INFRA
GUIDANCE NOTES

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IMPACT OF GLOBAL CRISIS ON INFRASTRUCTURE PPP PROJECTS:
WHAT ARE THE ISSUES AT STAKE AND WHAT CAN THE WORLD BANK GROUP DO TO HELP?

This Guidance Note is a product of the Sustainable Development Network and is aimed at helping World Bank Task Team Leaders and other Bank specialists in the design and implementation of infrastructure investments, developed as part of the Infrastructure Recovery and Assets (INFRA) Platform. The INFRA Platform has been developed to bridge infrastructure financing, project preparation, and capacity gaps resulting from the global financial crisis. The Platform comprises a rapid diagnostic tool to identify at-risk infrastructure projects, a concessional financing window to support the preparation and financing of projects, initiatives for parallel and donor financing, and a common reporting system. More information at www.worldbank.org/infra

Abstract

Public-private partnerships (PPPs) are an important tool for delivering infrastructure and related services, but their reliance on the private sector has rendered them vulnerable to the current global crisis in particular as access to private finance has dried up, as demand for such services fluctuates and as uncertainty grips private investors. Ignoring the impact of the crisis on PPPs invites disaster; one need only look at the decade long dearth of serious investment in infrastructure suffered by Indonesia following the 1997 crisis.

This guidance note is intended to provide advice to task team leaders and Bank staff generally on responding to the needs of PPP in the face of the global crisis. The current crisis has affected every participant in a PPP (including investors, the government, contractors, and end users), but in very different ways. Understanding these impacts, and their potential implications for any given PPP, is key to developing an appropriate response to the crisis. This note is organized around three key questions:

- *What are the effects of the global crisis on infrastructure PPPs?*
- *How can these effects be addressed?*
- *How can the World Bank Group help?*

EXECUTIVE SUMMARY

Public-private partnerships (PPPs) have become an important tool for delivering infrastructure and related services in developing countries, but are being affected by the current crisis. According to a recent PPIAF study, almost half of infrastructure projects nearing completion in the developing world involving private participation have been delayed or canceled (or were at risk of being delayed or canceled) as a result of the crisis[1]. WBG client Governments with PPP programs may have a need for assistance in restructuring PPPs under stress.

Yet PPPs, either new or ongoing, are complex, and so is untangling and addressing the impacts of the crisis on such PPPs, as witnessed by the dearth of serious investment in infrastructure suffered by Indonesia in the decade that followed the 1997 crisis. Failure to address such a challenge in a prompt way runs the risk of individual project failures, a delay in infrastructure investments necessary for faster and more efficient economic growth and reduced participation of private investors as managers and operators of infrastructure services. While the global crisis necessitates a response, it is also an opportunity to re-examine and re-assert the benefits of PPP, and

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focus efforts on the most effective avenue to PPP development.

This guidance note is intended for task team leaders and other Bank staff who are helping client Governments respond to the effects of the crisis on PPPs[2]. The guidance provided is consistent with existing World Bank guidance notes on the roles of the public and private sectors in specific infrastructure areas,[3] while focusing on the impact of the current crisis.

The complexity of stakeholders' interests and contractual structures of PPP is such that it would be counterproductive to recommend "one size fits all" menu of solutions. So the intent of this note is not to pinpoint specific, actionable steps to be taken in all situations. Rather, the goals are (1) to help Bank staff and client Governments identify the cross-cutting ways in which the global crisis may be affecting PPP transactions in their countries, and (2) to offer a possible template for addressing those impacts. This template may then serve to start developing a response more tailored to the specific circumstances of a given PPP, based on the perspective of the Government's overall development program and its likely interest in safeguarding its PPP agenda.

With these points in mind, this guidance note is divided into three major sections:

What are the effects of the global crisis on infrastructure PPPs?

The current crisis is expected to affect every participant in a PPP (including investors, the government, contractors, and end users), but in very different ways. Understanding these impacts is key to developing an appropriate response to the crisis. In particular:

- The equity investors commonly relied upon to drive project implementation are having difficulty sourcing their equity investment and indeed the funding they need to develop the project through to financial close. They may be under pressure to extract themselves from investments that are not showing healthy returns[4].
- The private lending markets (and especially the markets for non-recourse or limited recourse debt) have been critically affected by the current crisis. IFIs and bilaterals have made some effort to fill the gap, but their capacity is clearly limited compared to the size of private financing gaps as shown by the ongoing initiative of the IFIs to raise additional capital.
- Operators and construction contractors, who provide the lifeblood of project implementation, have suffered from the fall in stock markets and are therefore having difficulties accessing financing.
- The shortfall in fiscal receipts is squeezing government resources, forcing them to downsize project preparation budgets (with the resultant impact on project quality and likelihood of failure), reduce payment obligations, and restrict monitoring functions, increasing the risk of conflicts and/or disputes.
- Rising unemployment, falling return on investment, falling corporate and individual wealth and reduced consumer confidence are all likely to reduce the affordability for many of infrastructure services at a time when the rising cost of debt and shifts in currency exchange rates are likely to increase those costs: a reduction in demand or inability to increase tariffs will reduce the financial viability of projects and offtakers.

How can these effects be addressed?

The specific circumstances of any given PPP will determine the Government's (and the Bank's) response, but there are several courses of action that Governments might take to assist a PPP under stress. It is important to assess carefully what is best for the country, not just what is best for the project. Projects that have not yet reached financial close are more easily modified but are at a higher risk of being abandoned before financial closing. Post-financial close, modification of the project will require unwinding of existing legal and financial arrangements, adding complication, but benefit from an existing agreed contractual framework reflecting underlying commitments. Also, modifications of the project, after financial close, are likely to cause potential legal liability, so the responsibilities arising from providing structuring advice in such situations should not be underestimated. Such actions include:

- restructuring the project to reduce government obligations, spread out investor requirements, reduce the cost profile, increase the revenue stream or otherwise increase the return of the investor,

- mobilizing local currency debt, where available,
- using government resources (or resources from multilateral or bilateral financial institutions) to supplement the project, via subsidies, providing debt or investing equity in order to improve the financial viability of the project or fill any gaps resulting from the financial crisis,
- using government credit (or the credit of multilateral or bilateral financial institutions) to take on contingent liabilities (guarantees or contingent financial undertakings) to protect investors from specific risks, and
- implementing conflict resolution mechanisms to identify stress in existing projects and resolve conflicts before they evolve into disputes or worse.

How the World Bank Group can help.

The World Bank Group has an extensive toolkit of financial products and is developing specific initiatives that can help support Governments looking to implement the solutions mentioned above. The products for the restructuring a PPP project, providing funded support to a PPP project, and providing contingent support to a PPP project are further described in Section 4.

More broadly, Bank staff should also note that the World Bank Group is establishing an integrated platform called INFRA to bridge infrastructure financing, project preparation, and capacity gaps in developing countries that are facing financial distress as a result of the crisis.[5]

1. INTRODUCTION

Public-private partnerships (PPPs) have been widely used in developed countries, and in an increasing number of developing countries, as an effective life cycle long investment and service delivery tool for infrastructure. In the decade from 1998 through 2007, at least 136 low- and middle-income countries used PPPs to raise more than US$420 billion of infrastructure investment[6]. PPPs are particularly important in emerging and transition markets (especially Latin America, Eastern Europe and Asia), where PPPs have been in use for more than a decade and have become an integral part of national infrastructure investment programs.

The global crisis is having multiple and cross-cutting effects on PPP projects, as more expensive (and more difficult to secure) private financing makes the project more expensive to Government and end users at the same time that both the Government and end users have the least capacity to absorb such increase in costs. The impact of these complex effects can be difficult to quantify precisely for any specific project, especially given the confidential nature of many of the relationships involved. But the evidence suggests that the overall effects are real, and far-reaching. A PPIAF survey in early 2009[7] looked at 315 infrastructure projects totaling about US$200 billion in aggregate investment volume in the developing world. All projects involved private participation, and all were in late stages of project development (i.e., in or close to the financing stage). The PPIAF analysis found that 20% of projects (by investment volume) had been delayed or canceled, or were at risk of being canceled. Another 25% were at risk of being delayed if financing could not be secured. Relatively few (2%) actually reported the increased cost of financing as a factor in the delay, but given the natural reluctance of project sponsors to acknowledge financing difficulties, this may be a substantial underestimate. Anecdotal evidence suggests that, for some projects, the problem is more likely to be a reduced access to credit at any price, rather than the price of debt per se.

PPP projects in crisis might be divided into two categories:

i. those that have not yet reached financial close; and
ii. those that are already under construction or in operation.

Pre-financial close, the government will have opportunities to:

- change the project risk profile, to take more risk on the Government or share the risk more effectively to make the project more attractive to private investors,
- extend the date for bid submission to give bidders more time to address concerns arising from the crisis,
- take time to perform more studies and otherwise gather additional data, or obtain permits, needed to reduce bidder risk and improve the project profile to make the project more attractive to bidders,

- reopen negotiations to address new concerns arising due to the crisis,
- cancel the bid process, restructure the project and rebid, and/or
- identify new sources of debt, in particular from IFIs or the government, to soften the pressure on bidders.

Changes to project documentation and risk allocation are typically easier before financial close, since generally legal agreements are not yet binding, and fewer existing legal rights are likely to be violated, than would be the case after financial close. On the other hand, prior to financial close, there is a greater chance that projects under stress will be abandoned rather than restructured.

While some of these options may also be available after financial close, modification of the project post-financial close will require unwinding of existing legal and financial arrangements. This complicates the modification process. There are likely to be more existing legal rights and injured parties involved in projects after financial close, and generally all parties will need to agree on the details of any modification, with the risk of hold-out parties abusing the situation to receive additional benefits from the other parties. There may be significant cost and time associated with the multi-party negotiations to make the necessary modifications to respond to the crisis. Furthermore, when addressing existing legal rights and signed contracts (particularly in the context of a project under stress), the level of care and due diligence required of WBG representatives may be sharply increased[8]. Even so, the process may benefit from an existing agreed contractual framework reflecting underlying commitments.

In either case, the discussion in this guidance note applies generally to both categories of PPP projects.

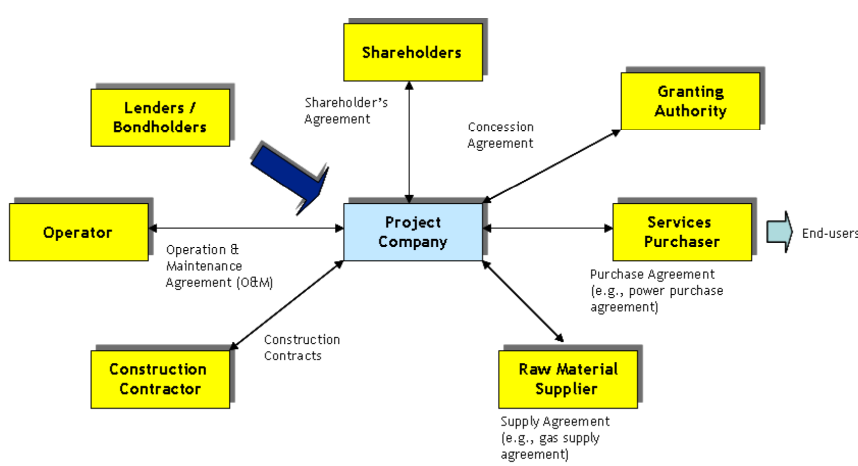
2. WHAT ARE THE EFFECTS OF THE GLOBAL CRISIS ON KEY PARTIES TO PPPS?

The current global crisis has clearly had dramatic effects on infrastructure PPPs, as the volume of project finance transactions dropped 30% in late 2008 from the levels reached a year earlier. Anecdotal evidence suggests that 2009 may be even worse. Yet the numbers do not tell the whole story, for the crisis is complex and multifaceted, and has impacted different parties in different ways. To differentiate these impacts, consider a simple schematic of some of the key contractual relationships among the participants in a generic PPP[9]. This section outlines the effects of the crisis on the capacities and decisions of each of these major participants.

Effects on Equity Investors: Where a consortium of equity investors develops new assets or takes an active participation in existing assets, these initial equity investors are generally specialized firms (often construction firms) with enough expertise and experience in a given sector to put their own capital at risk in the early, high-risk stages of project development; their participation is crucial to the success of such a PPP.

Investors have seen their balance sheets decimated by falls in stock markets globally under the lack of access to debt. These investors are finding it hard to source their equity investments in the capital needed to meet upfront development costs to pursue new projects. This is likely to create a flight to quality, where developers eschew more risky projects (even if they are more profitable) for less risky ventures.

Initial equity investors often have substantial resources already invested in a project by the time it approaches financial close. So as debt financing has become more difficult to secure during the financial crisis, they have often been pressed to make compromises (e.g., carry a larger portion of the capitalization, or accept a lower rate of return) for the sake of completing the project. But while equity investors have greater tolerance for risk (commensurate with their greater expected return), they do not have a limitless capacity to absorb the impact of the crisis. To protect their returns, many equity investors have



pulled back or sold their exposure in riskier developing countries to focus on less risky markets. Some have gone out of business entirely.

In many cases, once the project has been constructed and is in operation, the initial equity investors refinance all or a portion of their initial position to new investors interested in holding an equity position for the long term (secondary equity investors). These secondary equity investors are often institutional investors (non-bank financial intermediaries like insurance companies, pension funds, bond funds and others with long-term liabilities), or, more likely, dedicated infrastructure funds that cater to such institutional investors. These are also equity investors, but their risk profile is quite different from the initial project developers.

Effects on Lenders: Most infrastructure PPPs are highly leveraged in an effort to minimize the weighted average cost of capital by maximizing the use of debt capital, e.g. arranging debt financing of 50% to 90% of the construction cost. But the financial crisis has reduced lenders' appetite. Virtually every facet of the lending markets has been affected:

- Commercial bank lending has been significantly constrained since at least mid-2008, after the downturn in the housing market (and the collapse of the subprime mortgage market in the U.S.) caused major damage to bank balance sheets. The situation worsened substantially in September 2008, as the burgeoning financial crisis made it very difficult for banks and other institutions that fund operations in the short-term money markets to make long-term commitments. By the end of 2008, the volume of privately financed infrastructure projects reaching financial close had dropped significantly: global project finance volume was about $45 billion in the 4th quarter of 2008—down nearly 30% from 4Q2007.[10] Credit terms have deteriorated too, though the effects have been varied depending upon circumstances. In general, compared to 2007 and earlier, loan pricing and margin spreads are substantially wider, loan tenors are shorter, more equity is required, and banks are much more interested in syndicating loan commitment risks.[11] In parallel underwriting appetite has shrunk and many transactions are now being financed on the basis of club deals rather than on the basis of future syndication.
- Bond markets (a relatively small but important source of finance for infrastructure PPPs) have shrunk dramatically, at both the international and local levels. The single biggest factor has been the collapse of the monoline-wrapped project bond market, as most of the major bond insurers were downgraded due to losses from the mortgage crisis. Issuance of non-recourse project bonds plummeted 55% in 2008 (to $11.9 billion from $26.5 billion in 2007), although by the end of the year, the bond market was showing some signs of new life.[12] And for bonds that did make it to the market, credit premiums have widened drastically; in late 2008, the spread between US Treasury bond yields and the JP Morgan emerging markets bond index (EMBIG) spiked to 800-900 bp, up from about 200-300 bp in the prior two years.[13]
- Multilateral and bilateral financing institutions (including export credit agencies) have frequently stepped in to fill the gaps left by commercial lenders in recent months. These agencies are not immune to the financial crisis, and many have gone to the market for additional capitalization to meet demand, but in general they have not been damaged as much as commercial banks. Furthermore, in contrast to commercial banks, the core of the mission for most multilaterals relates to development, and so PPPs in developing countries are an integral part of their strategy, although with a renewed focus on quality and selectivity. In short, debt financing has become much more difficult to secure for projects, even creditworthy projects, since the financial crisis spread in late 2008. And because a significant portion of PPPs are based on non/ limited recourse debt[14] and a high debt leverage, this difficulty has a strong potential impact on both (i) projects in development, (as mobilizing debt to reach financial close can become significantly more difficult and lengthy), and (ii) existing PPPs (which will have increasing difficulties in refinancing debt). Clearly, while these are the overall trends, the precise effects of the crisis have varied widely from country to country. For example, in some developing countries, banks have avoided the worst of the damage from the global financial crisis,

Case Study: Mumbai Metro

Mumbai, India, is several years into an ambitious public-private program to construct a mass transit system. A consortium led by Indian firm Reliance Infrastructure won the build-own-operate-transfer (BOOT) concession for the first phase of the project ("Metro I") in 2006; construction began in early 2008, and the concessionaire raised outside bank financing in October 2008.

The second phase of the project ("Metro II") was—until recently—proceeding just as smoothly. In 2007, when the Mumbai Metropolitan Region Development Authority (MMRDA) circulated pre-qualification packages for Metro II, 32 firms expressed interest. Seven consortia were pre-qualified and submitted technical bids.

However, the schedule for Metro II began to slip in late 2008. Price quotes were originally due in December 2008, but several bidders requested an extension to February 2009 due to difficulties securing financing. And when the new date arrived, the MMRDA received no bids—only a few months after Metro I had successfully reached financial close. Particularly surprising was the failure of the Metro I concessionaire Reliance Infrastructure to submit a bid. Some Metro II bidders have requested more time to arrange financing, but the MMRDA has not yet indicated what they plan to do.

Although the reasons for the lack of bids have not been disclosed, this is a good illustration of the challenges facing equity investors in the context of the crisis. There is good anecdotal evidence in similar bidding processes that suggests that a number of equity investors that were active in PPP developments are now finding themselves overstretched and are not able to raise financing from banks and are therefore cutting down on development activities.

often because they did not invest in the sort of exotic derivatives that are now considered "toxic." In these cases, domestic banks have been able to replace at least some of the financing restricted by multinational banks, but with very different (and normally more conservative) terms and conditions and maturities.

Effects on Operators and Construction Contractors: These are the specialized firms that perform the nuts-and-bolts work of project development (e.g., designing the project, constructing it, operating it). The special purpose vehicle company formed by the original consortium of equity investors is often a legal entity only, with very limited staff or resources of its own; it must perform its obligations through subcontractors. In general, these operators and construction contractors have been negatively affected by the financial crisis, but the consequences for PPPs have been mixed. On the one hand, as global project volume has tailed off, the prices for EPC (engineering & procurement contract) services have decreased in some sectors (for example reductions in the cost of commodities like oil and steel), offering relief to PPPs still in development. But in many cases, market dislocations have made it difficult for EPC contractors to make firm bids at all. Many of these firms have lighter balance sheets and are more sensitive to risk or perceived risk, especially firms domiciled outside the project host country (as is usually the case in the developing world, except for unusually large markets like India). And the financial crisis has made it more difficult for firms to maintain working capital, which had particularly affected contractors who must pre-finance major capital costs (for instance, the lead construction contractor). The net result of these forces for any given PPP will likely be driven by country- and sector-specific factors.

Operators have been less affected than construction contractors, but are still significantly constrained by the cost of working capital finance and difficulty in fixing prices over the long term.

Effects on Governments: Broadly speaking, Governments have three main areas of responsibility with regard to PPPs. First, Governments have to put forward relevant funding and resources for project preparation and tender processes. Second, depending upon the project and the type of PPP, the Government may have financial obligations such as contributing all or a portion of the upfront capital or supporting operations through purchase of services or offtake, subsidies or guarantees. Third, Governments have an ongoing responsibility to monitor concessionaire performance and/or regulate the sector.

Financially, the global downturn in the real economy has severely damaged public budgets. Most government revenue streams (taxes, export revenues, remittances, user fees etc) have declined, sometimes sharply, while spending demands have increased—not just for traditional social priorities but also for unexpected needs like financial sector bailouts. Exacerbating the problem, Governments' own financing options (banks, capital markets) have also been constrained (or become more expensive) as a result of the financial crisis, making it more difficult to solve short-term public budgetary problems. This is likely to reduce funding available on the Government side for:

- Project preparation—Governments may need to cut budget allocations for project selection, for the teams and advisers appointed to perform feasibility studies or prepare projects for bidding processes, reducing the quality of projects being taken to market. Poor quality projects will reduce the likelihood of accessing finance and increase the likelihood of failure as bidders abandon low quality projects and lenders seek lower risk projects.
- Payment obligations—where Governments are obligated to contribute capital grants up front or to pay for services over time, reduced budgets may constrain the Government's ability to fulfill such obligations. This prospect increases political and commercial risk of the project for investors and therefore reduces appetite for investment. This will also increase the likelihood of government default of existing projects, and therefore increase perceptions of risk and the likelihood of investors to overreact to temporary project constraints.
- Monitoring functions—reduced budgets may result in more work allocated to fewer Government staff, decreasing the ability of that staff to ensure compliance by all parties with their project obligations and increasing the likelihood that simple conflicts will not be elevated early enough and will therefore escalate into major disputes.
- Sector development—anecdotal evidence suggests that the turmoil and disruption stemming from the crisis could crowd out the time and resources (and the political will) to establish robust PPP regulatory regimes. For instance, as individual projects come under greater pressure simply to reach completion, Governments may place less priority (in terms of time, resources and political will) on building the right institutional framework for these projects to function properly as PPPs over the long term.

Effects on Demand: The actual users of the completed infrastructure facility do not necessarily have any contractual role in the PPP, but they are nonetheless key stakeholders. Higher cost of debt further to the current financial crisis will result in increased operating costs for PPP projects. Further, as a result of the sharp downturn in the real economy, virtually all economic activity has decreased in volume, and end users have access to less disposable income to pay for services—at the very time that financing and other factors are making certain projects even more expensive. Almost every PPP will be affected by this increase in costs and drop in demand, regardless of how revenues are collected or who collects them. For PPPs in which the concessionaire collects fees directly from users, a sharp drop in projected usage reduces the profitability of the PPP for the investors; this is compounded by more stringent financing terms triggered by the weakened credit. If the project is already operating, a sharp increase in cost or drop in usage might even force the concessionaire into default, possibly requiring the Government to take over the project.

For PPPs in which the Government assumes volume risk (either by purchasing all project output and redistributing it to end users, or by guaranteeing the concessionaire's revenues), these risks are buffered; unlike a private concessionaire, the Government can decide to lose money on the project if it wants. But in either case, the drop in the economic value of the PPP threatens it with significant delay or even cancellation. The impact could be particularly great on poor communities, who are highly dependent upon basic infrastructure (especially utilities), but are the least able to pay for such services.

3. HOW CAN THE EFFECTS OF THE CRISIS ON INFRASTRUCTURE PPPS BE ADDRESSED?

In the face of these complex and interrelated impacts, the need for action may be immediate and specific. This section describes a number of specific, targeted activities that might be taken to assist a PPP.[15] Most have been employed by countries around the world, either in response to the current crisis or in other circumstances. As explained earlier, the intent is not to prescribe a defined set of steps, but rather to provide a starting point for Bank staff to assist client Governments in addressing a multi-layered set of challenges.

Furthermore, while Government response is likely to be strongly conditioned by what it is willing or able to do, this may not necessarily correspond with what it *should* do. TTLs and Bank staff may have a key role to play in assisting client Governments in this process.

The solutions discussed here are relevant to new projects still in procurement and to existing projects, but clearly will need to be adjusted accordingly to fit the context of the project. Possible solutions are organized as follows:

1. Restructuring the Project;
2. Providing Funded Support to the PPP; and
3. Providing Contingent Support to the PPP

There are certain common themes running through many of these possible strategies. Specifically, while all parties to a PPP have been affected by the current global crisis, for PPPs in the developing world it is very often likely to be the private participants who hesitate to commit. In this higher risk environment, private investors may need a higher expected return, a reduction in transferred risk—or both. Given this reality, many possible strategies for restructuring PPPs under stress revolve around adjusting the transaction structure to be more appealing to the private sector. This also increases the importance for Governments (and the Bank staff who serve them) to determine, in a transparent manner, what is best for the country—not simply what is best for the PPP (as further discussed below).

1. Restructuring the Project: the project structure may need to be altered to make it more attractive to the concessionaire or the lenders. This might include:

- Adjusting the timing and sequencing of investments. The financial viability of a PPP can be improved by spreading out the investment in new assets, e.g. by adjusting the timing of commencement of construction, delaying certain phases of construction or expansion of assets. However, the implications of delayed investment should be assessed carefully. It may result in reduced operating standards, increased operating costs over the life of the project and the public having to put up with construction works over a longer period. Where the Government chooses to spread out the investment in new assets, this may be an opportunity to use the additional time to perform further tests, obtain new data or fulfill permitting or regulatory requirements, to improve the project and mitigate key project risks.
- Reducing the cost profile of the project to fit the level of financing and/or demand, either by reducing the overall scope of construction, or by modifying the technical specification of construction to use less expensive technology. The disadvantage of this approach is that reducing the scope of the project may also reduce the usage or revenue stream of the project.
- Increasing the revenue stream of the project. This might be done without actually increasing the scope of the project, for instance by expanding the exclusive service delivery area for the project, extending the term of the concession, or increasing the permitted tolls or tariffs.
- Adjusting the allocation of risks in the PPP. For example, in the current climate, investors may be particularly concerned about demand risk. Governments may consider taking more demand risk, for example where the investor is otherwise at risk for usage levels on a toll road, the Government may consider using an “availability payment” structure (where Government makes a payment to the concessionaire based on availability of the road, regardless of usage).

Note, however, that even if these measures provide benefits to investors at no immediate cost to Government, they may have significant costs to other stakeholders, such as the end users, or other private operators in the sector. These interests should not be ignored, even if they do not appear to have a direct impact on the potential success of the PPP.

Finally, for projects that have reached financial close, the Government will need to increase its monitoring of projects and thereby increase its vigilance to identify problems with revenue streams, the need to access additional debt and other warning signs of trouble. By identifying PPP project stress early, many problems can be avoided or mitigated, and the relevant impact of the crisis reduced. The Government will need to allocate sufficient funding and experienced staff to monitor projects and ensure timely responses.

Case Study: Indonesian IPPs during the 1997 Asian Crisis

The Asian crisis had a particularly strong impact on the PPP agenda of the Government of Indonesia and its electricity company, PLN, in the power sector. Facing growing power demand, PLN had embarked in the early 1990s on a wide PPP program to attract private sector participation in building and operating power stations via IPPs (Independent Power Projects). In 1997 when the crisis hit, transactions with a number of world class consortia had reached financial close, with plants under construction (for instance the $1 billion Patuha geothermal facility and the $210 million coal-fired Amurang plant) and a large number of projects were in development with more than 20 solicited and unsolicited proposal for new plants. The crisis put a rapid stop to most activities in the field.

It became rapidly clear to investors and developers that local banks lending in rupiah would not have the capacity to replace international banks lending in US$. International banks themselves had not been and were not prepared to take currency exchange rate risk and therefore were relying on the ability of PLN to pay a portion of the revenues of the IPPs in USD. In view of the large devaluation experienced by the Indonesian Rupiah, international banks stopped pursuing new projects as the creditworthiness of PLN was being reevaluated downward. As a result most new project development activities stopped within the first 6 months of the crisis, leaving the government with a large demand gap. The IPP program had virtually stopped.

Existing projects that were half constructed were in an extremely difficult position and took years to complete. On the one hand, banks were reevaluating the risk of “throwing good money after bad” e.g. completing the project by drawing further on the loans and equity and facing the prospect of PLN not paying for the produced electricity, partially denominated in USD. On the other hand, PLN was keen to reduce its currency exposure and therefore renegotiate power purchase agreements. Investors were faced with the prospect of losing all their equity investment, or undergoing significant reduction of equity returns because of the reduction of revenues. A number of projects collapsed and the one that survived took 2 years of renegotiations among Government and PLN, lenders and investors.

The aftermath of the crisis has meant that until now IPPs have largely disappeared in Indonesia despite the effort of the Government to bring back the private sector.

Renegotiation can be an opportunity to improve the project, and times of economic and financial crisis may provide many such opportunities.

2. Providing Funded Support to the PPP: A more direct way to support a PPP is through the direct contribution of money. This support could come through any number of avenues, from the Government directly, IFIs, bilaterals or otherwise:

- Debt. Sources of debt finance might include IFIs, the Government, domestic or regional development banks, or local lenders. These loans might be made with the understanding that they will be refinanced using private debt once pricing achieves a specified level. Or, debt financing can be made available as a standby facility to address specific risks, such as future refinancing where the tenor of the initial commercial debt is insufficient. In some cases, the Government may need to create new institutions (or repurpose existing ones) to intermediate resources that exist but are for some reason unable to support the project—for instance, local institutional investors that lack the expertise and/or experience to invest directly in infrastructure might be supplemented by infrastructure financing facilities that could cover shortfall in equity and/or debt.
- Equity or mezzanine finance. For example, the government can increase its share capital in the project company, or reinforce available equity by providing mezzanine financing, to provide sufficient capitalization to improve the debt to equity ratio and satisfy increasingly stringent lender requirements.
- Subsidizing the project or consumers. For example, in a utility distribution project, the Government or an outside donor might provide targeted subsidies to the project company for each new connection, to encourage service delivery to a broader base of consumers and to help defray reductions in demand caused by tariff increases. Transitional consumption

subsidies could also be considered to cover the difference between an affordable tariff by those customers most severely impacted by the crisis, and the tariff required by the utility to cover costs. Or, the Government could increase its capital grant to defray construction cost and reduce the need for private debt/equity.

3. Providing Contingent Support to the PPP: There are also ways for Governments or other entities such as IFIs to deploy their credit in support of PPPs without making immediate cash disbursements. Such non-funded mechanisms might include:

- Guarantees provided to protect the lenders and/or the project company in the event of specified project risks. For instance, in a power project, the credit position of the power purchaser might be diminished by reduced industrial demand as a result of the crisis, even if the particular project is still sound; the Government might guarantee the payment obligations of the power purchaser to mitigate this perceived risk.
- If the PPP project is exposed to some form of market risk, then additional contingent support could be provided to mitigate such market risk, via take or pay structures or similar risk mitigation instruments (availability payments, offtake agreements, etc.).
- Contingent subordinated loans that can be drawn due to specified events, such as a shortfall in traffic, or an unexpected deterioration in exchange rates affecting project cashflows, will protect the lenders but will need to be repaid by the project.

Selecting the right approach

From a policy perspective, as Governments are asked to provide more financial support and bear more of the risks for any given project, they need to ask whether the project still makes sense as a PPP. At the project level, so long as the project continues to deliver greater value for money as a PPP (whether as originally conceived or as restructured) than it would as a traditionally procured public project, it should continue to be a PPP. But there is also a policy angle to be considered: a lesser developed PPP program (e.g. with no or limited results to-date) might be easier to postpone or to modify (e.g. by providing additional limited government support) compared to a more advanced PPP program where good value for money has been demonstrated. Postponing or modifying the lesser developed program entails limited losses, but a more advanced program has momentum which might justify making a greater effort to maintain more continuous support.

In some cases, the Government may conclude that its best option is to terminate the PPP. This may be necessary at any point in the PPP development process, and for any number of possible reasons. For instance, during the tendering and negotiations phase, the Government might terminate the PPP if it no longer delivers greater value for money, or (if the PPP is already under stress) restructuring fails. If the project is already in operation, the Government might terminate due to poor performance by the concessionaire.

The specific roles and responsibilities of client Governments and of Bank staff in PPP termination scenarios are beyond the focus of this Note. However, in many cases, Bank staff may be uniquely positioned to assist client Governments in achieving best results from a potential termination. Given that terminating a PPP *at any stage* may give rise to legal, financial and reputational liabilities for all parties (including the World Bank Group), Governments and Bank staff should approach such situations with a high degree of caution and due diligence. Some guidance on this topic exists for Bank staff (see footnote 8 above), but in any case, additional legal guidance should be sought.

Assuming that the Government does move forward with the PPP, the advantages and disadvantages of the restructuring approaches mentioned above will vary from country to country and project to project. A Government would ideally be able to undertake a thorough diagnostic of the environment, the resources available, the stakeholders, the objectives and the alternatives, considering financial, legal and technical aspects of the program and the projects, employing the value-for-money/cost-benefit assessments used when the project was first assessed for implementation as a PPP. But in practice, many countries are not in a position to undertake such an evaluation due to constraints on time, resources, or capacity, and will need to design a more selective and targeted diagnostic mechanism. This may involve a concise set of questions to assist policymakers to make a rapid assessment of the underlying issues.

The following sets out some of the questions that the Government will want to consider for new PPPs and existing projects in crisis:

- What are the flaws in the project that are causing the problem?
    - While section 2 identifies some of the flaws that may arise further to the current crisis, the Government will need to approach this assessment with an open mind. In particular, the key flaws may not be specifically created by the crisis.
    - As flaws are remedied, new flaws may arise or be uncovered, therefore this process should be iterative.
- How can the flaws be remedied?
    - What are the different options? What are the different packages of remedies available to the Government?
    - This analysis will require input from the various project parties, IFIs, bilateral agencies, etc.
    - The Government needs to resist the temptation to adopt wholesale the solutions used by other countries without first doing this assessment.
- How costly/attractive is each of the solutions in the short, medium and long term?
    - The solution may include any combination of public and private participation, and should not be limited to the PPP structure originally contemplated for the project.
    - The cost-benefit analysis performed when the project was first selected as a PPP (usually including a public sector comparator and/or value for money assessment) can be useful in this assessment.
    - Governments often focus on short-term costs and benefits, but PPPs are long-term infrastructure solutions, and the solutions available need to be assessed accordingly.
    - Clearly, the costs to be assessed here are not just financial, but also commercial, political and service quality.
- How likely is each option to successfully address the flaws?
    - The cost of different solutions will need to be balanced against their likelihood of success and the Government's ability to access the necessary resources.

4. How the World Bank Group can help

The World Bank Group has a number of products and current initiatives that can be used effectively in the context of the impact of the crisis on PPPs.[16] This section focuses on World Bank products and initiatives and provides links to further resources within IFC and MIGA in relation to PPP. It is organized using the activities identified in Section 3 as most relevant to resolving the constraints currently suffered by PPP projects in the face of the financial crisis, and how the World Bank Group can support these activities: i) restructuring the project, ii) providing funded support to the PPP, and iii) providing contingent support to the PPP. A summary table is provided at the end of Section 4.

Restructuring the Project: Bank support can provide technical assistance and different sources of funding that can be used to procure technical assistance to help Governments undertake the often costly process of identifying the best methods for restructuring a project (or a program of PPP projects) and implementing them.

- Development Policy Loans (DPLs) can be used to support Government undertaking policy reform to achieve restructuring. The triggers of a DPL can help Governments focus on the reform processes they have identified, even when political pressures magnified by the demands of economic crisis might distract the Government from the planned reforms.[17]
- Specific Investment Loans (SILs) can provide funding for specific restructuring exercises, providing the added support of the Bank safeguards to help the Government protect against degradation of environmental, financial management and procurement and social standards that might otherwise follow from the urgency of an economic crisis.
- Partial Credit Guarantees (PCGs) can help the Government borrow from commercial markets on improved terms, to fund the advisory support needed to assess and implement restructuring of PPP projects.

- Technical Assistance Loans (TALs) can finance advisory services for the restructuring of PPP projects. The TAL could cover the cost of non-bank advisors and other consultants to develop projects (PPP and non-PPP) and assistance for the PPP transactions. It can cover the cost of technical, financial and legal advisory, and the amount can be limited to a few US$ million. In particular, such TALs might provide the right funding mechanism for the diagnostic evaluation discussed under in Section 3 under "selecting the right approach"
- The Bank also manages a number of trust funds that might be able to provide assistance to Bank staff and Governments looking to restructure PPP projects to address constraints due to the financial crisis. Two of the best known are the Public-Private Partnership Advisory Facility (PPIAF) and the Global Program for Output Based Aid (GPOBA) (as discussed below), but others may also provide support, and should be explored accordingly.
    - PPIAF is a multidonor technical assistance facility created to help governments improve the quality of infrastructure through partnerships with the private sector. PPIAF provides grants in support of policy, legal, and regulatory reforms and capacity building in pursuit of PPPs in the financing, ownership, operation, rehabilitation, maintenance, or management of eligible infrastructure services, for both national and sub-sovereign projects.
    - GPOBA is a partnership of donors and international organizations working together to support output-based aid (OBA) approaches. GPOBA funds, designs, demonstrates, and documents OBA approaches to improve delivery of basic infrastructure and social services to the poor in developing countries, with the goal of mainstreaming OBA approaches with development partners (including client Governments).[18]
- Governments looking to restructure PPP projects may benefit from the advice and support of Bank experts. This support can be funded through Trust Funds or TALs, as discussed above, or through other mechanisms, such as:
    - Reimbursable Technical Assistance (RTA) involves client Governments purchasing advisory support from the World Bank.
    - The World Bank has a PPP Global Experts Team which includes specialists in all areas of PPPs (financial structuring, legal structuring, economic viability, PPP tendering, risk analysis, regulatory issues etc.). The group was established in February 2009 and its medium-term objectives are to respond quickly to requests for support from regional departments on PPP issues, and where needed, assemble teams of experts to address medium- to long-term interventions. GETPPP also has access to some funding to co-finance such interventions.
    - IFC advisory provides advisory services to Governments on a fee-for-service basis.

Providing Funded Support to the PPP: Bank support can provide funding that can be used to support a PPP project, directly or indirectly.

- Development Policy Loans (DPLs) can be used to support Government commitments to infrastructure, and to that extent can provide the resources needed for the Government to providing funding to PPP projects. The triggers of a DPL can help Governments focus on the reform processes they have identified, even when political pressures magnified by the demands of economic crisis might distract the Government from the planned reforms.
- Specific Investment Loans (SILs) can provide funding for specific projects, with the additional benefit of the Bank safeguards to help the Government protect against degradation of environmental, financial management and procurement and social standards that might otherwise follow from the urgency of an economic crisis.
- Partial Credit Guarantees (PCGs) can help the Government borrow from commercial markets on improved terms, to provide funding to PPP projects.
- The Clean Technology Fund (CTF) can invest in projects and programs that contribute to demonstration, deployment and transfer of low carbon technologies with a significant potential for long term greenhouse gas emissions savings. While not specifically focused on PPP, the CTF aims to finance transformational actions by

(a) providing positive incentives for the demonstration of low carbon development and mitigation of greenhouse gas emissions through public and private sector investments; (b) promoting scaled-up deployment, diffusion and transfer of clean technologies by funding low carbon programs and projects that are embedded in national plans and strategies to accelerate their implementation; and (c) promoting realization of environmental and social co-benefits thus demonstrating the potential for low-carbon technologies to contribute to sustainable development and the achievement of the Millennium Development Goals.[19]

- The International Finance Corporation (IFC) can lend to PPP investors and also invest equity in such projects. It also is developing an *Infrastructure Crisis Facility* initiative to bridge the gap in available financing for viable privately funded or PPP infrastructure projects in emerging markets that are facing financial distress as a result of the financial crisis. The facility will comprise a loan financing trust, an equity facility and an advisory facility, providing short to medium term financing for infrastructure projects. IFC is also active in this area via its efforts to partner with emerging market investors and to leverage investment through financial intermediaries.
- The Subnational Finance Department (a combined initiative of the World Bank and the IFC) provides states, provinces, municipalities, and their enterprises with financing and access to capital markets, without sovereign guarantees. On a selective basis, this department also provides financial support to nationally owned enterprises operating in natural monopoly infrastructure sectors. Subnational clients have access to the full range of IFC investment products, including lending instruments, guarantees, equity and quasi-equity.

Providing Contingent Support to the PPP: Clearly, the funding available from the World Bank can assist Governments in their undertaking of contingent liabilities. But the Bank also offers specific products that are designed to reinforce the Government's contingent support, and ideally use the AAA credit rating of the World Bank to improve the value to PPP investors of such contingent support, increasing competition as more bidders are attracted by the project, reducing the cost of debt as lenders feel more comfortable with the project risk and therefore reducing the cost of the project commensurately.

- The World Bank Partial Risk Guarantee (PRG) is specifically designed to support PPP. The lenders to a PPP project receive a guarantee from the World Bank of specified project risks, which may include various forms of Government breach of contract (e.g., Revenue or tariff guarantees, payments in compensation for regulatory failure, termination payments etc). The PRG has been usefully deployed in markets where commercial financing available is scarce and has led to increase of maturities by up to 13 years and reduced lending margins by up to 3 %. The PRG requires a counter guarantee from the Government matching, on a back to back basis, the coverage of the PRG. Such coverage is agreed with the Government to ensure that the PRG guarantees only the risks required to improve credit terms.
- The Multilateral Investments Guarantee Agency (MIGA) MIGA helps investors and lenders to address concerns about investment environments and political risk in the emerging markets by providing political risk insurance, and dispute mediation services. In response to the current crisis, MIGA is developing new products that would unable to it to mitigate risks more effectively. On April 14, 2009, MIGA received an approval from the Board of Directors for an expanded line of products that includes Non-Honoring of Sovereign Guarantees and enhanced Breach of Contract and War and Civil Disturbance coverages. MIGA also developed a Master Contract that could help companies and private equity funds to raise capital for their planned investments in several countries.

Summary table

Product	Restructuring Projects	Funding	Contingent Liabilities
DPL	X	X	
SIL	X	X	
Partial credit guarantee	X	X	
Partial risk guarantee			X
Technical Assistance (Loan or reimbursable)	X		
GET PPP	X		
Trust Funds	X		
MIGA			X
IFC	X	X	X [20]

5. Conclusion

The project-level analysis presented in this guidance note may very likely lead to consideration of more fundamental issues, such as the proper roles of the public and private sectors. In that light, it is important for Bank staff to remember that PPPs are only one part of a much larger agenda. Despite their increasing popularity in recent years, PPPs are still a relatively small part of overall infrastructure investment in the developing world (perhaps 10%-20%), and infrastructure itself is only one part of the overall development equation. Other crucial factors include health, education, institutional capacity, human security, gender equity, environmental sustainability, and the rule of law. All of these (to a greater or lesser extent depending on the country) require substantial investment and commitment of money, other resources and time. Furthermore, all of these have been affected to some degree by the ongoing and multifaceted global crisis.

But while infrastructure PPPs are only one piece in a much larger puzzle, they are an important piece that touches many others. By using PPPs to deliver infrastructure projects, Governments can transfer key fiscal risks and free up fiscal space for other uses, such as social spending on health and education. PPPs can allow the Government to deliver more infrastructure, on a faster timetable, and of a higher quality than it might otherwise—boosting economic growth, stimulating job creation and private sector development, and improving living standards.

PPPs are difficult and complex by nature, and are even more so now in the wake of the global crisis. But their popularity in recent years stems from their advantages to Governments: transfer of key risks to the private sector, expansion of the scope and quality of the Government's infrastructure investment program, stimulation of private sector activity, and access to the (often greater) efficiency and innovation of the private sector. Moreover, PPPs are located at the nexus of several vital strands of the overall development agenda, including economic growth, public financial management, private sector development, job creation and other critical issues.

As a result, it is very important for Governments to appropriately manage their PPP programs—and their challenges—through the global crisis. Whenever and however the current crisis ends, the decisions that Governments make now will have significant and long-lasting effects. The World Bank Group stands prepared to assist them in that process.

This Guidance Note was prepared by the team of Raymond Bourdeaux, Jeff Delmon and George Wolf of the Finance & Guarantees Group in the Finance, Economics and Urban Development Department (FEU) with inputs from Elena Palei (MIGA) and Adriana Aguinaga (IFC). Additional review was provided by Henry Russell (FEU), Patricia Veevers-Carter (GPOBA), Paul Noumba Um (MNA) and Mark Moseley (LEG).

CONTACT POINTS:

- General support on PPP design and financing issues:
  - FEU: http://go.worldbank.org/M0DG4V7DX0
  - Infrastructure and law website: worldbank.org/inflaw
- GET PPP
  - http://knowledge.worldbank.org/public-private-partnerships-get
- Partial risk and Guarantees:
  - http://intranet.worldbank.org/wbsite/intranet/operations/intguarantees
- PPIAF:
  - http://www.ppiaf.org
- GPOBA:
  - http://www.gpoba.org
- CTF
  - http://intranet.worldbank.org/wbsite/intranet/sectors/intranetenvironment
- IFC – Infrastructure Finance Facility
  - http://www.ifc.org
  - Contact: infrafacility@ifc.org
- IFC – Subsovereign
  - http://www.ifc.org/ifcext/subnationalfinance.nsf/
  - Contact: subnationalfinance@ifc.org
- MIGA
  - http://www.miga.org

APPENDIX 1: SOURCES AND REFERENCES FOR FURTHER INFORMATION

World Bank Group Sustainable Infrastructure Action Plan, FY 2009-2011 (July 2008), available at http://siteresources.worldbank.org/INTSDNETWORK/Resources/SIAPfinal.pdf

Infrastructure Action Plan, Informal Board Meeting (July 8, 2003), available at http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2003/06/24/000012009_20030624104022/Rendered/PDF/26204.pdf

Operational Guidance for World Bank Group Staff: Public and Private Sectors Roles in the Supply of Electricity Services (February 2004), available at http://siteresources.worldbank.org/INTENERGY/Publications/20269078/Public_and_Private_Roles_in_Electricity_Supply.pdf

Operational Guidance for World Bank Group Staff: Public and Private Sector Roles in Water Supply and Sanitation Services (April 2004), available at http://siteresources.worldbank.org/INTWSS/Publications/20249486/Guidance%20note%20Public%20and%20Private%20Sector%20Roles%20in%20Water%20Supply%20and%20Sanitation%20Services%20Apr%2004.pdf

Operational Guidance for World Bank Group Staff: Public and Private Sector Roles in the Supply of Gas Services in Developing Countries (April 2004), available at http://siteresources.worldbank.org/INTENERGY/Publications/20269079/Gas_Operational_Guidance_Note.pdf

Operational Guidance for World Bank Group Staff: Public and Private Sector Roles in the Supply of Transport Infrastructure and Services (May 2004), available at http://siteresources.worldbank.org/INTTRANSPORT/214578-1099319223335/20273720/tp-1_pp-roles.pdf

Operational Guidance for World Bank Group Staff: Public and Private Sector Roles in the Information and Communication Infrastructure Sector (July 2004), available at http://intresources.worldbank.org/INFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/Pub_&_Priv_Sector_Roles_in_the_ICT_Sector.pdf

Infrastructure Recovery and Assets (INFRA) Platform, available at http://go.worldbank.org/C0ZU10N2D0

World Bank and PPIAF PPI Project Database, available at http://ppi.worldbank.org

Assessment of the Impact of the Crisis on New PPI Projects – Update 2 (March 5, 2009), available at http://www.ppiaf.org/documents/Impact_crisis_note_03-05-2009.pdf

World Bank Operational Policies, OP7.40 (9) and (10) on procedures and responsibilities in contract renegotiations, available at http://go.worldbank.org/KV8Z17DX01

Assisting in the Renegotiation of Public-Private Infrastructure Agreements: Guidance Note for World Bank Staff

Delmon, Private Sector Investment in Infrastructure: Project Finance, PPP Projects and Risk (2009), available from the World Bank or from Kluwer Law International Publishing at http://www.kluwerlaw.com/Catalogue/titleinfo.htm?ProdID=9041127143&name=Private-Sector-Investment-in-Infrastructure%3a-Project-Finance%2c-PPP-Projects-and-Risk-2nd-edition

Gassner, Popov and Pushak, “An Empirical Assessment of Private Sector Participation in Electricity and Water Distribution in Developing and Transition Countries” (June 2007), available at http://siteresources.worldbank.org/INTSDNETWORK/Resources/2007_June_Impact_of_PSP_in_elec_and_water.pdf

Irwin, Government Guarantees Allocating and Valuing Risk in Privately Financed Infrastructure Projects (March 2007), available at http://siteresources.worldbank.org/INTSDNETWORK/Resources/Government_Guarantees.pdf

Harris, Private participation in infrastructure in developing countries: trends, impacts, and policy lessons (April 2003), available at http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2003/08/11/000090341_20030811153444/Rendered/PDF/265260PAPER0WB1on0in0infrastructure.pdf

Project Finance International Magazine website: www.pfie.com

Delmon, A Practical Guide to Private Participation in Infrastructure, Project Development and Project Finance (2009), forthcoming from World Bank publications

Baker and Mandri-Perrot, Mitigating the Impact of the Financial Crisis on the Urban Poor using Results Based Financing such as Output Based Aid for Slum Upgrading (2009)

Akbar, “Greening” the Infrastructure Recovery and Assets Platform (2009)

Juhel, Infrastructure Action Plan Crisis Response: Addressing Infrastructure Needs in Development Policy Operations (2009)

ENDNOTES

[1] Please see "1. Introduction" below for further details on this PPIAF study.
[2] The guidance provided in this note is consistent with the World Bank Group's commitment in the Sustainable Infrastructure Action Plan (SIAP, 2008) to provide institutional and financial support for PPPs (on both the public and the private side) through direct financing, risk mitigation, technical assistance, and other innovative strategies and instruments. The SIAP itself follows upon the Infrastructure Action Plan (IAP, 2003), which revitalized the WBG's engagement in infrastructure development. (See Appendix 1 for links to these and all other referenced documents.)
[3] Public and Private Sectors Roles in the Supply of Electricity Services (February 2004); Public and Private Sector Roles in Water Supply and Sanitation Services (April 2004); Public and Private Sector Roles in the Supply of Gas Services in Developing Countries (April 2004); Public and Private Sector Roles in the Supply of Transport Infrastructure and Services (May 2004); Public and Private Sector Roles in the Information and Communication Infrastructure Sector (July 2004)
[4] For instance, there is strong evidence that a number of Europeans, Russian and Indian companies are curtailing their project development activities due to funding constraints
[5] See http://go.worldbank.org/C0ZU10N2D0 for details on INFRA platform
[6] World Bank and PPIAF, PPI Project Database. Date: 02/27/2009. Privatizations not included.
[7] PPIAF article produced by Ada Karina Izaguirre, Assessment of the Impact of the Crisis on New PPI Projects – Update 2, March 5, 2009
[8] Please refer in particular to OP7.40 (9) and (10) on procedures and responsibilities in contract renegotiations. For a more detailed discussion of the issues involved in renegotiating PPPs, see Assisting in the Renegotiation of Public-Private Infrastructure Agreements: Guidance Note for World Bank Staff.
[9] PPPs can vary widely in terms of the participants involved and their respective contributions. Some of the specific circumstances and remedies addressed in this Note concern PPPs in which private investors contribute capital and financiers lend money (such as a concession or BOT, as reflected in the diagram); "lighter" forms of private sector involvement (such as management contracts) which are often used in early PPP markets, might be easier to rebalance as they have less intricate contractual structures and fewer stakeholders.
For further discussion of PPP projects generally, see: Delmon, Private Sector Investment in Infrastructure: Project Finance, PPP Projects and Risk (2009); Gassner, Popov and Pushak, "An Empirical Assessment of Private Sector Participation in Electricity and Water Distribution in Developing and Transition Countries" 2007; Irwin, Government Guarantees Allocating and Valuing Risk in Privately Financed Infrastructure Projects, 2007; and Harris, Private participation in infrastructure in developing countries : trends, impacts, and policy lessons (2003).
[10] Project Finance International Magazine database
[11] A PricewaterhouseCoopers survey in the first trimester of 2009 quantified these trends for the UK, and anecdotal evidence suggests that the trends hold true in emerging markets
[12] Project Finance International Magazine 2008 league tables
[13] World Bank data
[14] The lenders rely on the project's cash flows and collateral security over the project as the only means to repay debt service, and therefore the lenders do not have recourse to other sources, for example shareholder assets.
[15] See also Delmon, A Practical Guide to Private Participation in Infrastructure, Project Development and Project Finance (World Bank 2009), in particular Chapter 8.
[16] Please also refer to the sector-specific guidance notes issued in connection with the IAP in 2004 and SIAP issued in June 2008 (see footnote 2 and 3 above) for a more detailed discussion of the applicability of different WBG instruments to specific infrastructure sectors and sub-sectors. These guidance notes include quick-reference tables matching different instruments to possible applications in specific sectors. Note, however, that several of the instruments described here were not available in 2004.
[17] Please see Infrastructure Action Plan Crisis Response: Addressing Infrastructure Needs in Development Policy Operations (Marc Juhel, 2009)
[18] Please see Mitigating the Impact of the Financial Crisis on the Urban Poor using Results Based Financing such as Output Based Aid for Slum Upgrading (Mandri Perrot and Baker, 2009)
[19] Please see "Greening" the Infrastructure Recovery and Assets Platform (Sameer Akbar, 2009)
[20] Via IFC guarantees