ENERGY AND MINING SECTOR BOARD DISCUSSION PAPER

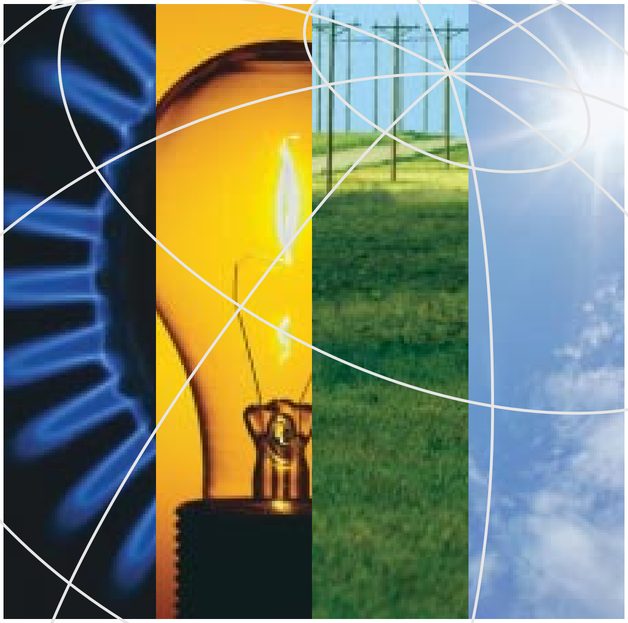
PAPER NO.6

MAY 2003

What International Investors Look For When Investing In Developing Countries

Results from a Survey of International Investors in the Power Sector

Ranjit Lamech and Kazim Saeed



THE WORLD BANK GROUP

The Energy and Mining Sector Board

AUTHORS ACKNOWLEDGMENTS

We would like to thank the respondents for their participation in the survey. Special thanks are due to Robert Bacon, John Besant-Jones, and Kyran O'Sullivan for their comments on and generous support of our work. We would also like to acknowledge the valuable advice of Tonci Bakovic, Denis Clarke, Scott Sinclair, and Jon Stern. Gratitude is also due to Anne Carlin and Elee Muslin, who administered the survey and made the high response rate possible.

Preliminary results from the survey were presented at the World Bank's annual Energy Forum on June 4, 2002. The comments, questions, and feedback of the conference participants are deeply appreciated.

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The World Bank, Washington, DC

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FOREWORD

International investment in the power sectors of developing countries, though insignificant in the 1980s, grew rapidly in the early 1990s and appeared to be set on a course of continuing growth. But in the past few years the interest of international investors has fallen off, and the number and value of transactions sponsored by these investors are well below their peak in 1997. This decline in foreign investment is a concern, since electricity demand in developing countries is projected to grow by about 4 percent a year over the next two decades.

To keep pace with this demand growth, many countries need to attract international and domestic investment to their power sectors. That requires taking into account the factors that investors consider important.

To capture international investors' perceptions of the factors critical to the success or failure of their investments, based on their experience, the World Bank surveyed firms with international equity investments in developing country power sectors. The analysis assumed that their experience with past investments is likely to inform their future decisions on whether to make or withhold investments and, once investments are made, to maintain or relinquish them.

The results of the survey add to our understanding of investors' perceptions. The survey has found that, at the time of the survey, many investors remained guardedly interested in developing countries. The conditions they seek are those that reform-minded governments have within their mandate to ensure—the rule of law, respect for the rights of investors, and a judicial and regulatory process free of arbitrary government interference. This finding suggests that governments can expect international investment flows to resume if they continue to strengthen the investment climate. That lesson probably also applies to domestic private investors. These investors, who may be just as important as international investors in meeting future investment needs, are likely to demand similar conditions.

The messages for governments that emerge from the survey derive from the perceptions of international investors. Of course, international investors are only one among many groups of stakeholders in power sector reform. To ensure that reform programs are sustainable, governments also need to take into account the interests of consumers, trade unions, domestic investors, and others.

We hope that the survey results, reflecting the collective view of the investor community, will prove useful to individual investors and to policymakers. The results should help policymakers tailor their strategies for attracting investment to their power sectors, enabling them to compete more effectively for international investment capital.

Jamal Saghir
Director, Energy & Water Department
Chair, Energy and Mining Sector Board
Private Sector Development and Infrastructure Vice-Presidency

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Director, Project Finance and Guarantees Department
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1. THE SURVEY AND ITS KEY MESSAGES

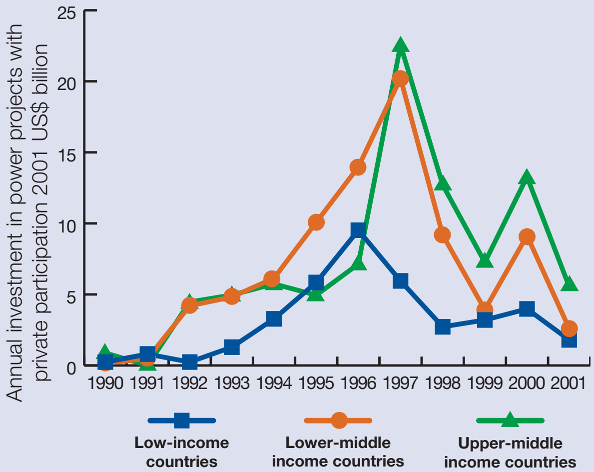
The survey results show that despite the decline in private investment in developing countries, international investors remain guardedly interested in these markets and would prefer to see adequate cash flows in a sector before making serious commitments to it.

Growing demand for power—but a falloff in investment

Electricity demand in developing countries is projected to grow by about 4 percent a year over the next two decades.[1] Keeping pace with this demand growth will require both international and domestic (public and private) investment—to add capacity, expand transmission and distribution networks, and maintain existing infrastructure.

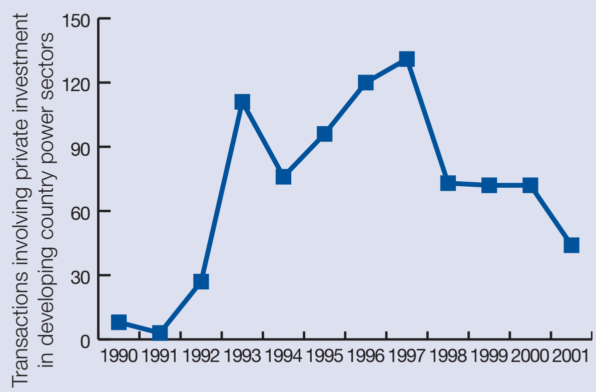
Investment by foreign private firms in developing country power sectors grew during the first part of the 1990s, peaking at more than $50 billion in 1997. Driving the boom were independent power producer (IPP) programs for greenfield generation in East Asia before 1997 and large privatizations of state-owned utilities in several Latin American countries. But with the completion of these investment programs in East Asia and Latin America and a general decline in investor interest, both the amount of investment and the number of transactions fell (figures 1.1 and 1.2). In 2001 there were only 44 transactions involving private investment in the power sectors of developing countries.

Figure 1.1 International investment in developing country power sectors fell after the 1997 peak



Source: World Bank, Private Participation in Infrastructure (PPI) Project Database

Figure 1.2 So did the number of transactions



Source: World Bank, Private Participation in Infrastructure (PPI) Project Database

Several factors contributed to the falloff in foreign investors' interest in developing country power sectors:

- Financial crises, such as the one in East Asia in 1997 and those in Argentina and other countries later in the decade, featured steep devaluations of local currencies that undermined the sustainability of investments. And macroeconomic weaknesses that led to economic contractions in such countries as Turkey affected investor interest not only in power but in all infrastructure sectors and in the wider economy.
- Conditions in international capital markets and the drop in investors' market capitalization values affected their ability to raise capital for new investments. In many cases capital markets penalized international

[1] International Energy Agency, *World Energy Outlook 2002* (Paris, 2002).

investors for having developing country exposures, exacerbating the financial crises they faced.

- Conditions in developing countries and investors' experience with their investments in these countries also affected investor interest.

It is this third set of factors that the survey focused on.

What the survey aimed to do

The survey set out to gauge the interest of international investors in the power sectors of developing countries and to identify the conditions in developing countries that investors perceive as important when making decisions on new investments or judging the performance of existing ones.

The survey was sent to 67 firms that have invested equity in the power sectors of developing countries other than their country of origin. Of these 67 firms, 48 submitted valid responses, which is a response rate of 72 percent. This high response rate lends force to the survey's findings.

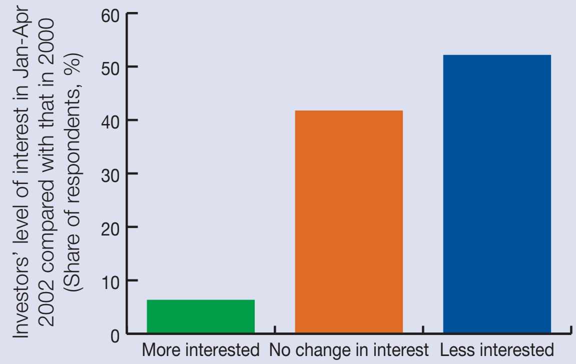
The survey's findings are based not on investors' ideal investment preferences, but on what investors have seen as determining the success or failure of their investments in developing countries in the past decade. This foundation in experience is the main strength of the messages derived from those findings.

What the survey found

International investors are not uniformly dissatisfied with their experiences in the power sectors of developing countries. The survey's findings show an even split between respondents reporting more interest in developing country power sectors or no change since 2000 and those reporting less interest (figure 1.3). Moreover, a large number report high levels of satisfaction with many of their investment experiences in developing countries.

Interestingly, countries with smaller systems do not seem to be at a disadvantage. Investors reported high levels of satisfaction with their investments in small systems in many countries (a large share of them in Central America), suggesting that what matters most for investors is the country's business environment and the sector's growth potential.

Figure 1.3 Almost half the investors were still interested in developing country power sectors



Source: Survey of International Investors in the Power Sector 2002, The World Bank Group

Key messages for governments

The survey's findings point to several priorities for governments seeking to attract and retain international investment in the power sector:

- ***Ensure adequate cash flow in the sector.*** Among the highest priorities identified by investors were adequate tariff levels and collection discipline. Investors are unlikely to consider an investment if these conditions are not present.

- ***Maintain the stability and enforceability of laws and contracts.*** A clear and enforceable legal framework is also among the top priorities for investors. They want the "rules of the game" to remain credible and enforceable—not altered at the government's convenience once they have made investment decisions based on those rules. A government's willingness and ability to honor its commitments are key.

- ***Improve responsiveness to the needs of investors.*** Investors identified government unresponsiveness to their needs and time frames as the most important factor in the failure of investments. And they considered the administrative efficiency of a host government one of the top factors in their decisions to invest in a country. Completing better preparation of transactions before inviting investors to participate can help reduce processing delays and the related opportunity costs for investors.

- ***Minimize government interference.*** Investors are most satisfied with investment experiences when they are free to realize returns from their investments without government interference. Where investment experiences were successful, investors pointed to their ability to exercise effective operational and management control of their investments as a key factor. And when investors consider investing in a country, they give much weight to the independence of regulatory processes from government interference.

Investors did not report complete disappointment with the power sectors of developing countries. Indeed, they are quite satisfied with some of their investments in many countries. And they are more interested in ensuring the long-term viability of investments than in maximizing short-term returns. In many cases they are willing to stay the course and do what is needed to turn around the financial and technical performance of the assets in which they have invested—as long as governments ensure that the conditions they consider priorities are in place.

In planning the development of power sectors, developing country governments need to respond to these messages from investors. Satisfaction ratings by investors show that some developing countries have already picked up these signals from investors and have even been able to steer their power sectors through difficult times.

2. THE INVESTORS AND THEIR EXPERIENCES

Most of the survey respondents are from North America and Western Europe, most are utility affiliates, and most have investments in generation. And most are relatively small. Many of these investors have entered developing countries seeking high returns and portfolio diversification. Broadly speaking, the investors are most satisfied with their investments in East Asia and Latin America.

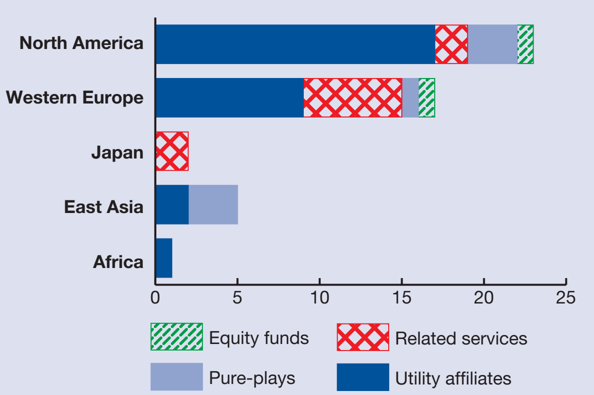
Who are the survey respondents?

Most of the investors responding to the survey are from industrial countries. More than 83 percent are from North America or Western Europe (figure 2.1). Only six out of 48 are from developing countries.

Utility affiliates dominate among the respondents. More than half (29 firms) entered the power sectors of developing countries as unregulated subsidiaries of large utility companies. All but three of these large parent utility companies are based in North America or Western Europe. Ten firms responding to the survey are power equity ventures of firms whose core businesses are power-related equipment, financial services, oil and gas, or other activities ("related services"). Just 7 of the 48 respondents are "pure play" power developers—that is, not an affiliate of a larger entity.

Most of the investors are relatively small. At the time of the survey (January–April 2002) 23 of the 48 respondents (48 percent) had a total capitalization of $1.5 billion or less, taking into account their investments in both developed and developing markets (figure 2.2). And 31

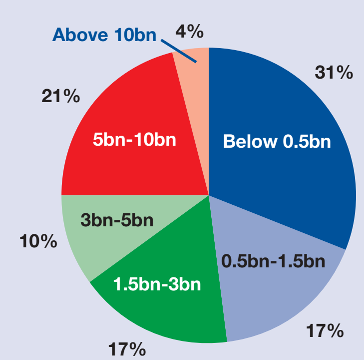
Figure 2.1 Most of the respondents are from North America or Western Europe



Source: Survey of International Investors in the Power Sector 2002, The World Bank Group

Figure 2.2 Most of the respondents are relatively small

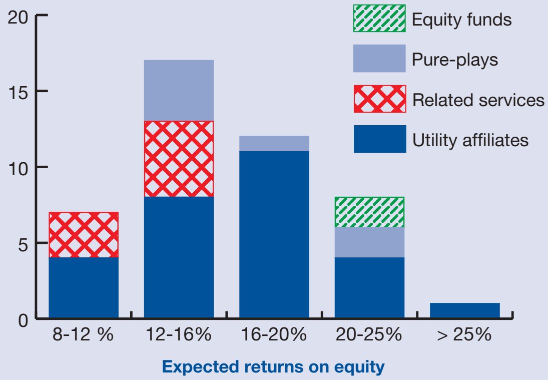
Respondents by total capitalization (US$ billions)



Source: Survey of International Investors in the Power Sector 2002, The World Bank Group

Figure 2.3 Many of the investors seek high returns

Respondents by expected returns from investments in developing country power sectors



Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

percent of the investors had $500 million or less in total capitalization.

Many investors seek returns higher than 16 percent. Investors' expected returns on equity range from 8 percent to more than 25 percent, with 21 (44 percent) of the respondents seeking returns of more than 16 percent (figure 2.3). That investors require higher returns in riskier markets is hardly surprising. But it points to the importance of improving the investment climate in riskier countries lest the higher returns demanded drive power prices higher than customers can afford, which in turn may undermine the sustainability of private investments. Another possibility is to use risk guarantee instruments that provide greater assurance that contractual terms will be honored and tariffs adjusted according to agreed procedures, enabling investors to seek lower returns.

Diversification into new markets is an important driver of investment. For 26 (54 percent) of the respondents, the main reason for investing in developing countries is to diversify their investment portfolio and expand beyond their home market. For 18 others (37 percent), the main reason is to obtain higher returns than are possible in their home market. Interestingly, two-thirds of these are subsidiaries of regulated utilities in their home market, and many are looking for fairly modest returns (12–16 percent) from their investments in developing countries.

Most of the respondents have investments in generation. Twenty-six (54 percent) of the respondents are solely in the generation business. And the 19 respondents in both generation and distribution have directed 70 percent of their investment to generation.[2]

How satisfied are respondents with their experiences in developing countries?

To capture investors' satisfaction levels with specific countries, respondents were asked to list the developing countries in which they had power sector investments at the time of the survey, then rate their satisfaction with their investment experience (or experiences) in each country. The rating choices were "very satisfied—will invest more," "reasonably satisfied," and "very dissatisfied—will exit if possible." For all countries with satisfaction ratings, the ratings were based on more than one project. And many of the respondents reporting experiences in these countries had several investments of varying sizes.

The most important message from the satisfaction ratings: although international power investors are hesitant to participate in new deals in developing countries, they are not uniformly dissatisfied with their experiences in these countries.

Many investment experiences have been satisfactory

Many international investors reported satisfactory experiences, challenging the gloomy view of an unremittingly poor investment environment held by some market commentators (figure 2.4). Moreover, these satisfactory experiences are spread across developing regions.

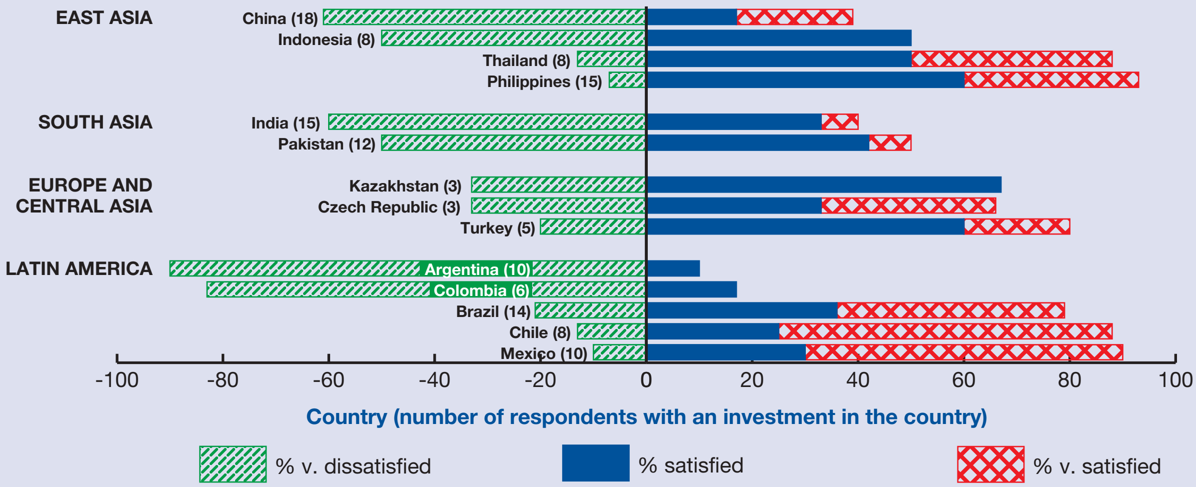
The Philippines, for example, received favorable ratings despite the protracted debate about the renegotiation of power purchase agreements with independent power producers. Of the 15 firms with investments in the Philippine market, 13 reported satisfaction with their investment experiences, and 7 said that they had had their best investment experience in the Philippines.

Brazil scored well despite its power crisis in 2001, with 11 of the 14 respondents with investments there reporting that they were satisfied or very satisfied with their

[2] This finding is consistent with a May 2000 report from the World Bank's Private Participation in Infrastructure (PPI) Project Database for 1990–99, which found that four-fifths of investment in developing country electricity projects with private participation goes to the generation sector (Ada Karina Izaguirre, "Private Participation in Energy," Viewpoint 208, World Bank, Private Sector and Infrastructure Network, Washington, D.C., 2000).

Figure 2.4 Many respondents reported satisfactory investment experiences

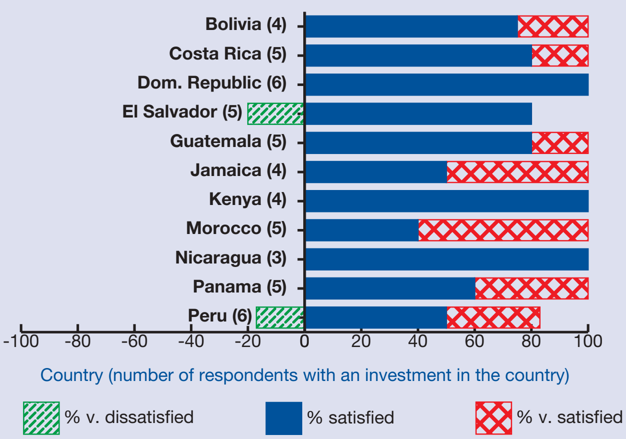
Satisfaction ratings for large systems (more than 10,000MW)



Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

Figure 2.5 Respondents were satisfied with investments in smaller systems

Satisfaction ratings for smaller systems (around 1,000MW)



Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

experiences. Four cited Brazil as the site of their best investment experience in developing countries. Chile and Mexico also fared well, with four respondents listing their experiences in Chile as their best.

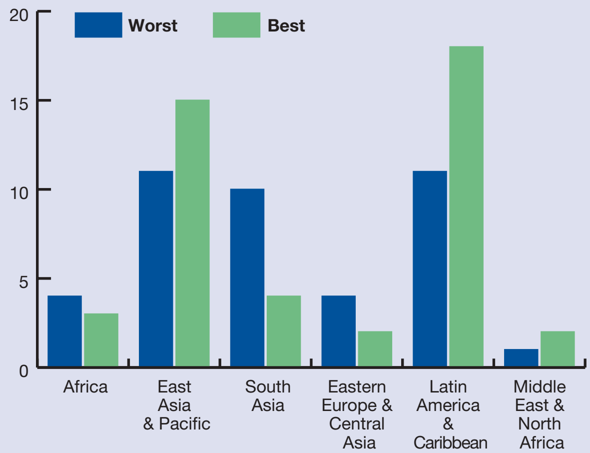
Smaller systems score well in satisfaction ratings

The survey results show that international investors are largely satisfied with their investments in smaller power systems (around 1,000 megawatts), most of them in Central America (figure 2.5). Again, the satisfaction ratings are generally based on more than one project: many of the respondents with investments in countries with small systems have a variety of investments in these countries. The respondents for the Dominican Republic, Guatemala, Nicaragua, and Panama, for example, all have investments in both generation and distribution.

The results for the Dominican Republic are interesting. All six respondents with investments in the country report that they are "reasonably satisfied" with those investments, even though poor payment discipline in that country has impacted investors in distribution and generation alike.

Figure 2.6 Investors had more positive perceptions of experiences in East Asia and Latin America

Respondents reporting best or worst experience



Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

Figure 2.7 Some developing countries were still considered investment prospects

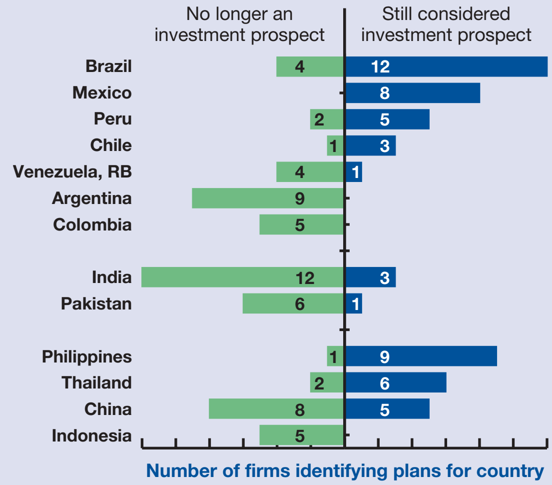


Figure includes only the countries mentioned most frequently by survey respondents

Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

Satisfaction levels vary across regions

More than two-thirds of the respondents (68 percent) reported that their best experience was in a different region than their worst one. This suggests that the respondent group's investment experiences are not significantly concentrated by region, allowing a simple comparison of investors' experiences across developing regions.

Broadly speaking, investors perceive their experiences in East Asia and Pacific and Latin America and the Caribbean as positive (figure 2.6). And they perceive experiences in South Asia as negative.

Which countries are still investment prospects?

To capture the positions investors are taking with respect to developing countries, respondents were asked to identify countries they considered prospects for more investment in the next two or three years and those they had dropped from their investment plans since 2000. Respondents were not given a list of countries to rate; instead, they were asked to list any country they wished to.

The results show that, at least at the time of the survey, investors did not have an unqualified negative outlook on all developing countries. Respondents still considered some countries to be investment prospects (figure 2.7).

These results are broadly consistent with those relating to investors' priorities (see chapter 3). Countries that have consistently done well in providing the conditions considered key priorities by investors have been able to retain their interest. Conversely, countries with a poor record of doing so are no longer considered an investment prospect.

3. THE PRIORITIES OF INVESTORS WHEN INVESTING IN DEVELOPING COUNTRIES

Underlying the survey's design is the hypothesis that investors make two broad decisions when investing in developing countries: whether to invest in a country at all and whether to invest in a specific project. To identify investors' priorities when investing in developing countries, the survey asked them to rate the importance of factors that may influence each of these decisions (see annex 1 for a discussion of the survey's methodology).

In assessing country conditions, investors reported giving top priority to:

- A legal framework defining investors' rights and obligations.
- Payment discipline and enforcement.
- The availability of a guarantee from the government or a multilateral agency.

In identifying the most important factors in the success or failure of investments, investors gave top ranking to:

- The retail tariff level and collection discipline.
- Fair adjudication of tariff adjustments and disputes.
- Operational control and management freedom.
- Regulatory commitment sustained through a long-term contract.

The results indicate a “back to basics” approach in the international investor community. Many investment decisions in the 1990s rested on basic assumptions—that collections would increase, that laws would be enforced, that government commitments would be sustained. But in many developing countries these assumptions proved invalid. To reassure investors and attract or retain their interest, governments need to focus attention on some of investors’ basic priorities.

What are the key priorities of investors?

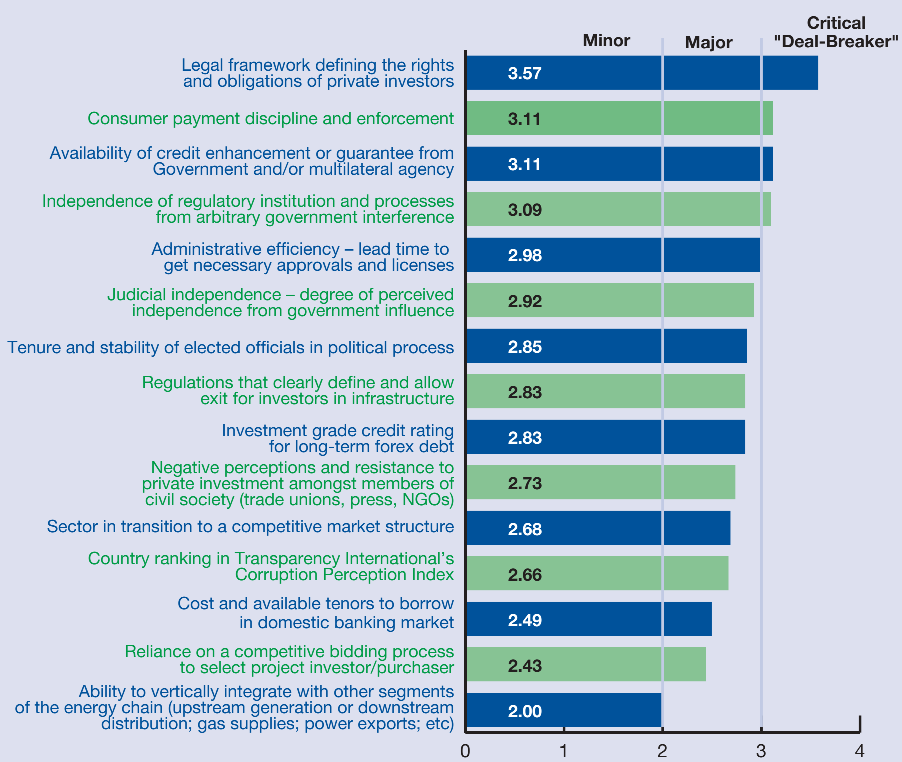
Organizing the survey questions on investment decisions in two sections—one focusing on country conditions and the other on factors determining the success or failure of specific investments—provided greater insight into what influences investors’ decision-making. But since the results from these two sections of the survey are often linked, they are combined in the discussion that follows.

Adequacy of cash flows in the sector

Investors give clear priority to adequate cash flows for ensuring a reasonable prospect of recovering costs and making an investment a success. In rating the importance of factors in the country environment, investors gave the second highest rating to payment discipline by customers coupled with a legal or administrative process that can be invoked to enforce payment or, if

[3] Countries often use private participation in distribution as a vehicle for improving the performance of the power sector, including by locking in commitments to sustainable tariffs and improving collection and labor discipline. These changes are often difficult to make under public ownership. Thus investors are looking to see whether governments have demonstrated a willingness to improve performance and allow the private operator to consolidate and deepen these improvements.

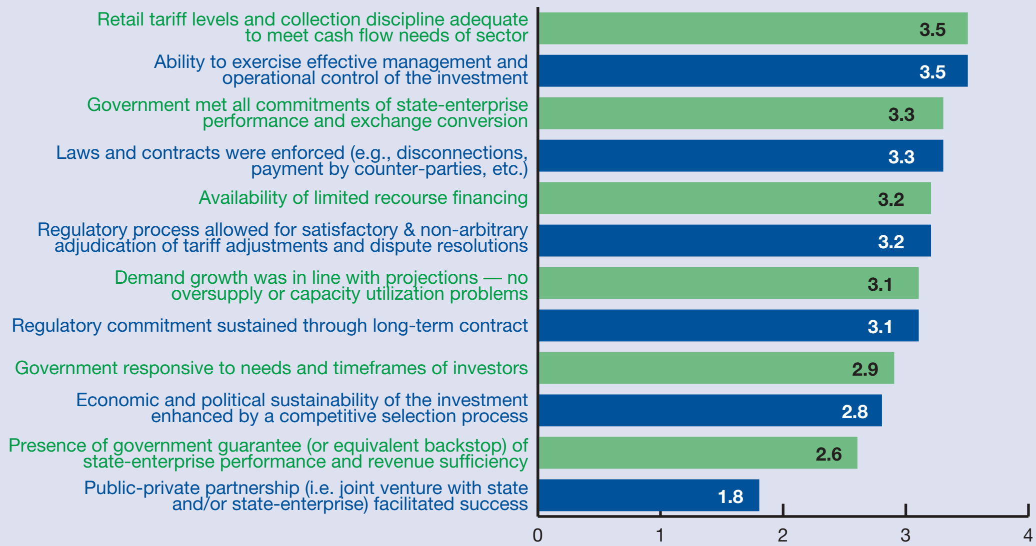
Figure 3.1 How investors rank priorities when investing in a developing country



See annex page 17 for an explanation of the factor ratings

Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

Figure 3.2 What makes for the best project experiences



See annex 1 for an explanation of the factor ratings

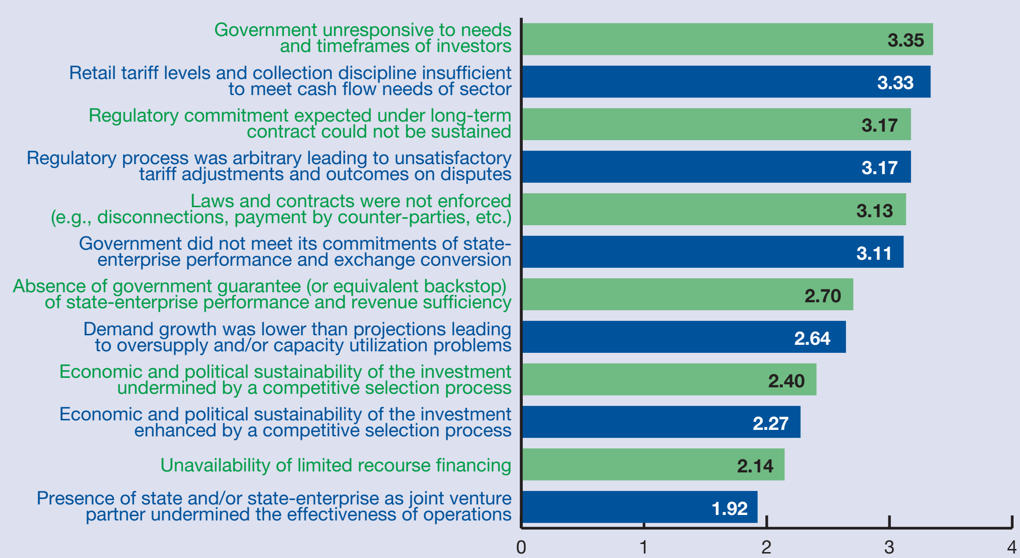
Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

payments are not made, disconnection (figure 3.1). Eighteen (38 percent) of the 48 respondents considered this factor a deal breaker—the highest rating.[3]

Investors considered payment discipline and enforcement even more important in determining the success of an investment, giving it the highest ranking among criteria for success (figure 3.2). Of the respondents identifying this as a factor in their best experiences, 66 percent rated it a deal breaker. And those identifying inadequate retail tariff levels and collection discipline as a factor in their worst experiences rated it the second most important contributor to the failure of investments, with 64 percent calling it a deal breaker (figure 3.3).

Adequate cash flows in the sector are a high priority for both firms with investments in distribution and those with investments in generation. Even though firms investing in generation are at a remove from retail customers, experience has led them to be more cautious about investing in sectors where collections are a problem.

Figure 3.3 What makes for the worst project experiences



See annex 1 for an explanation of the factor ratings

Source:Survey of International Investors in the Power Sector 2002, The World Bank Group

Investors cited nonpayment by customers and weak enforcement of collection in the Dominican Republic, India, and Pakistan as having contributed to dissatisfaction with their investments. Conversely, they cited payment discipline among customers in Brazil and China as the most important factor in the success of investments in those countries.

As experience in the Indian state of Orissa has shown, transferring assets into private hands cannot by itself bring about the improvement in collections needed to make an investment commercially viable. In Orissa, a distribution company acquired by an international investor did not receive the state support subsequently needed for enforcing collection discipline. This failure stunted Orissa's reform process. Governments need to actively support the investment by ensuring that collection discipline is enforced.

If private participation in the electricity business is to succeed, the government, the customers, the investors, and other stakeholders all need to reach some consensus about the tariff regime that will be introduced and about the enforcement of collections, including disconnection for nonpaying customers. The investors' survey responses pointed to important messages on these issues:

- Nonpayment by customers is a problem that investors cannot fix without the government's commitment to payment enforcement.
- A track record of improving payment discipline can lead investors to seriously consider bids for distribution concessions.
- Investors would like some security to cover the risk of nonpayment.

Stability and enforcement of laws and contracts

For international investors the test of a good legal framework is its clarity and the enforceability of contracts, particularly contracts with government agencies. Investors base long-term investment decisions on the reliability, applicability, and enforceability of laws and contracts. To have some assurance that these investments will succeed, investors want to see that the rights and obligations of private investors are clearly defined and that applicable laws and contracts are enforced.

Indeed, investors rated a legal framework that clearly defines the rights and obligations of private investors as by far the most important factor in decisions to invest in a developing country. Among respondents rating this as a factor in these decisions, 66 percent considered it a deal breaker.

Investors' responses to the survey also show that they place high value on the enforcement of laws and contracts. This factor ranked high among contributors to both the success and the failure of investments.

Investors identifying Chile as the site of their best experience gave high marks to the government's ability to meet its commitments and to the stability of contracts. And those identifying the Philippines as the country where they had their best investment experience gave the enforcement of laws and contracts the highest rating. The survey captured investors' perceptions as the brewing debate in the Philippines about the renegotiation of tariffs under Napocor's power purchase agreements was gaining momentum (the National Power Corporation, Napocor, is the premier state utility buying power from IPPs under power purchase agreements). But their ratings reflect the stability of laws and contracts in the Philippines from the advent of independent power producers in the early 1990s through the East Asian financial crisis because the investors identified investment experiences throughout this period.

Investors reporting their worst experience as being in Pakistan or India rated the lack of enforcement of laws and contracts as the most important factor in Pakistan and among the most important in India. Those that had their worst experience in China pointed to the government's failure to enforce laws and contracts and to sustain commitments under long-term contracts as the most important factors.

Government responsiveness to the needs and time frames of investors

Delays in government approvals and licensing have an opportunity cost for international investors responding to concession auctions and solicitations for bids. The survey responses indicate that this opportunity cost is significant in the power sectors of developing countries. Governments of developing countries need to be aware that international investors are less likely than domestic investors to continue to put up with the costs of administrative inefficiency.

Investors rated government unresponsiveness to their needs and time frames highest among factors in their worst investment experiences. Among those identifying this as a factor in their worst experience, 59 percent rated it a deal breaker. Investors ranked the host government's administrative efficiency (the lead time to secure necessary approvals and licenses) fifth among factors influencing their decisions to invest in a country.

Respondents identifying investment experiences in China, India, Indonesia, and Pakistan as their worst cited administrative inefficiency as a major factor in the failure of these investments. Take the case of China. In the mid-1990s investors' frustration with the central government's slow processing of approvals led to a policy decision to allow projects under $30 million to be processed at the provincial level. That led many international investors to develop smaller projects. But the government's processing efficiency for larger projects failed to improve. In 1997 the central government revoked the policy and resumed a role in processing all projects. Even so, investors have continued to hope for greater improvements in administrative efficiency.

While government responsiveness ranked highest among the factors in investors' worst investment experiences, it ranked low among those contributing to their best experiences. Where investments succeed, investors probably take adequate government responsiveness for granted.

Investors' control over their investments

The survey results suggest that governments can increase the chances of investor satisfaction by allowing investors greater management and operational control over their investments and permitting them to derive the maximum value from their assets. Investors ranked their ability to exercise effective management and operational control second among the factors contributing to the success of investments. And 55 percent of respondents considering this a factor in their best investment experience rated it a deal breaker. But effective management and operational control ranked low (ninth out of 12 factors) among contributors to the worst investment experiences.

Why do investors rank effective management and operational control so high as a factor in the success of investments, yet relatively low as a factor in their failure? Taken together, the results suggest that where investors have effective control over an investment, it helps success a great deal. But where they do not have it, the investment does not necessarily fail. Other factors are more important contributors to failure.

Having a partnership with the state or a state enterprise might be expected to affect management and operational control. Yet investors ranked public-private joint ventures lowest among factors contributing to both their best and their worst experiences. Since there are public-private joint ventures across the developing world (including among respondents' projects in the countries identified as hosting their best and worst experiences, such as Brazil, China, and India), this result suggests that the mere existence of such an ownership arrangement neither helps nor harms an investment's prospects of success.

Regulatory independence

The independence of regulatory institutions and processes from government interference also informs investors' decisions. Investors ranked this factor fifth among those influencing decisions to invest in a country, with 28 percent considering it a deal breaker. Survey respondents cited Chile as a country where sector regulation is free from government interference.

Availability of credit enhancement or risk guarantee

While investors do not consider government guarantees key contributors to the success or failure of investments, they do view the availability of guarantees as an important factor in decisions on whether to invest in a country. Survey respondents gave the availability of credit enhancements and guarantees the second highest rating (the same rating as for consumer payment discipline) among the factors affecting decisions to invest in a developing country, with 40 percent considering it a deal breaker. According to the respondents, the existence of a guarantee alone is not enough to determine an investment decision, but it is a key consideration in finalizing deals in markets where cash flow is influenced by a government entity (such as a state-owned purchaser of power) or a new regulator.

When it comes to specific investments, however, guarantees in themselves do not make them a success or failure. In India, cited by investors as the country in which the availability of guarantees had most influenced their experiences, investors struggled long to secure financial guarantees from state governments to back the performance of state electricity boards. But the main complaints from these investors relate to other factors: the sector's fundamental lack of financial viability (stemming from inadequate retail tariff levels and poor collection discipline) and the unresponsiveness of governments to investors' needs and time frames.

Even so, guarantees may play an important role in some investment experiences. In Brazil investors cited the existence of a government guarantee (or equivalent backstop) of state enterprise performance and revenue sufficiency as an important factor in the success of investments.

What is less important to investors?

Vertical integration

International power sector investors have little interest in integrating their investments beyond commercial links with other segments of the energy chain. Investors rated the ability to link projects with other sub-sectors (such as distribution or generation, gas supplies, and power exports) last among the 15 factors affecting their decisions to invest in a country. Investors report that they are "too specialized to consider vertical integration." These results suggest that investors prefer that each segment of the energy chain be independently profitable.

Competitive selection process

In decisions to invest in a country, investors also give little importance to reliance on competitive bidding processes for the selection of project investors or purchasers, ranking this factor second to last. Indeed, investors cited the lack of competition in negotiated deals between independent power producers and the government in Pakistan as a factor contributing to investor satisfaction. Experience has shown, however, that some investments made following uncompetitive selection can have unsustainable costs.

Domestic borrowing costs and tenors

Borrowing costs and tenors in the domestic banking markets of target developing countries were also ranked among the least important factors in investment decisions. International investors do not expect domestic credit markets in developing countries to have the depth to meet their credit needs for power investments. And they perceive domestic banks as unwilling to provide limited or non-recourse financing. This finding suggests that domestic financing is unavailable to international power investors.

Transition to a competitive market structure

When making a decision to invest in a country, investors give low priority to whether its power sector is undergoing a transition to a competitive market structure. Part of the reason for this may be the success of IPP investments in many countries, including in smaller systems such as those in Jamaica, Kenya, and Senegal (all cited by survey respondents). Yet investors view a sector's transition to a competitive market structure as a factor that strengthens the sector's legal framework, consumer payment discipline, the independence of regulatory institutions, and government efficiency—all key priorities. This result suggests that investors will not look unfavorably on a sector undergoing a transition to a competitive market structure.

Consistency between investment experiences in distribution and generation

In the questions on best and worst experiences the survey distinguished between generation (greenfield and acquisition) and distribution.[4] In most cases there was remarkable consistency between investment experiences in distribution and generation, with the differences too small to warrant presenting the findings separately. But notable differences emerged in a few areas.

Regulatory stability was one area where the responses of distribution investors and generation investors differed significantly. Distribution investors cited the inability to sustain regulatory commitments under long-term contracts as the most important factor in their worst experiences. And they gave a higher rating to an arbitrary regulatory process than generation investors did, though the difference was small (possibly reflecting generation investors' concern about the creditworthiness of distributors that purchase their power). For generation investors, the availability of limited recourse financing was, understandably, a much more important factor than it was for distribution investors.

[4] Since some of the respondents had investments in both generation and distribution and since the survey questionnaire did not require them to evaluate country or project factors separately for the two types of investment, distinguishing fully between generation investments and distribution investments was not possible. Future surveys should address this distinction.

ANNEX 1. SURVEY METHODOLOGY

The survey establishes a baseline for January–April 2002 of the perceptions of international investors that have invested in power sector projects—that is, in generation, transmission, or distribution assets—in developing countries.

How the target group was selected

A target list was prepared of firms that had equity investments in developing country power sectors (box A1.1). The focus was on firms that had put their own or a sponsor's capital at risk and had played a role in identifying an investment opportunity and putting together the initial capital for an investment.

Consideration was given to including lenders in the survey, given the objectives of the survey and the key role that lending institutions can play in realizing what are often highly leveraged transactions in developing country power sectors. But despite lenders' central role, the focus was limited to sponsors, since they identify and develop investments as well as bring them to fruition.

Consideration was also given to including local private investors in developing countries. Local investors are likely to play a growing role in the future, and their perceptions are therefore important. But difficulties in contacting a sufficient number and in ensuring geographic representativeness ruled against including them in this survey.

Box A1.1 How the respondent list was drawn up

A list of 113 international firms involved in the power sector was drawn up from lists of firms known to World Bank Group staff, supplemented by Platt's International Private Power Quarterly (A Country-by-Country Update of Markets Outside the U.S. and Canada, New York: McGraw-Hill, first quarter 2002). These firms had made investments in power sectors outside their country of origin. Of these 113 firms, 46 were found ineligible for the survey because they were not equity investors in the power sectors of developing countries (28), were subsidiaries of other firms in the list (6), no longer existed because of mergers (6), or had sold off developing country businesses (6). This left 67 firms in the sample (see box A1.2), of which 48 completed the survey questionnaire—a 72 percent response rate.

Box A1.2 The 67 investors that received the survey

ABB Equity Ventures
AEP
AES Corp.
Alliant Energy International
Alsons Consolidated Resources
Amata Power
Banpu Public Co. Ltd.
BG Group
BP Global Power
CHI Energy (Energia Global)
Chilectra
Cinergy Global Resources
CLP Power International
CMS Energy Corporation
Cogentrix Energy
Commonwealth Development Corp.
Covanta Energy
Delma Power
Duke Energy
Dynegy
E.ON Energie
Edison Mission Energy
EIF Group
El Paso Energy
Electricite de France International
Electricite de Portugal
Elyo
Endesa
Entergy Power Group
ESBI
Eskom Enterprises
FondElec
Fortum
GE Capital Global Energy
GMS Power
HEI Power
Hydro Quebec
Iberdrola
Independent Power
InterGen
International Power
Keppel FELS Power
Korea Electric Power Company
Marubeni Power
Mirant
Mitsui & Co.
NRG Energy
Panda Energy
PPL Global
PSEG Global
Reliant Energy
Rolls Royce Power Ventures
Saur International
Scudder Latin America Fund
Sempra Energy
Siemens Power Ventures
Sithe Energi
Statkraft International
Steag AG
Tomen Power
Tractebel
TransAlta
TXU Corp
Union Energy
Union Fenosa
Wartsila NSD

How the survey was administered

Firms were contacted individually, and the survey was either faxed or emailed to them. Follow-up calls were made to respondents to obtain explanations of survey responses where necessary. Individual responses will remain confidential.

How the survey questionnaire was designed

The survey questionnaire was designed to obtain five main categories of information:

- *Profile of the firm*—type of investor (IPP developer, strategic investor, portfolio investor, or a combination), indicative firm size, industry segment favored (generation, distribution, or both), and strategic reasons for investing in developing countries.
- *Profile of the firm's current investments in developing countries*—the countries in which the firm had invested, the sub-sectors in which it had invested, and its degree of satisfaction with each country.
- *Assessment of the firm's general approach to investing in developing countries.* Each firm was asked to rate and rank 15 factors—relating to government and legislative processes, the economy, the sector's current status, and the political economy—to describe the importance of each factor in its decisions to invest in a developing country (box A1.2). Investors were asked to rate each factor as "not a factor," "a minor factor," "a major factor," or "a critical factor/deal breaker."
- *Best and worst investment experiences.* Each firm was asked to rate and rank 12 factors—relating to investment process and support, revenue, operations, regulation, and government support and performance—that may have influenced its best investment experience in developing countries, and 12 corollary factors that may have influenced its worst investment experience (box A1.3). Again, each factor could be ranked as "not a factor," "a minor factor," "a major factor," or "a critical factor/deal breaker." A few respondents rated groups of countries as having represented their best and worst experiences. From the

Box A1.3 Factors in decisions to invest in a developing country

Government and legislative processes

1. Administrative efficiency—lead time to get necessary approvals and licenses
2. Judicial independence—degree of perceived independence from government influence
3. Country ranking in Transparency International's Corruption Perception Index
4. Regulations that clearly define and allow exit for investors in infrastructure
5. Reliance on a competitive bidding process to select project investor or purchaser

The economy

6. Investment grade credit rating for long-term foreign exchange debt
7. Cost and available tenors to borrow in domestic banking market

The sector's current status

8. Consumer payment discipline and enforcement
9. Availability of credit enhancement or guarantee from the government, multilateral agency, or both
10. Ability to vertically integrate with other segments of the energy chain (upstream generation or downstream distribution, gas supplies, power exports, and so on)
11. Legal framework defining the rights and obligations of private investors
12. Sector in transition to a competitive market structure
13. Independence of regulatory institution and processes from arbitrary government interference

The political economy

14. Tenure and stability of elected officials in political process
15. Negative perceptions and resistance to private investment among members of civil society (trade unions, press, NGOs)

Box A1.4 Factors influencing best and worst investment experiences

Best experiences

Investment process and support

1. Economic and political sustainability of the investment enhanced by a competitive selection process
2. Government responsive to needs and time frames of investors
3. Presence of government guarantee (or equivalent backstop) of state-enterprise performance and revenue sufficiency
4. Availability of limited recourse financing

Revenue factors

5. Cash flow sustainability: retail tariff levels and collection discipline adequate to meet cash flow needs of sector
6. Demand growth was in line with projections, no oversupply or capacity utilization problems

Operational factors

7. Public-private partnership (i.e., joint venture with state and/or a state enterprise) facilitated success of investment
8. Ability to exercise effective management and operational control of the investment

Regulatory factors

9. Regulatory commitment sustained through long-term contract
10. Regulatory process allowed for satisfactory and non-arbitrary adjudication of tariff adjustments and dispute resolutions

Government support and performance

11. Government met all commitments of state-enterprise performance and exchange conversion
12. Laws and contracts were enforced (e.g., disconnections, payment by counter-parties, and the like)

Worst experiences

Investment process and support

1. Economic and political sustainability of the investment undermined by a noncompetitive selection process
2. Government unresponsive to needs and time frames of investors
3. Absence of government guarantee (or equivalent backstop) of state-enterprise performance and revenue sufficiency
4. Nonavailability of limited recourse financing

Revenue factors

5. Retail tariff levels and collection discipline insufficient to meet cash flow needs of sector
6. Demand growth was lower than projected, leading to oversupply and/or capacity utilization problems

Operational factors

7. Presence of state and/or state enterprise as joint venture partner undermined the effectiveness of operations
8. Inability to exercise effective management and operational control of the investment

Regulatory factors

9. Regulatory commitment expected under long-term contract could not be sustained
10. Regulatory process was arbitrary, leading to unsatisfactory tariff adjustments and outcomes on disputes

Government support and performance

11. Government did not met its commitments of state-enterprise performance and exchange conversion
12. Laws and contracts were not enforced (e.g., disconnections, payment by counter-parties, and the like)

48 responses to the survey, 44 single-country best experiences and 39 single-country worst experiences were considered complete enough to be used for analysis.

- Prospects for investing in developing countries—the firm's level of interest in developing countries as a whole over the next two to three years, the expected growth of its investments in developing country power sectors, its expected return on equity from its developing country investments, the countries viewed as having investment prospects in the next two or three years, and the countries dropped from the firm's list of prospects for new investments in the next two or three years.

How perceptions about countries were captured

The survey elicited information on investors' perceptions of country investment climates from two angles. First, it asked investors to list the countries in which they had developed power sector projects and state whether they were "very satisfied—will invest more if possible," "reasonably satisfied," or "very dissatisfied—will exit if possible." The responses to this part of the survey provide an indication of investors' general perceptions of countries, particularly their inclination toward making other investments in the future. These results were tabulated to generate the country satisfaction ratings shown in chapter 2.

Second, the survey asked investors to name the country in which they had had their best experience and the country in which they had had their worst experience, and then identify the factors that had shaped these experiences in order of importance. The results provide greater insight into the reasons for the success and failure of investments in specific countries.

How key calculations were performed

Wherever investors were asked to rate a factor as "not a factor," "a minor factor," "a major factor," or a "critical factor or deal breaker," factor ratings and rankings were calculated as follows:

- *Factor ratings.* A scale of 1 to 4 was created for factor ratings by assigning numerals to each possible rating. "Not a factor" was given the value 1, "a minor factor" the value 2, "a major factor" the value 3, and "a critical factor/ deal breaker" the value 4. An arithmetic average of all respondents' ratings was then calculated for each factor. This average is the rating for that factor (see figures 3.1, 3.2, and 3.3).

- *Factor rankings.* After the arithmetic average of all respondents' rankings was calculated for each factor, these averages were sorted and assigned ordinals from the lowest value to the highest. These ordinals, the relative rankings of the factors, were used as a cross-check for the ratings.

- *Deal breaker.* As another proxy of how important respondents considered a factor, the percentage of respondents considering it "a deal breaker" was calculated by dividing the number of respondents rating the factor "a critical factor or deal breaker" by the number of those giving the factor any rating.

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