable prosperity is demonstrated most clearly by Argentina's most recent economic and political meltdown. But economic difficulties, poverty and searing inequality has continued to plague the Mexican case as well. Latin American policymakers themselves have begun to contribute to the growing discussion of policies necessary to confront the lingering economic and social challenges. Included among the recommended policy prescriptions are increased social spending, supported by tax reform, assistance to small and medium enterprise, and an end to corruption. Such policy reforms require governments that are

autonomous from particular business interests with established institutional channels capable of securing generalized business cooperation and support. This article argues that the market reform experiences of Argentina and Mexico reinforced preexisting power structures and political practices, strengthening the economic clout and personalized political access of the owners of powerful holding companies, a situation diametrically opposed to the sort of business state relations conducive to further essential reforms. As the case of Argentina illustrates, this sort of skewed policy influence is liable to generate strong opposition and resistance to the market model.

WODON, Quentin, FOSTER, Vivien, and ESTACHE, Antonio. *Accounting for Poverty in Infrastructure Reform: Learning from Latin America's Experience*, Washington, D.C.: The World Bank, 2002.

Abstract: During the 1990's a number of countries in Latin America including Argentina, Bolivia, and Chile, developed policies focused on utility sector liberalization through increased private sector participation. This focus resulted from the recognition that overall quality and availability of services were inadequate. Infrastructure reform is inexorably linked to poverty alleviation and therefore must be carefully constructed and enacted.

This book provides practical guidelines and options for infrastructure reform that result in access and affordability for the poor. *Accounting for Poverty in Infrastructure Reform: Learning from Latin America's Experience* includes analysis of the trade-offs that must be made between efficiency, equity, and fiscal costs of the options. It includes a new model for reform that consists of three main components—policies, regulation, and provision which when properly balanced minimize the risks associated with reform.

WOODHOUSE, Erik, "The Experience of Independent Power Producers in Developing Countries," Seminar Draft, Program on Energy

and Sustainable Development, Stanford University, June 2005.

Abstract: Private investment in electricity generation (so called “independent power producers” or IPPs) in developing countries grew dramatically during the 1990s, only to decline equally dramatically in the wake of the Asian financial crisis and other troubles in the late 1990s. The Program on Energy and Sustainable Development at Stanford University has undertaken a detailed review of the IPP experience in developing countries. The study has sought to identify the principal factors that explain the wide variation in outcomes for IPP investors and hosts. It also aims to identify lessons for the next wave in private investment in electricity generation.

This paper presents the conclusions and analysis of the study of the experience of investment in greenfield IPPs in developing countries. The term “independent power producer” has been used to refer to several types of enterprises, but for this paper, “IPP” refers to a privately developed power plant that sells electricity to a public electricity grid, often under long term contract with a state utility. For this study and report, the lead actors in every IPP are private investors—usually foreign, but often with local partners. The classic foreign-sponsored, project-financed IPP has taken root in more than fifty emerging countries that display wide variation in economic, political, and social environments. The wide variation in settings for IPPs affords a special opportunity for researchers to probe systematically the critical factors that contribute to outcomes for host countries and for investors.

THE WORLD BANK, *Power’s Promise: Electricity Reforms in Eastern Europe and Central Asia*, Washington, D.C.: The World Bank.

Abstract: Power’s Promise is part of the World Bank Working Paper series. These papers are published to communicate the results of the Bank’s ongoing research and to stimulate public discussion.

This study analyzes the fiscal, efficiency, social, and environmental impact of power

sector reforms in seven countries in the ECA region. Sector deficits have been falling over the last decade and the savings from lower deficits have not translated into higher social spending. More emphasis must be placed on monitoring deficits and tailoring policy reform to country-specific circumstances. The impact of reform on utility efficiency, as measured by the cost of generation, system loss collections, and operational efficiency, is ambiguous. While overall revenue per kilowatt-hour increased in almost all countries, problems continue with losses, collection rates, and staffing. In terms of social impacts, electricity spending as a share of income increased, especially for the poor, while consumption stayed the same. In terms of environmental impacts, reforms slightly improved energy efficiency in power plants, though this has little direct impact on human health, because the electricity sector’s share of the total health damage from air pollution is negligible.

Several lessons emerge from this analysis. Undertaking simple ex ante simulations of reform impacts will allow better identification of potential reform benefits and costs. Placing more emphasis on outcome-based indicators of service quality would help ensure that future operations produce the intended end-user benefits. In many cases, tariff increases can and should be explicitly timed to coincide with service quality improvements. Yet, this may not always be possible. Where it is not, the adverse impact of tariff increases, especially for low-income consumers, should be mitigated by improving access to and efficiency in the use of clean alternatives.

Contains three related previously published titles on CD-ROM.

THE WORLD BANK, *The Private Sector and Power Generation in China*, Washington, D.C.: The World Bank, 2000.

Abstract: World Bank Discussion Paper no. 406. “The Chinese government remains aware of the potential threats to the economy (foreign capital flight, loss of competitiveness, drop in consumers’ confidence, etc.) and is striving to continue

to provide a stable environment for domestic investment and household consumption to maintain growth." Since the early 1980s, the Chinese government has eased restrictions on the power industry and ensured private participation in power sector development. In the aftermath of the Asian economic and financial crisis, concerns are being raised about Chinese currency (Renminbi) devaluation and the impact of the slowdown of electricity growth on the implementation of past contracts and new investment opportunities. To address these concerns, China's Ministry of Finance and the World Bank sponsored a two-day conference, held in Beijing June 22–23, 1999. The conference aimed to improve understanding and narrow the gap in perceptions of risks related to project development among government officials, representatives of provincial power companies and financial institutions, and private investors. The first part of this publication is dedicated to the narrative summary of the conference. The second part presents a background paper prepared for the conference to take stock of the progress achieved and identify issues and problems that still need to be addressed to create an environment conducive to further private involvement in power sector development. This publication will be useful to the international community that is interested in past and future development of private sector involvement in China's power sector, such as, Chinese government officials, power companies, private financial institutions, and private investors.

THE WORLD BANK, *The Privatization of Power and Natural Gas Industries in Hungary and Kazakhstan*, Washington, D.C.: The World Bank, 1999.

Abstract: World Bank Technical Paper no. 451. Hungary and Kazakhstan have privatized a large portion of their electric power and natural gas industries, but have followed different strategies. In contrast, the other former socialist countries in Central and Eastern Europe have privatized almost none. Has the privatization in these two countries been a success? What lessons can other countries learn from their experience? These

countries began their reforms from different starting points. The Hungarian power and gas sectors had a long history of being relatively well managed. In contrast, Kazakhstan inherited pieces of the old systems that were designed to serve the needs of the Soviet Union and had to develop new organizations to manage the system. Privatization of the Power and Natural Gas Industries in Hungary and Kazakhstan analyzes how each country dealt with the key issues involved in the restructuring and privatization of the power and gas sectors. These issues include industry structure, wholesale market, labor and management relations, regulatory framework, privatization objectives, and privatization methods.

THE WORLD BANK, *World Development Report, Sustainable Development in a Dynamic World: Transforming Institutions, Growth and Quality of Life*, Washington, D.C.: The World Bank, 2003.

Abstract: Three billion people will be added to the world's population over the next 50 years and 2.8 billion people today already live on less than \$2 a day—almost all in developing countries. Ensuring these people have access to productive work and a better quality of life is the core development challenge of the first half of this century. Growth could itself be jeopardized over the longer term, unless a transformation of society and the management of the environment are addressed integrally with economic growth. Now in its 25th edition, this year's World Development Report examines, over a 50-year period, the relationship between competing policy objectives of reducing poverty, maintaining growth, improving social cohesion, and protecting the environment. The World Development Report 2003 emphasizes that many good policies have been identified but not implemented due to distributional issues, and barriers to developing better institutions. The Report reviews institutional innovations that might help overcome these barriers and stresses that ensuring economic growth and improved management of the planet's ecosystem requires a reduction in poverty and inequality at all

levels: local, national, and international. If such an accord makes sense, then the outline above will require more careful work over the next few years, to develop an implementable program to adjust to contingencies, without undermining

the promise of the accord. As in previous years, the report contains an appendix of selected indicators from the World Development Indicators.

List of Formal Reports

| Region/Country | Activity/Report Title | Date | Number |
|---------------------------------|--|-------|--------|
| SUB-SAHARAN AFRICA (AFR) | | | |
| Africa Regional | Anglophone Africa Household Energy Workshop (English) | 07/88 | 085/88 |
| | Regional Power Seminar on Reducing Electric Power System Losses in Africa (English) | 08/88 | 087/88 |
| | Institutional Evaluation of EGL (English) | 02/89 | 098/89 |
| | Biomass Mapping Regional Workshops (English) | 05/89 | — |
| | Francophone Household Energy Workshop (French) | 08/89 | — |
| | Interafrican Electrical Engineering College: Proposals for Short- and Long-Term Development (English) | 03/90 | 112/90 |
| | Biomass Assessment and Mapping (English) | 03/90 | — |
| | Symposium on Power Sector Reform and Efficiency Improvement in Sub-Saharan Africa (English) | 06/96 | 182/96 |
| | Commercialization of Marginal Gas Fields (English) | 12/97 | 201/97 |
| | Commercializing Natural Gas: Lessons from the Seminar in Nairobi for Sub-Saharan Africa and Beyond | 01/00 | 225/00 |
| | Africa Gas Initiative—Main Report: Volume I | 02/01 | 240/01 |
| | First World Bank Workshop on the Petroleum Products Sector in Sub-Saharan Africa | 09/01 | 245/01 |
| | Ministerial Workshop on Women in Energy and Poverty Reduction: Proceedings from a Multi-Sector and Multi-Stakeholder Workshop Addis Ababa, Ethiopia, October 23-25, 2002 | 10/01 | 250/01 |
| | | 03/03 | 266/03 |
| | Opportunities for Power Trade in the Nile Basin: Final Scoping Study | 01/04 | 277/04 |
| | Energies modernes et réduction de la pauvreté: Un atelier multi-sectoriel. Actes de l'atelier régional. Dakar, Sénégal, du 4 au 6 février 2003 (French Only) | 01/04 | 278/04 |
| | Énergies modernes et réduction de la pauvreté: Un atelier multi-sectoriel. Actes de l'atelier régional. Douala, Cameroun du 16-18 juillet 2003. (French Only) | 09/04 | 286/04 |

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|--------------------------|---|--|----------|
| Africa Regional | Energy and Poverty Reduction: Proceedings from the Global Village Energy Partnership (GVEP) Workshops held in Africa | 01/05 | 298/05 |
| | Power Sector Reform in Africa: Assessing the Impact on Poor People | 08/05 | 306/05 |
| | The Vulnerability of African Countries to Oil Price Shocks: Major Factors and Policy Options. The Case of Oil Importing Countries | 08/05 | 308/05 |
| Angola | Energy Assessment (English and Portuguese) | 05/89 | 4708-ANG |
| | Power Rehabilitation and Technical Assistance (English) | 10/91 | 142/91 |
| | Africa Gas Initiative—Angola: Volume II | 02/01 | 240/01 |
| Benin | Energy Assessment (English and French) | 06/85 | 5222-BEN |
| Botswana | Energy Assessment (English) | 09/84 | 4998-BT |
| | Pump Electrification Prefeasibility Study (English) | 01/86 | 047/86 |
| | Review of Electricity Service Connection Policy (English) | 07/87 | 071/87 |
| | Tuli Block Farms Electrification Study (English) | 07/87 | 072/87 |
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| | Urban Household Energy Strategy Study (English) | 05/91 | 132/91 |
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| | Technical Assistance Program (English) | 03/86 | 052/86 |
| | Urban Household Energy Strategy Study (English and French) | 06/91 | 134/91 |
| | Burundi | Energy Assessment (English) | 06/82 |
| | Petroleum Supply Management (English) | 01/84 | 012/84 |
| | Status Report (English and French) | 02/84 | 011/84 |
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| Cameroon | Africa Gas Initiative—Cameroon: Volume III | 02/01 | 240/01 |
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| Chad | Elements of Strategy for Urban Household Energy The Case of N'djamena (French) | 12/93 | 160/94 |
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| | In Search of Better Ways to Develop Solar Markets: The Case of Comoros | 05/00 | 230/00 |

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|-------------------------------------|---|-------|----------|
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| | Africa Gas Initiative—Congo: Volume IV | 02/01 | 240/01 |
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| | Project of Energy Efficiency in Buildings (English) | 09/95 | 175/95 |
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| | | | |
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| | Cooking Efficiency Project (English) | 12/87 | |
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| | Africa Gas Initiative—Gabon: Volume VI | 02/01 | 240/01 |
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| | Household Energy Strategy (English and French) | 01/94 | 163/94 |
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|------------|--|-------|-----------|
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| Liberia | Energy Assessment (English) | 12/84 | 5279-LBR |
| | Recommended Technical Assistance Projects (English) | 06/85 | 038/85 |
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| | Household Energy Strategy (English and French) | 03/92 | 147/92 |
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| | Household Energy Strategy Study (English and French) | 07/90 | 123/90 |
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|-----------------------|--|-------|-----------|
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|---|--|-----------------------------|----------------------------|
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| Power System Efficiency Study (English) | 06/83 | 005/83 | |
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|-----------|--|-------|----------|
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| | Household Energy Strategy (English and French) | 12/91 | 143/91 |
| Honduras | Energy Assessment (English) | 08/87 | 6476-HO |
| | Petroleum Supply Management (English) | 03/91 | 128/91 |
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