



Advice on Fiscal Management of Infrastructure PPPs in Pakistan

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Executive Summary

The Government of Pakistan (the Government) has entered into a number of contracts with the private sector for the development of infrastructure. These include roads and tunnels contracted by the National Highway Authority (NHA) and power plants contracted by the Private Power and Infrastructure Board (PPIB). The Government has plans to increase the number of public private partnerships (PPPs) in infrastructure.

The Government has issued guarantees to some of these infrastructure PPP projects. As the Government's stock of PPP projects gets larger, so will its stock of guarantees. Guarantees create contingent liabilities to the Government—that is, guarantees expose the Government to making sudden and substantial payments if a certain event occurs. If the Government does not make the necessary provisions in its budget to cover this exposure, it could put its budget at risk—that is, the guarantees create fiscal risk.

The Government is interested in developing a framework for issuing and administering guarantees to infrastructure PPPs in order to manage this fiscal risk. The World Bank asked Castalia to help the Government develop this framework. This report presents Castalia's recommendations and the rationale behind them. The recommendations were discussed in Islamabad with various stakeholders from the Government in September and December, 2007.

We recommend that the Government create a Guarantee Fund (the Fund) as an entity separate from the Government's consolidated account, and therefore with its own capital. The Fund will be capitalized with funds transferred from the Ministry of Finance, or a current or contingent line of credit from a bank. The Fund will only be allowed to issue guarantees to cover risks that the Government is able to directly influence, or which are uncontrollable or economy-wide, and for which insurance is not available. To be eligible to receive a guarantee from the Fund, a project should be economically and financially viable, competitively procured, and in one of the sectors selected for PPPs.

To manage its exposure from issuing guarantees, the Fund will not be allowed to issue guarantees which create an exposure—or contingent liability—greater than the capital of the Fund. This means the contingent liabilities from these guarantees are off the Government's balance sheet and are also covered with the Fund's capital.

The day-to-day operations and management of the Fund will be contracted out to a private financial institution. The Fund will be governed by a Board chaired by a representative of the Ministry of Finance. The Ministry of Finance will establish a Risk Management Unit (RMU) that will set the operating policies of the Fund and oversee its operation.

The Fund's Board and management team will manage the guarantee assessment, approval, and administration process. This process will consist of two steps. First, a pre-approval before the projects is competitively procured, and second, a final approval after the project has been awarded. This process has been designed to fit with the PPP project development cycle prepared by the Infrastructure Project Development Facility (IPDF).

To arrive at this recommendation, we first reviewed the existing and probable future stock of infrastructure PPPs and Government guarantees in Pakistan. We also reviewed the legal framework for providing Government guarantees. We then considered principles for

managing the fiscal risk created by Government guarantees. Some of these principles are drawn from the practices of insurance companies, who are in the business of managing risk.

We also examined how other countries have approached managing the fiscal risk created by Government guarantees to infrastructure PPPs. We reviewed the risk management frameworks of Brazil, Colombia, Indonesia, Chile, and the state of Victoria, Australia. We drew lessons for Pakistan from these experiences.

Based on the above information, we think that the framework for issuing and administering guarantees in Pakistan should include:

- Rules for deciding which risks the Government may guarantee, and which projects are eligible to receive guarantees
- Rules for managing the fiscal risk from these guarantees
- An institutional structure for issuing and administering guarantees
- Procedures for requesting and issuing guarantees.

Fiscal risk can emerge from Government guarantees to other than infrastructure PPP projects. In fact, substantial contingent liabilities exist from loan guarantees issued by the Government to lenders to state-owned enterprises like Pakistan International Airways. There is however, no record of the terms of these guarantees and therefore of the Government's exposure from them. Although the framework that we are recommending should apply to all Government guarantees, we think it is more realistic to start applying it to guarantees to future PPP projects, and to expand it over time to cover other than PPP projects, and guarantees already issued.

We propose that our recommendations for establishing a framework for issuing and administering guarantees are adopted through two documents. First, a regulation under the Fiscal Responsibility and Debt Limitation Act that makes the key principles underlying the framework legally enforceable. Second, Guidelines providing more details on how to operationalize these principles. The Guidelines could be issued by the Ministry of Finance.

Although not part of the Regulation and Guidelines, this report also includes recommendations on how to value contingent liabilities from Government guarantees. This valuation is needed to determine how much capital the Fund should set aside. However, valuing contingent liabilities is more an art than a science, and it is therefore important to understand the limitations in terms of accuracy from estimating their value.

1 Definitions

Competitive Selection Process: The process whereby a Private Party is selected to develop a Project, and which involves transparent and open competition among at least two unrelated bidders

Contingent Liability: Defined by the International Accounting Standards Board as

- A possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity, or
- A present obligation that arises from past events but is not recognized because:
 - it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation, or
 - the amount of the obligation cannot be measured with sufficient reliability.

Government Support: Government support to a PPP project can be provided in various forms and serves primarily to facilitate its financing. Government support can be direct or contingent. Direct government support could include grants, capital and operating subsidies, tax holidays, provision of land, provision of assets, value added tax (VAT) relief, etc. The most common form of contingent support is a guarantee, yet other forms of contingent support instruments are: state insurance schemes, bailout of sub-national entities or financial system, and disaster relief, among others. Guarantees can be structured in respect of debt, foreign exchange, demand, construction cost, interest rates, and so on

Government Guarantee: A contractual arrangement under which the Government agrees to fulfill the financial or other obligations of the guaranteed party (the implementing institution) to another party (the private party) in the case of default by the principal obligor

Infrastructure Project Development Facility (IPDF): The company incorporated by the Federal Government under Section 42 of the Companies Ordinance, 1984

Institution: Government, person (individual, company, or other association) performing functions pursuant to any law in connection with the affairs of a Government, or a person whose ownership or control is vested in a Government

Implementing Institution: The government agency, or 'Institution', that directly prepares, procures, and executes a contract with a Private Party for financing, building, rehabilitating, operating, or maintaining (or any combination of these) an infrastructure asset

PPP Task Force: A group of senior officials from Ministries and provinces established to advise on overall PPP policy reforms

Public Private Partnership Agreement: The written agreement between the Implementing Institution and the Private Party that sets forth the terms and conditions for the implementation of a PPP

Private Party: The non-government party—that is, any party which does not fall under the definition of “Institution”—that enters into a contract with an Implementing Institution to develop or operate (or both) an infrastructure project

Private Partner: Equivalent to Private Party

Risk: The possibility of an outcome or returns which are different than expected (usually of loss, or less-than-expected returns). “[Risk Factor] risk” means unexpected variation in returns arising from unexpected variation in the risk factor

Provision: Defined by the International Accounting Standards Board as a liability of uncertain timing or amount

Viability Gap Funding: In Pakistan, means the subsidy which may be provided to a PPP project which is economically but not financially viable. It constitutes funds transferred to a Private Party to cover part or all of the difference between the expected cost of a PPP Project and its expected revenue.

2 Introduction

The Government is party to a number of PPPs in infrastructure. It has decided to expand its PPP program as part of its strategy for reducing Pakistan's infrastructure deficit. In order to develop its PPP program in a way that is fiscally responsible, the Government wants to design a framework for managing the fiscal risk¹ created by the guarantees it has given and will give to infrastructure PPPs.

The World Bank is supporting the development of this framework and has engaged Castalia to help the Government develop this initiative. The basic elements of this framework have been defined in a set of regulations and guidelines that Castalia drafted and reviewed based on feedback received from the Government. This report explains the rationale behind the approach embodied in the regulations and guidelines. It also provides some specific guidance on how to value contingent liabilities (an important element of the risk management framework). This report can be useful to Government officials who need to apply these guidelines, as well as other readers wanting to understand Pakistan's approach for fiscal risk management in infrastructure PPPs.

The rest of this introduction explains the rationale for PPPs—focusing on the importance of risk allocation between the public and private sectors—and outlines the remainder of this report.

The principal benefit of using PPPs to develop infrastructure is that PPPs allow governments to allocate risks more efficiently than if the infrastructure were developed and operated only by the government. Risks are allocated between the public and private partners based on which partner is best-placed to manage or absorb the risk. This allocation is specified in the PPP contracts. Sharing risks between the government and private sector means that the government will bear those project risks that it is best-placed to manage or that the private party is unable to manage or get insurance for.

The allocation of risks between the private party and the Government is specified in the PPP contracts, and in side agreements to the contracts. For example, in Pakistan the Implementing Agreements signed by the Private Power and Infrastructure Board (PPIB) include Government guarantees to PPP projects in power generation.

A Government guarantee is a guarantee by the Islamic Republic of Pakistan on the obligations that the implementing institution has agreed to in the contract. Government guarantees may be needed because there is a risk that the implementing institutions do not honor their obligations in the PPP contract. In this case, a Government guarantee is needed to enhance the creditworthiness of the PPP contract.

A Government guarantee may be issued by an institution of the central government, such as the Ministry of Finance, or by another institution on behalf of the Government of Pakistan. Guarantees issued by the Government are more credible than guarantees made by implementing institutions of PPP projects because the Government is less likely than an implementing institution to default. A Government default could eventually have an impact on its credit rating, an its cost of borrowing.

¹ In the rest of this report we use the term 'fiscal risk' loosely to refer to the risk that the government is exposed to when the Ministry of Finance or the Government issues a guarantee to backstop the obligation of a government agency that has entered into a PPP contract with a private firm.

Providing guarantees creates a contingent liability for the Government. A contingent liability may be defined as an obligation to make a payment in the future if a certain event occurs. For example, if the Government provides a guarantee on PPIB's payment obligations to independent power producers (IPPs), and PPIB defaults on its payments to the IPP, the Government will have to cover the obligation out of its budget. If the Government does not make the necessary provisions in its budget to cover its exposure from these contingent liabilities, it could put its budget at risk—that is, the guarantees create fiscal risk. Even if provisions are made in the budget to cover the expected value of contingent liabilities, it is possible the actual value is higher than expected.

Thus, the aim of this document is to explain the rationale behind the framework that we developed for issuing and administering Government guarantees to infrastructure PPPs. This report is organized in eight sections. The executive summary and a section defining terms that will be used in this report are the first two sections. They are followed by this introduction. Section 3 describes the context in which the fiscal risk management framework will be developed. In particular, it describes:

- the major infrastructure PPPs that government institutions in Pakistan are party to (including the current stock of Government guarantees to these PPPs and the likely portfolio of future PPPs and guarantees)
- other guarantees that the Government has committed to, and
- the laws and regulations that are relevant to Government guarantees and risk management and how these are applied in practice.

Section 4 discusses how government guarantees to PPPs create fiscal risk, presents the basic principles that insurance companies use to manage their risks and discusses how the Government can apply these principles to manage fiscal risk. Section 5 describes how governments in other countries have managed fiscal risks and identifies common elements and practices, as well as lessons that are useful to Pakistan. These two sections are useful to define the key principles and practices that should underpin the risk management framework in Pakistan.

Based on the understanding of the Pakistani context and how other countries have managed fiscal risk, Section 6 presents and discusses how to operationalize the risk management principles and practices identified in the previous two sections—that is, to operationalize the risk management framework. The option presented in this section was discussed with the PPP Task Force and the Ministry of Finance. These discussions provided useful feedback to make our recommendations consistent with the views of the various stakeholders consulted. The outcome of this process is a set of regulations and guidelines which outline how the risk management framework could be established and operationalized in Pakistan. These regulations and guidelines are presented in Appendix A.

The implementation of the proposed risk management framework will involve estimating the contingent liability associated with government guarantees to PPP contracts and setting aside some capital or making budget allocations to cover the exposure from the potential liabilities. Estimating the value of a contingent liability from a government guarantee to a PPP project is more an art than science, and requires understanding how to value uncertain events when limited information is available about the probability distribution of that event. Section 7 describes an approach to estimate the value of contingent liabilities from

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government guarantees to PPP contracts. This approach could be useful to the Government officials that are made responsible for implementing the risk management guidelines.

3 Public Private Partnerships and Guarantees in Pakistan

Before we discuss how to establish a framework for issuing government guarantees to PPPs in infrastructure in Pakistan, it is important to understand the context in which this framework will be developed.

To this end, this section starts by discussing the existing and probable future portfolio of infrastructure PPPs and guarantees in Pakistan. The existing portfolio includes power plants—structured as IPPs—procured by the PPIB. Independent power producers are discussed in Section 3.1. The existing portfolio also includes roads and tunnels procured by the National Highway Authority (NHA). These are discussed in Section 3.2. The Government has PPPs in other sectors, including ports, and plans to expand its PPP program. These PPPs and plans are discussed in Section 3.3.

In addition to guarantees to infrastructure PPPs, the Government has also guaranteed the obligations of state entities. Section 3.4 discusses these other guarantees. Finally, Section 3.5 discusses the laws and regulations that are relevant to government guarantees and risk management, and how these are applied in practice.

3.1 Public Private Partnerships and Guarantees in Power Generation

Pakistan's PPPs in power generation are structured as IPPs. An IPP is a private company that owns facilities to generate electricity, and sells the electricity to utilities. By definition, an IPP is not an electricity utility and does not have its own power distribution network.

This section reviews Pakistan's experience with IPPs under the power sector policies of 1994, 1998, and 2002 (Section 3.1.1), describes the structure of the IPPs (Section 3.1.2), describes the guarantees issued to the IPPs (Section 3.1.3), and discusses the Government's plans to reform the power sector (Section 3.1.4).

3.1.1 Power policies and experience with independent power producers

Pakistan's first policy for private sector participation in electricity generation dates from 1986. However, progress on attracting investment under this policy was slow, and a new policy was implemented in 1994. The 1994 policy was called "Policy Framework and Package of Incentives for Private Sector Power Generation Projects in Pakistan." The 1994 policy aimed to provide a package of incentives to attract foreign investment in private power generation projects. It included the following:

- Attractive project structure in terms of assured cash flow for debt payment and return on investment
- A reduction in local currency investment requirements (from what was specified in the 1986 policy)
- Indicative average tariff of US cents 6.5/kWh for the first 10 years
- Transfer of inflation and fuel cost risk to the public utility (Power Purchaser), through tariff indexation mechanisms
- Steps to create and encourage a domestic corporate debt securities market
- Exemption of IPPs from income, sales, and other taxes

- Creation of PPIB as a one-window facility to streamline project approval and closure processes, and to facilitate dialogue between the Government and private investors.

The 1994 policy allowed investors to make their own proposals regarding the technology and fuel to be used.

Under the 1994 policy, 15 power plants with a total capacity of 2,911MW were procured by PPIB and developed by the private sector as IPPs. Nineteen IPP projects reached financial closure; however, four projects, representing 435MW, were terminated. The 15 projects developed under the 1994 policy represented a total investment of approximately US\$5.3 billion. One quarter of this was financed with foreign capital.²

The IPPs have long-term power purchase agreements (PPAs) with one of Pakistan’s two vertically-integrated, state-owned power utilities—the Water and Power Development Authority (WAPDA) and the Karachi Electricity Supply Corporation (KESC). The Water and Power Development Authority supplies power to all of Pakistan, except the metropolitan city of Karachi and some of its surrounding areas, which are supplied by KESC.

The main private parties to these projects are AES, Coastal Power, El Paso, Siemens, Tenkasa Inc., Midlands Electricity, and Fauji Foundation. The International Finance Corporation (IFC), the Asian Development Bank (ADB), and the World Bank have supported several of the IPP projects.

Table 3.1 lists the IPPs that are in operation in Pakistan. Almost all of them were developed under the 1994 policy. These IPPs represent approximately one-third of Pakistan’s current electricity generation capacity.

Table 3.1: Independent Power Producers in Pakistan

Project	Gross Capacity (MW)	Policy	Fuel	Term of Project (Years)
Kohinoor Energy Ltd	131	1994	RFO *	22
AES Lalpir Limited	362	1994	RFO	30
AES PakGen (Pvt) Limited	365	1994	RFO	30
SEPCOL	117	1994	RFO	30
Habibullah Coastal	140	1994	Gas	30
Rousch Power Ltd	412	1994	RFO	30
Saba Power Company	125	1994	RFO	30
Fauji Kabirwala	157	1994	Gas	30
Japan Power Generation	135	1994	RFO	30
Uch Power Project	586	1994	Gas	30

² Fraser, Julia M. “Lessons from the Independent Private Power Experience in Pakistan.” Energy and Mining Sector Board Discussion Paper No. 14, The World Bank, May 2005.

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Liberty Power Project	235	1994	Gas	25
Altern Energy	14	1994	Gas	30
Davis Energen	10	1994	Gas	25
Northern Electric	6	1994	Coal	30
Power Generation System	116	1994	RFO	22
Kot Addu Power Company (KAPCO)	1,638	pre-1994	Gas/RFO/HSD**	25
HUB Company (HUBCO)	1,292	pre-1994	RFO	31
Total MW	5,841			

*RFO = Residual Furnace Oil

**HSD = High Speed Diesel

Source: WAPDA

HUBCO is owned by a consortium formed by National Power (Great Britain), Xenal (Saudi Arabia) and Mitsui Corporation (Japan). KAPCO is owned by National Power.

Water and Power Development Authority financial difficulty and tariff renegotiations

The 1994 policy was initially successful, but the capacity contracted under IPPs grew faster than demand in the mid- to late 1990s. Maximum demand fell from 84 percent of capacity in 1994 to 64 percent in 1998.³ Demand growth slowed further as the Pakistani economy suffered the effects of the Asian financial crisis and the economic sanctions placed on the country after its 1998 nuclear tests. The Water and Power Development Authority faced difficulties meeting its payments to the IPPs, as the cost of purchasing power from the IPPs reached 50 percent of WAPDA's operating costs.⁴⁵

In order to resolve WAPDA's financial difficulties, the Government could either raise electricity tariffs paid by consumers to WAPDA or renegotiate the tariffs paid by WAPDA to the IPPs. The Government perceived it would be politically difficult to raise electricity tariffs to consumers without a corresponding decrease in the tariff paid to the IPPs. The Government therefore attempted to renegotiate the tariffs in the PPAs, through committees of inquiry and sponsor-by-sponsor negotiations. These attempts were unsuccessful. Furthermore, the IPPs became a focus of investigations of corruption under the Bhutto government.

In July of 1998, the Government (through PPIB) issued notices of intent to terminate seven IPPs on grounds of corruption, and notices of intent to terminate two IPPs on technical grounds. This represented approximately two-thirds of the total capacity owned by IPPs in the country at the time.

³ "Evaluation of the Power Sector Operations in Pakistan" January 2006... (Executive Summary)

⁴ A portion of the tariffs paid by WAPDA is indexed to the U.S. dollar/rupee exchange rate. The rupee devalued by 45 percent during the economic crisis.

⁵ Fraser 2005, p. 8

As the largest foreign investment project in the country (US\$1.6 billion) and the largest IPP, HUBCO was a principal target of corruption allegations and of the Government's efforts to reduce tariffs. In 1998, HUBCO and WAPDA entered into a prolonged legal dispute. In December of 2000, the dispute was resolved with a decrease in the tariff paid by WAPDA from US cents 6.6/kWh to US cents 5.6/kWh. This lowered the internal rate of return on the project from just under 18 percent at the time of financial close, to 12 percent.⁶ In October 2000, KAPCO also agreed to a tariff reduction..

The notices of intent to terminate also resulted in tariff re-negotiations. The average decrease in the levelized tariff was approximately 10 percent, though it ranged from 7 to 16 percent. In exchange for these tariff reductions, the terms of the PPAs were extended from approximately 20 to 30 years.⁷ The renegotiations were carried out under an "Orderly Framework for IPP Negotiations," drafted with help from the World Bank and adopted in 1998.

1998 power policy

The Government issued a revised power sector policy in 1998, which introduced international competitive bidding and increased the role of the regulatory body, the National Electric Power Regulatory Authority (NEPRA). Due to the difficulties of the existing IPPs at the time, this policy attracted no new investment.

2002 power policy

By 2002, the tariff renegotiations had been completed and the outlook for foreign investment in Pakistan had recovered. In 2002, the Government announced an updated policy on private sector participation in electricity generation, "Policy for Power Generation Projects, Year 2002."

The 2002 policy is similar to the 1998 policy, but offers additional tax incentives and clarifies the division of responsibility between the federal and the provincial governments. The 2002 policy acknowledges that all future investment in power generation is expected to come from the private sector. It clearly delegates responsibility for all projects over 50MW to the federal government, and responsibility for all smaller projects to provincial governments.

The 2002 policy was also designed to provide sufficient capacity for power generation at the least cost. The Government wished to avoid the power shortages that were predicted for the winters of 2003–2004 and keep consumer prices within affordable limits—a key lesson from the crisis of the late 1990s. Under the 1994 policy, the private partners of IPP agreements could specify the technology and fuel to be used. There were no explicit incentives for investors to use least-cost technologies. This resulted in higher payment obligations for WAPDA and contributed to the crisis.

Although no IPP projects developed under the 2002 policy have been commissioned yet, PPIB has plans to develop several IPPs under this new policy. In contrast to the late 1990s, demand now exceeds supply and a lack of generation capacity is seen as a serious constraint

⁶ Kabraji, Kairas N., "HUBCO v. WAPDA: Allegations of Corruption Vitiates International Commercial Arbitration—The Pakistan Experience," prepared for the 17th LAWASIA Biennial Conference, Christchurch, New Zealand, October 2001, p. 10.

⁷ Fraser 2005, p. 11.

to economic growth. It is estimated that 2GW of additional capacity—or approximately US\$1.5 billion in new investment—is required every year over the medium-term.⁸

Plans to expand generation capacity and independent power producers program

The Government has plans to increase Pakistan’s generation capacity by at least 34,885MW by 2025. Some of these projects will be carried out by the public sector, and some will be implemented as IPPs. However, little progress has been made on implementing IPPs.

WAPDA has developed a plan for meeting upcoming deficits in power generation and water sector projects, called “Vision 2025.” The 41 projects included in this plan will be developed by the private sector, public sector, or through PPPs. The decision as to which sector will develop the projects will depend on the urgency with which the infrastructure is needed to meet demand, and the Government’s available resources.

The Government also laid out a generation expansion plan in its 2002 power policy. The generation expansion plan states that 58 projects, with a total of 34,885MW of power generation capacity, will be developed between 2002 and 2025. There is some overlap between the generation expansion plan and Vision 2025. Thirty-two of these projects also form part of Vision 2025. Correspondingly, 30 of the 41 projects included in Vision 2025 are part of the generation expansion plan included in the 2002 power policy.⁹

There are four projects in the generation expansion plan slated to be developed by 2007. However, none are operational as of yet. Four projects are under construction, one is under negotiation, and three are in the feasibility or design stage. Some of these projects are being developed as IPPs by PPIB, while some are being developed by the public sector. For example, the PPA for the Upper Jhelum Canal/New Bong Escape 74MW project is currently being negotiated between WAPDA and the private party.

The nine projects slated to be developed by 2007 have a total installed capacity of 792MW. An additional 10,600MW of generation capacity is slated to be developed by 2011, and an additional 23,493MW is slated to be developed by 2025. Progress on achieving these plans is unclear.

PPIB states that it has plans to process 60 IPPs under the 2002 power policy.¹⁰ This includes some of the projects included in Vision 2025 and the generation expansion plan. PPIB expects these IPPs to begin commercial operations between October 2008 and April 2016. They represent a total of 16,055MW of generation capacity and are estimated to require a total of US\$14.6 billion in investment. However, the only IPP deal that is close to being closed is the Upper Jhelum Canal/New Bong Escape 74MW project. This is very small compared to PPIB’s overall plan. Only fourteen IPP projects, representing 1,458MW, have gotten beyond the initial planning stage, and their feasibility has been determined.

3.1.2 Independent Power Producer Structure

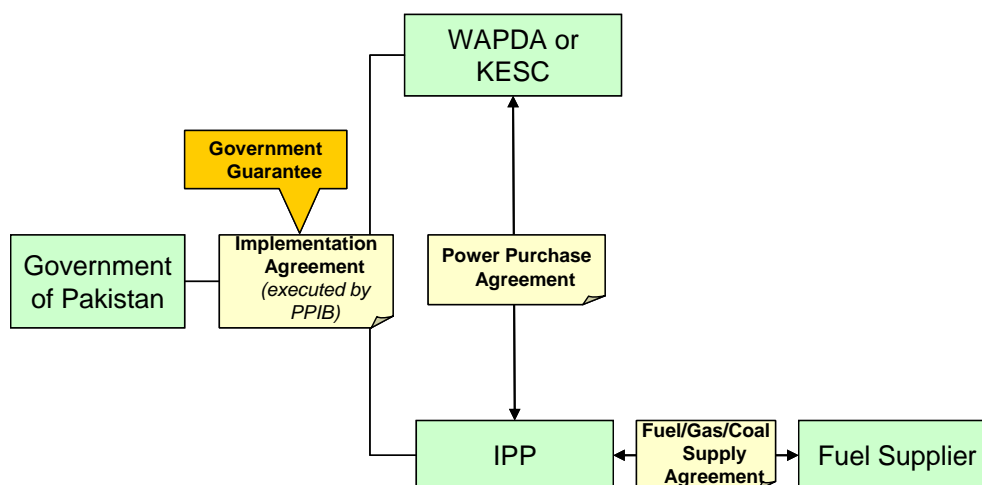
The typical structure of the IPPs implemented in Pakistan is illustrated in Figure 3.1.

⁸ Harris, Vince (International Power) “IPP Experience in Pakistan,” presented at the Pakistan Power Generation Road Show in London, March 2005.

⁹ A list of the Vision 2025 projects is available at <http://202.38.50.35/vision2025/default.asp>. A list of the Generation Expansion Plan projects is available at the end of the 2002 power policy document, available at http://www.ppib.gov.pk/policy_text2002.pdf.

¹⁰ “Details of Projects Presently Being Processed by PPIB,” PPIB. Available at <http://www.ppib.gov.pk/list.htm>.

Figure 3.1: Structure of Independent Power Producer Agreements



PPIB develops the specifications for and procures the IPP. The procurement process consists of a pre-qualification stage, a “lock-in” period—in which the pre-qualified private parties put together 51 percent of the equity investment required for the project—and a bidding stage.

When procurement is completed, the project company that the private parties have created to be the IPP signs a PPA with the utility that will purchase the power it produces (the Power Purchaser). The utility is either WAPDA or KESC. The PPA defines the rights and responsibilities of the IPP and the Power Purchaser. It determines a formula for the Power Purchaser’s monthly payments to the IPP for electricity. It also sets out additional payments and the events that could trigger them (these will be discussed in Section 3.1.3).

The Power Purchaser’s monthly payments to the IPP for electricity are composed of a capacity payment and an energy payment. The capacity payment is based on the capacity in kilowatts (kW) that the IPP has available in that month. The capacity payment includes adjustments for exchange rates and inflation. The energy payment is based on the quantity of electricity that the IPP produces in the month (the net electrical output or the dispatched net electrical output). The energy payment includes a fuel cost component and a variable operation and maintenance cost component. These components include adjustments for fuel prices, exchange rates inflation, and local costs. For IPPs that are fueled by gas, there is a minimum annual energy payment.

The Implementation Agreement (IA) that the IPP signs with PPIB is a key component of the IPP structure. The IA sets out the responsibilities of the federal government and the IPP. The IA includes a Government guarantee on the obligations of the Power Purchaser. This guarantee is discussed in Section 3.1.3.

The IPP also enters into a Fuel Supply Agreement (FSA), Gas Supply Agreement (GSA), or Coal Supply Agreement (CSA) with the entity that supplies fuel to the power plant. These agreements are structured to provide a reliable supply of fuel to the IPP. If the project is a hydro generation project, the IPP signs a Water Use License (WUL) with the Government.

3.1.3 Guarantees to independent power producers

The Government has drafted a model IA and PPA to reflect the risk allocation and other principles set forth in the 2002 power policy. Appendix E outlines how each risk is allocated under the 2002 power policy. The PPA includes contractual obligations through which the Power Purchaser agrees to bear some of the project risks. The IA includes explicit Government guarantees.

Obligations included in the power purchase agreement

In the PPA, the Power Purchaser agrees to bear some risks by accepting the following obligations:

- **Demand.** The Power Purchaser pays a fixed capacity payment to the IPP regardless of the amount of electricity the IPP delivers. This isolates the IPP from some fluctuations in demand, but not all, because the energy payment remains variable
- **Regulatory.** The Power Purchaser will compensate the IPP if tariffs are not adjusted per contract terms
- **Change in law or tax.** The Power Purchaser will compensate the IPP if tariffs are not adjusted per contract terms Conversely, if there is a favorable change in tax, the IPP will make a payment to the Power Purchaser. Therefore, the tax regime remains fixed over the life of the contract
- **Macroeconomic.** The Power Purchaser's payments to the IPP include adjustments for exchange rates, inflation, fuel cost, and interest rates
- **Force Majeure.** The Power Purchaser and the IPP have specific rights and responsibilities in the case of specific force majeure events.

Guarantees included in the Implementation Agreement

The standard IA includes a Government guarantee. Under this guarantee, the Government guarantees the payment obligations of the utility that is party to the PPA (either WAPDA or KESC). PPIB has been given the authorization to sign the IAs on behalf of the Government of Pakistan.

The Government guarantee states that if the Power Purchaser defaults on any payments to the IPP, the Government will make these payments to the IPP. The text of the Government guarantee is shown in Box 3.1.

Box 3.1: Government Guarantee to IPPs

The model IA includes a Guarantee from the Government on the obligations of the Power Purchaser (PP) to the IPP. The text of the guarantee is as follows:

“In consideration of the company entering into the PPA with the PP, the Guarantor hereby irrevocably and unconditionally Guarantees and promises to pay the company any and every sum of money the PP is obligated to pay to the company under or pursuant to the PPA that the PP has failed to pay when in due accordance with the terms of that agreements, which obligation of the GOP shall include monetary damages arising out of any failure by the PP to perform its obligations under the PPA to the extent that any failure to perform such obligations gives rise to monetary damages.”

The IA also includes other guarantees. Under the IA, the Government:

- Ensures the convertibility of rupees to US dollars at the prevailing exchange rates
- Ensures the investors can remit foreign exchange to cover necessary payments related to the projects, including debt servicing and payment of dividends
- Provides protection against specific force majeure and political risks, including expropriation and nationalization.

The principal payments that WAPDA or KESC would make to the IPPs are monthly capacity charge and energy charge that the Power Purchaser pays to the IPP. The Government guarantee will only be called if the Power Purchaser defaults on these payments. It will default if its revenues are not enough to cover its operation and maintenance costs plus the cost of making the capacity and energy payments. The Power Purchaser's revenue depends on demand for electricity, tariff levels, and its collection efficiency (payments received from customers as a percent of the charges billed to them). The capacity and energy payments depend on the consumer price index, the rupee/dollar exchange rate, and fuel prices, as well as the base capacity and energy charges defined in the PPA. Thus, demand for electricity, inflation, the rupee/dollar exchange rate, and fuel prices are some of the key risk factors that could influence if WAPDA or KESC default, and if the guarantee is called.

The term of the IA is equivalent to the term of the PPA, plus any length of time during which any payments from the Power Purchaser to the IPP are outstanding, if there are sums outstanding after the term of the PPA has ended.

Some of Pakistan's IPPs have additional guarantees from multilateral agencies, which protect lenders against noncompliance by the Government that leads to the IPP defaulting on its loans. The World Bank issued Partial Risk Guarantees on HUBCO and Uch Power Ltd. The guarantee on HUBCO initially covered principal repayments for up to US\$240 million in loans. This was reduced to US\$137 million. The guarantee is triggered if the Government does not comply with one or more of its obligations, as outlined in the project contracts, and this results in a default in the repayment of the loans. The World Bank guarantee on Uch Power covers principal repayments for up to US\$75 million. MIGA has also provided guarantees to three IPP projects for a total of US\$31 million, including to Tapal Energy Limited. J-Exim issued a co-guarantee on HUBCO for up to US\$120 million.

3.1.4 Power sector reforms

For several years, the Government has been implementing various power sector reforms. Some of its future reform plans will affect IPPs and the need for guarantees.

In 1997, the Government adopted a policy to unbundle the power sector. The NEPRA Act (1997) and the WAPDA Act (1998) provide the basis for this policy. Unbundling consists of separating responsibilities for energy sector policy, regulation, and operations. Responsibility for energy sector policy remains with the Government. Responsibility for regulation has passed to the National Electric Power Regulatory Authority (NEPRA). Responsibility for operations is being divided among generation, transmission, and distribution companies.

The Government unbundled electricity sector operations in the following way:

- WAPDA has been separated into:

- Four generation companies
- The National Transmission and Despatch Company
- Nine distribution companies.
- The Government is planning to privatize the generation and distribution companies
- KESC has been privatized, as an integrated utility.

However, progress on unbundling electricity sector operations of WAPDA has been slow. The distribution companies have been created, but they are far from achieving operating or financial autonomy from WAPDA.

The Government also has plans to create a competitive wholesale power market. This will eliminate the PPAs signed between IPPs and utilities. Once this competitive market is created, IPPs would sell their power directly to distribution companies and large industrial consumers. Beginning in mid-2009, major consumers may purchase electricity directly from generators. The wholesale market is planned to begin functioning in 2012.

Once power generators begin selling their electricity directly to distribution companies and large industrial customers, PPAs will no longer be needed. PPAs will be replaced by contracts with individual customers (distribution companies and industrial customers). Therefore, the Government guarantee on the PPAs (established in the IA) will no longer be necessary. The current term of the PPAs is approximately 25 years. It is unclear how the Government plans to dismantle these PPAs and the associated IAs once the wholesale market is introduced.

3.2 Public Private Partnerships in Roads

Pakistan's program of PPPs in roads is less developed than its program for PPPs in power generation. The PPP cell within the National Highway Authority (NHA) is responsible for procuring PPPs for road projects (including tunnels). The NHA is the Government institution that is party to these PPP contracts.

3.2.1 Current and future public private partnership projects

The transactions that have been implemented to date include the Lakpass Tunnel, the Shahdara Flyover, and the M-9 Motorway. These transactions are all concessions on a Build-Operate-Transfer basis. The concession agreements are signed between the private concessionaire and NHA. The agreement specifies the rights and responsibilities of each party.

Under these concessions, the concessionaire has the right and authority to design, finance, insure, construct, manage, operate, and maintain the infrastructure. The concessionaire's revenue comes from tolls paid by users of the infrastructure. The concession agreement (PPP contract) specifies how tolls are to be set. Ownership of the infrastructure is transferred to the Government at the end of the concession period. For the Lakpass Tunnel, this period is 25 years.

The concession contract for the Lakpass Tunnel was signed between NHA and M/s IBEX Construction (Pvt.) Limited in 2006. The project achieved financial closure in April 2007. The concessionaire is wholly owned by Frontier Works Organization (FWO), a Pakistani entity. FWO is owned by the Government—it was created by the Pakistani army as a special

organization to build and maintain roads. It is now a large construction agency. This means the Lakpass Tunnel is not a traditional PPP, but is structured as a concession. The tunnel connects the city of Quetta with Iran, through the N-40 motorway. The Lakpass Tunnel project consists of a 180 meter tunnel and four and a half kilometer road. Its total cost was Rs800 million, or approximately US\$10 million. Construction is expected to be completed in January 2008.

The M-9 motorway concession agreement was signed with M/s SCC (Pvt) Limited in September 2006, but was terminated by the Government in July 2007 as a result of “political” pressure. The M-9 is a four lane divided highway between Karachi and Hyderabad. It is the primary road linking Karachi Port and Port Qasim to the rest of the country. The concession was to upgrade the road to a “motorway” standard.

The Shahdara Flyover concession has been competitively awarded to a Malaysian company (M/s Ascent Capital International Limited), and negotiations with the lenders have begun. Shahdara is a very congested area on N-5 near Lahore. The Shahdara Flyover Project is a six lane divided limited access tolled elevated expressway. It is 5.2 kilometers long and links the town of Shahdara with the city of Lahore. The details of the project are being discussed with the Government of the Punjab because the expressway may interfere with the proposed Lahore Rapid Mass Transit System. This system is in the initial stages of its development. Therefore, it is possible that the Shahdara Flyover project will be delayed.

The NHA signed a contract with FWO to operate and maintain the M-2 motorway between Islamabad and Lahore in 1997. An operation and maintenance contract is a common type of PPP; however, this project is not considered a traditional PPP because FWO is not a privately-owned company. The operation and maintenance contract states that FWO must carry out the following functions related to the motorway:

- Vehicle access control and toll collection
- Traffic management
- Recovery of vehicles involved in accidents and off road/broken down vehicles
- Evacuation of casualties from scene of accident to nearest hospital
- Keeping the motorway clean.

NHA’s PPP Cell shared with us plans to attract Rs41 billion (or approximately US\$692 million) in private investment in roads—including highways, tunnels, and motorways. Table 3.2 summarizes these plans.

We understand however, from informal discussions with government officials and private sector representatives, that current management of NHA is not interested in pursuing PPPs and is seeking funding to develop most of the projects in the pipeline under the traditional NHA-managed approach.

Table 3.2: Status of Public Private Partnerships being Developed by National Highway Authority

Project	Cost (Rs. Million)	Status
Lakpass Tunnel (N-25)	679	Financial Close achieved in April 2007, Completion expected in January 2008.

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Karachi-Hyderabad Motorway M-9	6,318	Concession Agreement lapsed on 13-07-2007. Project area returned to NHA. Currently in legal dispute.
Shahdara Flyover N-5	3,150	Concession awarded, and financing is being negotiated. Discussions with Government of Punjab due to interface with planned Lahore Rapid Mass Transit System.
Rawalpindi Bypass & Tarnol Flyover N-5	5,000	MOU with CIDB Malaysia signed in May 2007. Proposal is expected in February 2008
Karachi Northern Bypass (ACW)	3,000	MOU with CIDB Malaysia signed in May 2007. Proposal is expected in February 20089
Periodic Overlay on M-2 & Realignment of Salt Range (PPP mode) 50 MUSD from World Bank	11,840	Planned
Muzaffargarh - D.G Khan Section of N-70	5,000	Commercial feasibility work has been awarded to consultant and is scheduled to be completed by end of 2007
D.G Khan - Rajanpur section of Indus Highway N-55	6,000	Planned on BOT basis through equity financing from ADB

Source: NHA

Additionally, the Asian Development Bank is financing a consultancy under which other PPP projects will be identified.

3.2.2 Guarantees to road public private partnerships

Pakistan's existing road PPPs do not include Government guarantees. They do, however, include contractual obligations through which the implementing institution (NHA) agrees to bear some of the project risks. The Lakpass Tunnel, Shahdara Flyover, and M-9 concession contracts include the following obligations that transfer risk to NHA:

- **Demand.** NHA compensates concessionaire if alternate route is build and traffic falls below certain level. There is no minimum traffic guarantee
- **Regulatory.** NHA compensates concessionaire if tolls are not adjusted per contract terms
- **Change in Law.** NHA compensates concessionaire if change in law has an adverse financial effect
- **Convertibility and Remittability.** NHA compensates concessionaire if concessionaire is unable to convert and remit funds
- **Contract Default leading to Termination.** Concession contract specifies a buyout payment depending on who defaulted

- **Force Majeure leading to Termination.** Concession contract specifies a buyout payment.

Although the existing contracts do not include Government guarantees, it is likely that future road concessions may require Government guarantees. A lack of Government guarantees could have been acceptable to the concessionaires in the Lakpass Tunnel, Shahdara Flyover, and M-9 concessions for the following reasons:

- In the only road concession that is in operation (Lakpass Tunnel), the concessionaire is a Government-owned company. The concessionaire and its lenders may not have required a Government guarantee because the concessionaire is already a government entity. An “implicit” guarantee—as defined by the Government and discussed in Section 3.4—may exist between the Government and FWO
- The demand risk in these projects is seen as minimal because the routes of these projects already had well-established traffic patterns.

Thus, if future road PPPs do not have the same characteristics—if the concessionaire is truly a private company, and the road or route does not have established traffic—a Government guarantee may be required.

3.3 Public Private Partnerships in Other Infrastructure Sectors

Pakistan also currently has PPPs in ports, and the Government is developing PPPs in other infrastructure sectors. Section 3.3.1 describes PPPs in ports, and Section 3.3.2 discusses the Government’s plans for future PPPs in other infrastructure sectors.

3.3.1 Public private partnerships in ports

Pakistan’s three main ports are the Port of Karachi, Port Qasim, and Gwadar Port. These three ports are all being developed with varying degrees of private sector involvement. Here we describe the PPP projects and make a note about guarantees to the projects.

Public private partnership projects

The Port of Karachi is Pakistan’s largest and busiest port, handling around 60 percent of the nation’s cargo. Karachi International Container Terminal (KICT) at the Port of Karachi opened in 1996 and was the first port terminal in Pakistan to be built and operated on a PPP basis. The project was structured as a Build-Operate-Transfer (BOT) contract. The concessionaire is called KICT and began as a consortium led by a Pakistan based shipping agency, Premier Mercantile Services Ltd. KICT is now a subsidiary of Hutchison Port Holdings Ltd., a company based in Hong Kong. The federal government agency Karachi Port Trust (KPT) is the public partner to this contract. The project involved an investment of approximately US\$87 million.

In June 2002, a second port terminal concession, the Pakistan International Container Terminal (PICT), was established at the Port of Karachi. The US\$75 million project was also sponsored by PMS and is operated under a 21 year concession contract signed with KPT.

On 9 November 2007, the Karachi Port Trust signed a US\$1 billion agreement with Hutchison Port Holdings to construct a new terminal, the Pakistan Deep Water Container Port, which would begin operations by 2010. The cost of this project is around US\$550 million for the first phase, expected to be completed by mid 2009.

Gwadar Port is Pakistan's newest port and is located approximately 460 kilometers west of Karachi. A subsidiary of Port of Singapore Authority International has a concession to operate this port over a period of 40 years. The implementing institution for this concession is the Gwadar Port Authority.

Port Qasim was constructed to relieve the pressure on Karachi port and is located 35 kilometers east of Karachi city center. A dedicated floating liquefied natural gas terminal will be established at port Qasim on a BOT basis. The concessionaire is Pakistan GasPort Limited, owned by M/s Associated Group. This will be the second floating liquefied natural gas terminal in the world.

Also, at Port Qasim, a dedicated grain and fertilizer terminal will be built on a BOT basis. A Memorandum of Understanding was signed between the Port Qasim Authority and a consortium of Fauji Foundation, Akbar Group and Ports Management Services of the UK for this transaction. The terminal cost US\$100 million to build and will have an annual handling capacity of four million tons.

The Government has also approved the development of two large shipyards in Port Gwadar and Port Qasim by way of a PPP. A private company will be responsible for designing, financing, building, operating, and maintaining the shipyards, with minimal support from the Government. Expressions of interest are due from companies in December 2007.

There are also several smaller projects at Pakistan's ports that involve private sector participation and financing.

Guarantees

We requested information about guarantees to these projects, and any plans for guarantees to future port PPP projects. No information was provided.

However, it is likely that port PPPs would require Government guarantees on a minimum level of revenue to the project. Ports infrastructure usually requires a high level of investment. If use of the port facility is expected to grow over time—as is usually the case—the facility will initially have spare capacity. This means that a private investor building the port will be exposed to making a significant investment, some of which will deliberately will be for spare capacity, but will have no certainty that demand for the port will reach its capacity—that is, investment in port infrastructure, like other transport project, are exposed to significant demand risk. This means that private investor will most likely not be prepared to invest, unless the government is prepared to share or absorb the majority of the demand risk.

3.3.2 Future public private partnerships in other infrastructure sectors

Pakistan also requires significant investments in other infrastructure sectors. The Government recognizes the importance of these investments in contributing to sustained economic and social development. The Government estimates that it would be able to cover only 50 percent of the infrastructure investment needs with public funds. It is interested in harnessing private capital to make these investments, using PPP structures.

The Government has expressed its interest in developing PPPs in the following sectors:

- **Transport and logistics**—including provincial and municipal roads, rail, seaports, airports, fishing harbors, warehousing, wholesale markets, slaughter houses, and cold storage

- **Mass urban public transport**—including buses, and intra- and inter-city rail
- **Municipal services**—including water supply and sanitation, solid waste management, low cost housing, and health and education facilities
- **Small scale energy projects**—hydroelectric and captive power generation projects other than those being facilitated by Private Power Infrastructure Board (PPIB) and the Alternative Energy Development Board (AEDB).

However, the number of, and amount of required investment in, the projects being prepared is small compared to the investment needs. Most of the projects are of a small scale. This suggests that the Government is not yet fully committed to using PPPs to develop infrastructure on a large scale.

The Government has made progress on the enabling framework for public private partnerships

Most of the Government's efforts to date have concentrated on creating the enabling framework for PPPs in infrastructure. This includes:

- **Infrastructure Project Development Facility (IPDF)**—has been established to help public sector institutions (line ministries, provincial Governments, local bodies, state owned enterprises etc.) prepare and tender PPP projects
- **Infrastructure Project Financing Fund (IPFF)**—has been established to provide finance for PPP projects on commercial terms, when all of their financing needs cannot be met by the market
- **Viability Gap Fund (VGF)**—will be established to subsidize economically viable PPP projects that will not be financially feasible if they are constrained to charge affordable user tariffs
- Project preparation and feasibility guidelines for PPP projects
- Procurement guidelines for PPP contracts
- Standard PPP contracts
- Guarantee Fund, which is the focus of the present report.

The Government has also drafted a PPP policy. It is described in Box 3.2

Box 3.2: Pakistan Policy on Public Private Partnerships

The Government issued a Policy on Public Private Partnerships (PPP policy) in November 2007. The policy sets out the Government's objectives in pursuing PPPs, the PPP implementation structure, the concept of viability gap funding, the steps involved in preparing and tendering a PPP project, and the Government's approach to unsolicited proposals.

The PPP policy states that the Government is primarily interested in developing PPPs in the sectors of: transport and logistics, mass urban public transport, municipal services, and small-scale energy. The Government's objectives in promoting PPPs are to provide more, better, affordable, and timely services.

The policy clarifies that PPPs are not the Government's preferred option for improving service delivery in these sectors, but they are one of several options available. PPPs should be pursued where they represent priority projects, are affordable to the government and consumers, and represent value-for-money (they provide a better approach than public procurement).

The Government envisions that PPPs projects will be implemented faster than if they were implemented by the public sector. The Government expects to leverage public funds with private financing (local and international), and will limit its contributions to providing targeted subsidies to low-income consumers, as required to allow cost recovery by the private partner. The Government also expects PPPs to provide enhanced accountability in service delivery by linking service provision to a firm contractual arrangement. Finally, the Government expects projects that are implemented as PPPs to be of good quality and adequately maintained, because the private partner's focus will be on managing the whole life cycle cost of a project.

The focal point for implementation of the Government's PPP program is the IPDF. It will act as the principal facilitator and coordinator for PPPs in Pakistan.

To improve credibility and transparency of PPP projects, uniform bidding processes and publication of bidding and selections will be established. The PPP policy sets out the steps to be performed when preparing and tendering a PPP project.

The Government will provide viability gap funding (VGF)—or targeted subsidies—for PPP projects that are economically and socially justified but fall short of financial viability. This would be an explicit subsidy that is performance driven (based on private party achieving measurable outputs) and targeted to socioeconomically disadvantaged users or groups of users.

In the case of unsolicited proposals, the Government will verify project viability with the assistance of independent transaction advisors. If the project is deemed viable, it will be tendered out on a competitive basis.

Source: "Pakistan Policy on Public-Private Partnerships," November 2007.

These components form a strong basis for larger-scale PPPs to be implemented in the future. However, the current pipeline of projects is small.

Some projects are being prepared and implemented

Although most of the PPP projects that the Government is preparing and implementing are of a small scale, there has been substantial progress on one large-scale PPP project—the

Mass Rapid Transit System (MRTS) in Lahore. The Government of the Punjab is fully committed to implement this project on a PPP basis. It is described in Box 3.3.

Box 3.3: The Lahore Rapid Mass Transit System

The Government of the Punjab (GoPb) is committed to developing a rapid mass transit system (RMTS) for the city of Lahore. A RMTS would help alleviate serious gridlock and congestion problems that are constraining growth, curtailing investment, and reducing the city's competitiveness.

The GoPb, with the assistance of the Japanese International Cooperation Agency (JICA) and the World Bank, has analyzed several rapid mass transit solutions for the city and concluded that constructing a Light Rail Train system along the Ferozpur Road corridor (the Green Line) would be a feasible and first priority solution. This would be the first in a system of four lines that would comprise the Lahore MRTS. Preliminary forecasts indicate that the Green Line would carry 400,000 passengers daily by 2021.

The GoPb is also committed to implementing the Lahore RMTS as a PPP. It is interested in doing so because it had a positive experience with PPPs for bus transport and it would like to harness private capital for investment, create jobs that are sustained by the private sector, and provide quality service and efficient relief to traffic congestion in Lahore.

The Asian Development Bank engaged Castalia to develop PPP options for the Lahore RMTS and recommended one that best fits the GoPb's objectives. We have recommended that the PPP be composed of a Design-Build contract for civil works and a Build-Operate-Transfer contract for the remainder of the project, with one private firm (the concessionaire). The GoPb would finance the cost of the civil works. Castalia also recommended that the GoPb competitively procure a contract with a private firm (ticketing company) to install and operate the ticketing and fare collection system, and to transfer the fare revenue to GoPb. The ticketing company might be required to install a single system that could be implemented across various modes of transport in the city. Payments to the concessionaire will be made by GoP and not directly by passenger, though the payments may be based on actual ridership levels to give the concessionaire some exposure to demand risk and therefore incentives to mitigate this risk. This type of arrangement is sometimes referred to as 'gross cost concession'.

Economic, financial, and technical feasibility studies of the Green Line have been completed. With the assistance of the Asian Development Bank, the GoPb will select a transaction advisor to help it prepare and tender the project. It is expected that the transaction advisor will be appointed in early 2008.

The other PPP projects that the Government is preparing and implementing are of a small scale. There are currently 44 projects in IPDF's pipeline of development, of which 21 are active (past inception and initial stages). The largest number of active projects fall within the Municipal Services and Transport and Logistics sectors. IPDF's portfolio of active projects is described below. They are in varying stages of development—from initial information gathering to proposals being evaluated for finalization.

Municipal Services. There are seven active projects located in the Punjab, Balochistan, and North West Frontier Provinces. These involve the development of solid waste management systems, water supply systems, and billing and metering services. Ten further municipal services projects are in the inception stage and include projects in solid waste management, desalination plants, housing, and parking across a number of provinces.

Transport and Logistics. The seven active development projects in this sector are predominantly in the Sindh region and cover investment in roads, airports, and port facilities. Projects include the dualisation of Mirpurkhas-Hyderabad Road and projects to establish two large shipyards at port Qasim and port Gwadar.

Mass Urban Public Transport. There are three active projects in this sector which include a mass transit system between Islamabad and Rawalpindi and the introduction of environmentally friendly CNG buses in public transport in Karachi. Furthermore there are seven urban transport projects in the inception stage mainly in the Sindh region. These include plans for inter-city bus terminal facilities (highways and terminals), a light rail mass transit system in Karachi, and a motor vehicle inspection system.

Energy and Water. One project is currently underway for the construction of five multi-purpose dams in Islamabad Capital Territory for irrigation, power generation, and other water resource uses. IPDF is at present providing technical assistance to the task force for this project on issues pertaining to preliminary financial analysis, project structuring, and evaluation and project financing. Three more power generation projects across Punjab, Sindh, and Balochistan are in preliminary stages.

Industry Infrastructure and Information Technology. There are two industry infrastructure developments underway in Islamabad. The Pakistan Software Export Board (PSEB) plans to establish an IT park of international standard and the Pakistan Tourism Development Corporation (PTDC) aims to develop a corporate building complex. Within the IT sector, the Central Board of revenue is looking to develop an integrated electronic system for coordination of trade and commerce across Pakistan. There are currently three offices and industry infrastructure development projects at the inception stage in Balochistan and ICT.

The future projects may require Government guarantees

The Government has not taken a position regarding what types of guarantees should and will be provided to the PPP projects developed in transport and logistics, mass urban public transport, municipal services, and small scale energy.

In the case of the Lahore RMTS, it is likely that a Government guarantee will be required. Under most PPP options, revenue from passenger fares will not be enough to enable the private party to recover its costs. Thus, a Government subsidy will be required to make the project financially feasible. Because subsidy payments from the Government will be a significant source of revenue to the private party, the private party, its lenders, or both, may require assurance from the federal Government—or even a multilateral agency—in the form of a guarantee on these payments.

3.4 Other Guarantees

In addition to guarantees to infrastructure PPPs, the Government of Pakistan has also guaranteed the obligations of state entities. The Government defines its obligations as either “explicit” or “implicit” contingent liabilities, and discloses these in a “Contingent Liabilities” statement in its annual Economic Survey report.

The Government defines explicit guarantees as specific government obligations set out in a contract or a law. The government is legally mandated to settle such an obligation when it becomes due. This type of guarantee is similar to a Government guarantee on a PPP project. The explicit guarantees that the Government has issued cover:

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- Borrowing and obligations of state-owned enterprises
- Borrowing and obligations of provincial governments
- Financing obtained through government-guaranteed entities
- Umbrella guarantees for various types of loans, including loans to small- and medium-sized enterprises and agricultural companies
- International trade and foreign exchange risks
- Some guarantees on private investments
- State insurance schemes

The Government defines implicit guarantees as those that represent a moral obligation or expected burden for the government not in the legal sense, but based on public expectations and political pressures. This type of guarantee does not fall within the definition of guarantees that we have used in this report. The Government has implicit guarantees on:

- Defaults of provincial governments and public or private entities on non-guaranteed debt and other obligations
- Liabilities of entities being privatized
- Bank failures
- Disaster and relief financing
- Failure on other non-guaranteed funds.

During Fiscal Year 2004–05, the Government’s actual cash payments on explicit guarantees totaled Rs15.02 billion. In FY 2005–06, they totaled RS 24.29 billion. In FY 2006–07 they are estimated to be Rs36.56. These payments include the following, plus others:

- Payments made on contractual guarantees issued on Ghee Corporation of Pakistan (GCP), Rice Export Corporation of Pakistan (RECP), Trading Corporation of Pakistan (TCP), and Cotton Export Corporation (CEC) (Rs2.64 billion in 2006–07)
- Interest payment on WAPDA’s Sukuk bonds and debt servicing on NBP loan to WAPDA (Rs14 billion in 2006–07)
- Saindak Metal Limited bonds (Rs1.24 billion in 2006–07)
- Pakistan Steel Mills Corporation's liability payments contractually assumed by the Government (Rs1.74 billion in 2006–07)
- Payments to Fouji Fertilizer Company Bin Qasim on account of 1989 Investment Policy .pertaining to the fertilizer industry
- Interest payments on restructured loans and Term Finance Certificates (TFCs) for Pakistan International Airways (Rs0.73 billion in 2006–07)
- Debt servicing on Pakistan Railways’s Government-guaranteed loan (Rs2.58 billion in 2006–07)

Implicit guarantees also have a substantial impact on the Government’s budget. In its 2006–2007 Economic Survey, the Government estimates that its implicit guarantees cost Rs75.79

billion in 2004–05, Rs67.86 billion in 2005–06, and Rs78.64 billion in 2006–07. Payments to or on behalf of WAPDA represent the largest share of these amounts. The amounts include:

- WAPDA subsidy (Rs18.46 billion in 2006–07)
- Non-recovery of WAPDA loans (Rs6.15 billion in 2006–07)
- New WAPDA loans (Rs38.02 billion in 2006–07)
- Equity injection and subsidy to KESC (Rs3.49 billion in 2006–07)
- Operational shortfalls of Pakistan Railways (Rs3.85 billion in 2006–07)

We would like to highlight three things about these contingent liabilities:

- First, the government does not have a record of all the guarantees that constitute an explicit contingent liability. We asked the Ministry of Finance and they told us they do not have this information
- Second, the amounts reported for these contingent liabilities in that Economic Survey are the actual cash payments during the fiscal year—not the expected payment based on the terms of the guarantee. This means that the Government does know much it should budget to cover its exposure from these guarantees
- Third, the Economic Survey also reports that actual payments with respect to these contingent liabilities are less than two percent of GDP. This means that Government thinks about this limit not as a limit on annual cash outflows, rather than on expected payments.

Controlling the Government’s exposure from these contingent liabilities is the central topic of our work. However, as we explain in Section 6, we think it is more realistic to start with a framework that applies to future PPP projects, and is later expanded to cover the sort of explicit contingent liabilities described in this section.

3.5 Legal Framework for Guarantees

The Fiscal Responsibility and Debt Limitation Act of 2005, as well as other legislation, sets out the legal framework for guarantees issued in Pakistan. This section describes the legal framework for Government guarantees and how it is implemented in practice for guarantees to infrastructure PPPs.

3.5.1 Legal framework

The Fiscal Responsibility and Debt Limitation Act of 2005 (FRDL) is the only law that affects the Government’s overarching policy on guarantees. It imposes a ceiling on the maximum amount of guarantees that can be issued by the Government and requires the Government to disclose information on the guarantees that it has issued, including their value. Other acts and laws—mainly those that establish public agencies and enterprises—state that the Government is legally bound to guarantee loans, dividends, or return on bonds and shares of certain entities. However, these laws do not specify how these guarantees should be managed, disclosed, or accounted for.

The rule within the FRDL that sets out the ceiling on guarantees reads as follows:

“not issuing new guarantees, including those for rupee lending, bonds, rates of return, output purchase agreements and all other claims and commitments that may

be prescribed, from time to time, for any amount exceeding two percent of the estimated gross domestic product in any financial year... Provided that the renewal of existing guarantees shall be considered as issuing a new guarantee.” (Chapter II, number 3 (3d)).

This law places an upper limit on the total currency amount that guarantees may be issued for, but does not take into account the expected value of the guarantees. Thus, guarantees of the same amount but bearing different risks—guarantees which may have different expected values—would be regarded as equal under this rule.

The FRDL defines “guarantee” as “any obligation undertaken to make payments in the event of the profit of an undertaking falling short of a specified amount.” The Act applies to “all guarantees including those for rupee lending, bonds, rates of return, output purchase agreement, exchange risk, claims, and commitments made by the Federal Government having potential budgetary implications, including revenue demands raised but not realized and liability in respect of major works and contracts.”

The law requires that the Government disclose information on public and external debt and guarantees issued by the Government, including any payments made on those guarantees, in the debt policy statement presented to the National Assembly each year (Chapter III, number 7(3e)). The Government must also disclose all decisions made by the federal Government that have a material effect on the fiscal and economic situation of the country. Where the fiscal implications of these decisions can be quantified, or valued, with reasonable certainty, their value must be reported as well (Chapter III, number 8). Guarantees issued by the Government have a potential material effect on the Government’s fiscal situation and would need to be disclosed under this requirement. Guarantees may be quantified using the valuation techniques for contingent liabilities set out in Section 7 of this report. The Debt Policy Coordination Office (DPCO) established under the FRDL is responsible for providing consistent information on Government guarantees outstanding, and updated balances and limits for Government guarantees.

Apart from what is specified in the FRDL, the Government is legally bound to guarantee loans, dividends, or return on bonds and shares of certain entities. The Government’s exposure under these guarantees is limited in some cases. A summary of the applicable legislation is provided in Appendix F. This legislation applies to “Other Guarantees” described in Section 3.4 above.

The 2002 Policy for Power Generation Projects sets out how various risks associated with IPPs should be allocated. While this is not law, it is applied in practice through the model Implementation Agreement and Power Purchase Agreement used in all IPPs developed under the 2002 policy. The allocation of risks specified in this policy is presented in Appendix E.

3.5.2 Current practice

While the FRDL Act sets out an overall limit for the amount of guarantees that may be issued and reporting requirements for guarantees, it does not specify detailed rules for guarantee requests and approvals. This section describes how requests for, and approvals of, guarantees are currently being made, and how the rules on exposure and reporting are being followed in practice.

Guarantee Requests. In practice, there is no clear central processing framework available for guarantee requests, and requests are made on a case-by-case basis. The Government has given PPIB the authority to issue guarantees to IPPs under the Power Policy (described in Section 5.2.1) without further approval from the Ministry of Finance. The Ministry of Finance does not currently provide guarantees to transportation (road) projects. In the case of “explicit” guarantees other to than infrastructure PPPs, the Ministry of Finance is bound to guarantee the obligations of other government controlled entities by the legislation summarized in Appendix F.

Guarantee Approvals. There are no explicit rules for approving guarantees. It is unclear whether the Budget Wing approves, or simply records, these guarantees. Recent transactions include loan guarantees to WAPDA and Pakistan International Airways.

Recording and Reporting. As discussed above, the FRDL Act requires DPCO to issue a “debt policy statement” that includes information on guarantees issued, every year. However, DPCO currently does not have a record of guarantees issued and relies on the budget wing for its reporting. DPCO has played a limited role as advisor on several transactions.

Exposure. As discussed above, the FRDL imposes a ceiling of two percent of GDP in any financial year on the maximum amount of guarantees that can be issued by the Government. In practice, the Pakistan Economic Survey lumps together government subsidies, loan write-offs, interest payments, and cash outflows on guarantees provided on behalf of government entities. It does not report the amount guaranteed, or the value of guarantees, separately.

4 Managing the Fiscal Risk of Guarantees

There are benefits to provision of government guarantees. In a well-designed project, the overall project cost can be reduced by the government taking on the risks it is best able to mitigate or absorb.

However, there are also costs associated with the provision of government guarantees. The nature of these costs is different from most government expenditures, in that they are uncertain (in both magnitude and timing). The provision of a guarantee means that the government assumes a contingent liability—an uncertain payment obligation in the future—rather than expenditure committed at the time of contracting.

This makes managing the fiscal impact of guarantees more complicated than that of normal government expenditures. A large and sudden fiscal adjustment may need to be made if the guarantee is called (that is, guarantees constitute a fiscal risk). This may threaten other government spending or debt sustainability, amongst other things, and could undermine the integrity of the budget process, government credibility, and macroeconomic stability. This risk is compounded when a guarantee covers a risk event, such as a demand shortfall, that is more likely to occur in a general economic downturn, when the government is least able to absorb a fiscal shock.

If the number and size of PPP projects, and associated guarantees, are small compared to the government's budget, it may be feasible to simply accept this risk. To date, this has been the approach of the Government of Pakistan. The only limitation on the exposure from guarantees is a provision in the Fiscal Responsibility and Debt Limitation Act (FRDL) to cap the government's total stock of contingent liabilities. As discussed further below, in the absence of an institutional structure to implement this, and clear rules on how to estimate the value of contingent liabilities, even this measure may be ineffective in limiting the fiscal exposure. The Government recognizes that the planned increase in infrastructure provision through PPP projects will result in an unacceptable level fiscal risk, unless stronger measures to manage this risk are introduced.

To consider how best the government can manage the fiscal risk arising from guarantees to PPP projects, we start in Section 4.1 by describing how private insurance companies, as risk management specialists, manage their contingent liabilities. However, government guarantee contracts do have special characteristics which will have to be considered in designing a fiscal risk management framework. These are explored in Section 4.2.

4.1 Risk Management Principles of Insurance Companies

Insurance companies have developed principles and techniques for managing the risks they are exposed to through contingent liabilities. They have also found solutions for minimizing moral hazard.

4.1.1 Managing contingent liabilities

When an insurance company issues an insurance contract, the insurer acquires a contingent liability, much as issuing a guarantee creates a contingent liability for governments. For example, a fire insurance contract may require the insurer to pay a certain amount in the case of damage by fire—that is, the payment by the insurer is contingent on the fire damage event occurring.

To determine the value of this obligation, the insurer will use actuarial techniques. There is abundant data on prior loss experience that can be used to predict with reasonable accuracy the expected cost to the insurer over the length of the contract. The discounted value of this expected cost determines the present value of the contingent liability acquired by the insurer.

In exchange for issuing this fire damage insurance contract, the insured party will pay the insurer a premium. To cover the risk of a claim on the contract, a prudent insurance company will charge a premium at least equal to the value of the contingent liability.

The premium will cover the expected exposure of the insurance company. It is possible however, that the actual exposure is higher than the expected exposure. If this is the case, the insurance company could face unexpected losses. The normal practice in the insurance industry to cover the risk of unexpected losses is to set aside capital reserves, or to use re-insurance. Setting aside a reserve ensures that the insurance company has cash to pay an obligation that exceeds its expected value.

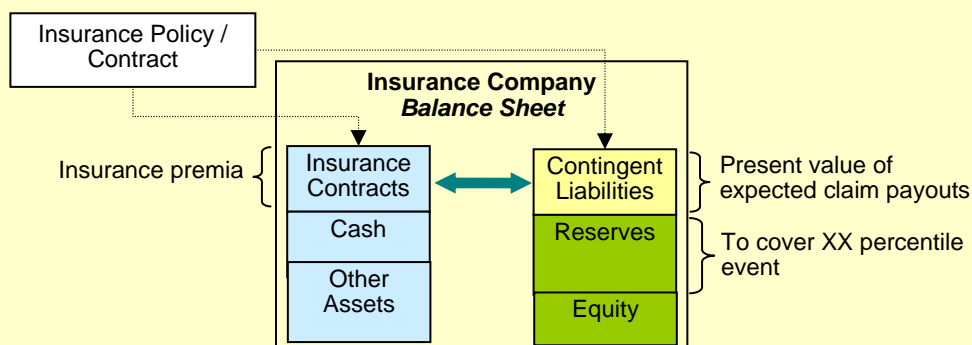
The management committee of the insurance company determines the amount of reserves that the company should hold, in excess of expected costs, to cover unexpected losses. Management weighs the expectations of the company's shareholders and stakeholders, rating agencies, and its business partners in determining an optimal level of reserves for maximizing shareholder value. The level of reserves held by the company will reflect its risk aversion, and its ability to withstand a specific level of unexpected losses. Thus, a company seeking an AAA rating will hold considerably more reserves against unexpected losses (say, capital to cover a 99 percentile event over a one year period) than a firm seeking an A rating (capital to cover a 90 percentile event).¹¹

Understanding how insurance companies record the insurance contracts in their balance sheets, and the contingent liabilities and capital reserves associated with these contracts, is useful in further understanding how risks associated with these contracts are managed (see Box 4.1 below).

¹¹ Lewis, Christopher and Ashoka Mody, "The Management of Contingent Liabilities: A Risk Management Framework for National Government", in Timothy Irwin, et al., eds, *Dealing with Public Risk in Private Infrastructure*. Washington, DC: The World Bank. 1997.

Box 4.1: Insurance Contract Accounting

From an accounting point of view, the insurance company will recognize the insurance contract, contingent liability, and reserves as illustrated in the figure below.



The insurance contract will be recorded as an asset with a value equal to the premium. The contingent liability will be recorded as a liability with a value equal to the present value of the expected cost of the contract to the insurance company. The reserves to cover unexpected losses will be accounted as provisions in the income statement, and will therefore reduce the retained earnings and equity.

In summary, insurance companies manage their risk by:

- Accurately establishing the present value of the expected cost of their insurance contracts, based on the probability, size, and timing of possible future pay-outs
- Covering the contingent liability resulting from the insurance contract by charging the insured party, and retaining among its assets, a premium at least equal in present value terms to the value of the contingent liability
- Setting aside reserves to cover unexpected losses.

4.1.2 Minimizing moral hazard

Moral hazard is a key concept in the practice of insurance. Moral hazard describes the change in behavior that results once someone is insured. For example, once a driver obtains motor vehicle insurance, he may start driving more dangerously because the loss to him from bad driving is now limited by the existence of insurance cover.

Insurance companies have numerous solutions for coping with the problem of moral hazard. For instance, they require the insured party to share the cost of the event insured (including paying deductibles) to reduce incentives on the insured party to take excessive risks. In the case of fire damage insurance, the insurance company will only pay a certain percentage of the cost of the damage to the company insured.

4.2 Risk Management Principles for Government Guarantees

Governments can learn from the principles followed by insurance companies in managing risk. The government can cover its expected losses by diligently valuing contingent liabilities and setting aside assets equal to this value (essentially paying itself an “insurance premium”). The government could significantly reduce the fiscal risk arising from provision of guarantees by also setting aside further reserves to cover unexpected losses. The government

may ensure that the guarantees it provides do not weaken the incentives for the private party to minimize costs and maximize revenues by safeguarding against moral hazard.

However, there are key differences between insurance contracts and government guarantees, and between insurance providers and governments. These differences are related to:

- The nature of the risks borne
- Systems of accounting for liabilities
- Institutional considerations.

In this section, we consider first how governments can minimize moral hazard. We then consider the key differences between insurance contracts and government guarantees and their implications for risk management.

4.2.1 Moral hazard considerations

As with insurance policies, concerns over moral hazard may arise when the government grants a guarantee. The government's objective in granting a guarantee is to reduce the cost of financing for the guaranteed project, without reducing the incentive for private party to minimize costs and maximize revenues. However, the government may find it must compromise these incentives in order to attract private investors, for example by guaranteeing a certain level of demand. This introduces a moral hazard problem.

Similar to deductibles in insurance contracts, government guarantees can be limited to the provision of partial guarantees covering less than 100 percent of the underlying loans. This may moderate the moral hazard problem by aligning the interests of private investors with those of the government. Limiting guarantees to cover part of the losses, or charging a premium or deductible on the guarantees issued may also encourage the guaranteed party to perform thorough risk assessments or exercise greater control over operations. Partial guarantees may deter the guaranteed party from conducting careless operation of the involved projects, expecting the government to bail it out in the event of loss.

4.2.2 Types of risks

While both insurance providers and governments issuing guarantees seek to manage their exposure to risk, there are important differences in the nature of these risks:

- An insurance company typically provides a very large number of insurance contracts on risks that are largely unrelated, such as millions of individual car insurance policies. As this number increases, the likelihood increases that the actual cost to the insurance company of making payments on the total stock of contracts is close to the expected cost; conversely, the probability that it differs widely is very low. A government, on the other hand, is likely to issue only a small number of guarantees to PPP projects. This means that outcomes that differ widely from the expected value are relatively much more likely
- The risks that an insurance company accepts are usually uncorrelated with one another; for example, the risk that the company will need to pay out on many car insurance policies at the same time is low. However, many of the risks covered by government guarantees may be correlated. During a general economic downturn, for example, there is a greater risk that government agencies will not be able to meet their obligations under PPP contracts—particularly where these obligations

include purchase agreements which guarantee a certain level of demand. In this case the government would have to make simultaneous payments under a number of government guarantees. This effectively reduces the number of unrelated risks the government is “insuring”, and further increases the variability of outcomes

- The availability of historical data or experience on risk events for infrastructure projects, to determine the expected cost to the government of issuing a guarantee, is limited. Using the best methods available, the calculated expected value may not reflect the true expected value, further increasing the probability that the actual outcome differs from this calculated value.

The combination of these factors means that, while it is feasible for an insurance company to set aside reserves to cover unexpected losses to a high degree of certainty—as discussed above—it would be prohibitively expensive for the government to do so. Setting aside assets to cover expected losses and an affordable level of reserves reduces the fiscal risk to government, but cannot eliminate it. The government may therefore need further measures to ensure the total risk remains acceptable, for example by:

- Ensuring that it bears only those risks where the expected benefit of doing so is greater than the expected cost
- Setting a cap on the total value of the stock of guarantees, and tracking the value of these contingent liabilities to ensure that it remains below the capped level
- Monitoring and reporting the total stock of guarantees and associated contingent liabilities.

4.2.3 Accounting for contingent liabilities

There is a further difference between the government and the insurance company in how they manage and report their accounts. The Government of Pakistan, like many other governments, runs a cash budget and accounting system. There is currently no mechanism in this system for budgeting or recording for provisions against unknown expenditures, or for recording the contingent liability arising from a guarantee. Guarantees are not currently reflected in government accounts until called, when they become cash expenditure and any resulting loan is an actual liability. An effective means to overcome this limitation would be to turn the provision against guarantees into an actual cash transfer, by separating it from the government’s consolidated accounts (at the cost of some loss of financial flexibility for the government).

4.2.4 Institutional considerations

While insurance companies and governments providing guarantees have some commonality in aims, they are very different institutions; insurance companies’ sole purpose is to profitably manage risk, while this constitutes only a small part of government’s responsibilities. Management of risk arising from the provision of guarantees by government is further complicated by the number of entities within government involved in the process. These institutional factors must be taken into consideration in designing a risk management framework for use by government.

When no budget provision is made against guarantees, as is currently the case in Pakistan, the guarantees are not subject to the same scrutiny as other spending commitments through the budget process. It also means that issuing guarantees has no immediate effect on the

government's budget constraint. This results in a temptation to over-use guarantees, or to disguise as a guarantee what is really a project subsidy, greatly increasing the level of fiscal risk.

Requiring a budget provision against guarantees, and limiting the total stock of guarantees to a certain level, alleviates these problems. Turning the provision into a cash transfer out of the consolidated account, as mentioned above, has the further advantage of enforcing self-discipline during the budget year, as the temptation to reallocate any provision against uncertain expenditures as budget pressures arise is removed.

However, both the budgeting and capping mechanisms for managing exposure from guarantees rely on properly valuing the associated contingent liabilities. Since the limited statistical information available means valuation of guarantees to PPP projects is more of an art than a science, this process may be open to manipulation. If the provision against guarantees is made at a central government level, for example, the implementing institution may have an incentive to under-value a proposed guarantee to ostensibly meet budget requirements, as it is not directly exposed to the risk of an above-expected call on that guarantee. This incentive may even exist at central government level, where providing a guarantee can facilitate infrastructure provision while meeting fiscal deficit requirements today, while passing on budget risk to future administrations. To overcome these limitations, guarantee valuation methodology must be clearly defined; the process must be transparent and subject to verification. In general, the institutional structure should ideally be designed to provide those responsible for valuing liabilities with the incentive to do so as accurately as possible.

In Section 5 we describe how governments in several countries have created frameworks for managing the fiscal risk resulting from guarantees to infrastructure PPPs. In Section 6 we discuss how we have applied the concepts set out in this section in drafting the guidelines for issuing government guarantees that we propose for Pakistan. In Section 7 we present a methodology that the Government can use to value contingent liabilities it is exposed to through guarantees to PPP projects.

5 International Experience with Risk Management Frameworks

The provision of government guarantees to PPP projects has benefits in terms of improved risk allocation. It also involves a cost, in the shape of fiscal risk arising from the associated contingent liabilities (as discussed in Section 4). Based on this discussion, the policy components of a system to maximize the benefits from guarantee provision, and manage the associated costs, might include:

- Defining the risks that government is prepared to bear, and screening proposed guarantees accordingly
- Defining criteria projects must fulfill, to justify a guarantee offers value-for-money
- Defining a standard approach to valuing contingent liabilities
- Setting aside funds against expected value of guarantees
- Setting aside reserves to cover unexpected losses when guarantees are called
- Limiting overall exposure from guarantees.

In practice, governments seeking to manage their exposure to risk from guarantees to infrastructure PPPs have done so in a number of ways, reflecting their specific objectives and institutional strengths or limitations. There are frameworks in place or under development in other emerging markets that incorporate some or all of these features; many include all five. The mechanisms used to implement these principles, for example the allocation of responsibilities between different entities within government, differ between countries. In considering the Government of Pakistan's options for a new risk management framework, it is useful to consider some experiences from other countries.

In the following sections, we present case studies from a range of countries: Colombia, Brazil, Chile, Indonesia, and the State of Victoria, in Australia. Section 5.6 examines the commonalities and differences between these frameworks, and summarizes the lessons for Pakistan.

5.1 Colombia

During the 1990s the Government of Colombia issued guarantees for electricity, roads, and telecommunication PPP projects. The value of the contingent liabilities to the Government of Colombia from having issued these guarantees was estimated at around 1.5 percent of the country's gross domestic product in 1997.

At that time, the general consensus was that guarantees were used indiscriminately by implementing government agencies. There were no rules on how to cover the Government of Colombia's exposure from these guarantees, or how to decide when to issue a guarantee or not. As result, many guarantees were offered to poorly structured projects in which the Government of Colombia was bearing an excessive amount of risk.

Between 1998 and 2003, the Government of Colombia defined new rules and procedures for issuing guarantees, with a series of laws, decrees, and policy documents. The primary objective of these was to manage the fiscal risks associated with future government guarantees.

5.1.1 Overview

The provision of guarantees in Colombia is controlled by the Risk Management Unit in the Ministry of Finance, which is responsible for assessing and approving guarantee requests prepared by implementing institutions, according to well-specified criteria of acceptable risks. Budget provisions against guarantees are made by transfers from the implementing institution to a contingency fund, a special government account which is managed by a private company.

The Contingency Fund was established by law in 1998. In 2001, a Decree defined detailed rules and procedures for managing contingent liabilities, supplemented by policy documents defining acceptable types of risk, and how each should be managed. In 2003, a further law required the Ministry of Finance to approve the value of the contingent liability of a proposed guarantee.

5.1.2 Projects and risks

Risks that the Government was prepared to guarantee were clearly defined, based on the principle that risk should be allocated to the party that is best placed to value, and control the risk, and that has best access to mitigation, protection, and diversification instruments.

For each sector, the Government defined the specific risks that it was prepared to bear or share, as well as the mechanisms that should be used for mitigation. For example, for a toll road project, the Government is only prepared to bear land acquisition risk. Demand risk is borne by the concessionaire, but is managed by extending the term of the contract until the concessionaire achieves a pre-agreed level of expected revenue.

The maximum level of risk that the Government was prepared to bear on each project was also capped. Projects can only receive guarantees whose total value of the risk exposure—with a certainty of more than 90 percent—is less than 10 percent of project costs. The intent of this policy is to exclude poorly structured transactions, which would be indicated by a high ratio of risk to cost.

5.1.3 Institutional structure

The Contingency Fund is a special account, administered by a private financial institution under contract to the Ministry of Finance. This Fund is essentially a vehicle for making budget provisions against guarantees; there is no direct contractual relationship between the Fund and the private investor.

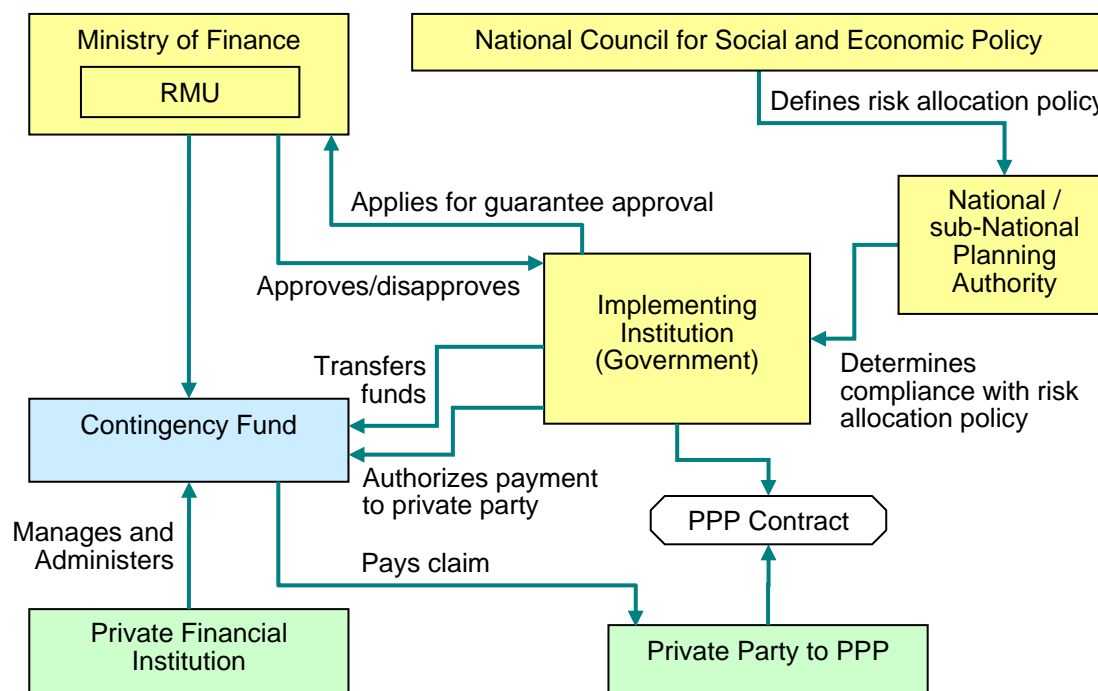
Responsibilities for setting policy with regard to guarantees, for assessing guarantee proposals and evaluating associated contingent liabilities, and for making the appropriate financial provision, are allocated between the implementing institution, the Ministry of Finance Risk Management Unit, and other Government planning authorities.

- The implementing institutions identify and prepare projects, estimate the value of contingent liabilities, and make transfers into the Contingency Fund according to their proposed payment plan, once approved by the Ministry of Finance. The implementing institution is also responsible for authorizing claim payments, and for meeting payment costs if these exceed the project provision within the Fund.
- The National Council for Social and Economic Policy defines the risk allocation policy, while the relevant planning department (national, provincial, and so on) determines the compliance of a particular proposal with this policy.

The Risk Management Unit of the Ministry of Finance defines the policy for valuing contingent liabilities. It is responsible for approving guarantees, along with their valuation and associated payment plans. This decision is based on information submitted by the Institution, as well as a recommendation from the relevant planning office.

The institutional structure for managing guarantees in Colombia is summarized in Figure 5.1.

Figure 5.1: Colombian Guarantee Management—Institutional Structure



5.1.4 Operating policies

In preparing and approving claims, and managing the contingency fund, the Government and contracting private financial institution are guided by policies designed to manage the fiscal risk of providing guarantees.

- Guidelines for calculating the value of the contingent liabilities—that is, the present value of the expected cost of the guarantee to the Government—require use of risk-pricing methods such as Binomial trees or Monte Carlo simulations
- Mandating implementing institutions to make transfers to the Contingency Fund equal to the expected value of the guarantee ensures the expected value of the total stock of guarantees does not exceed the assets of the Fund
- The Contingency Fund holds a separate account for each project, capitalized by the transfers from the implementing institution. In the case of a payment claim, any shortfall is met by the institution that is party to the PPP contract.

5.2 Brazil

Brazil established its current PPP and Risk Management Framework between 2004 and 2006. Brazil was relatively new to the involvement of private finance in infrastructure provision, so the primary objective of the framework was to mobilize private capital to finance extensive infrastructure investment.

5.2.1 Overview

In Brazil, an independent Guarantee Fund—the *Fundo Garantidor de Parcerias Publico-Privadas* (FGP)—forms the basis of the institutional structure for managing PPP Guarantees. The decision to approve guarantees proposed by government agencies is controlled by the government as the sole shareholder; all other functions are the responsibility of a management contractor. Provisions against guarantees will be made by allocation of the fund's assets—hence, the stock of guarantees is capped by the size of the fund.

A PPP Law in 2004 defined the legal framework for PPPs in Brazil, the general guidelines for project contracting, and authorized the creation of the FGP. The initial capitalization of the FGP, to a limit of US\$1.5bn, was authorized by a 2005 Decree, and it was formally launched in February 2006. Its operating policies have yet to be fully defined.

5.2.2 Selection of risks

The FGP provides guarantees to cover the financial obligations of government entities under PPP contracts, which generally constitute direct payments for specified services. Certain risks faced by the private PPP investors are explicitly covered or mitigated by Government in this structure, namely:

- The risk of the government entity party to the contract facing insolvency, or becoming illiquid—that is, facing a temporarily inability to make a due payment—this includes the risk of lower receipts due to a demand downturn
- The risk of payment delay due to a protracted legal process, and a long queue of payment claims, in case of dispute.

The framework does not have any specific guidelines as to what other risk events guarantees may cover. This is left to the discretion of the FGP.

5.2.3 Institutional structure

The FGP is a government-owned stock corporation, which was capitalized by the Government with US\$1.5bn in shares of publicly traded companies and state-owned enterprises (SOEs). The Government controls company decision-making through the Shareholder Assembly, including approval of guarantee proposals, while keeping the funds segregated from the budget process, enabling multi-year payment commitments.

The FGP is managed by the Brazilian Central Bank—Banco de Brasil (BB)—which manages its day-to-day financial operations, as well as having the following responsibilities:

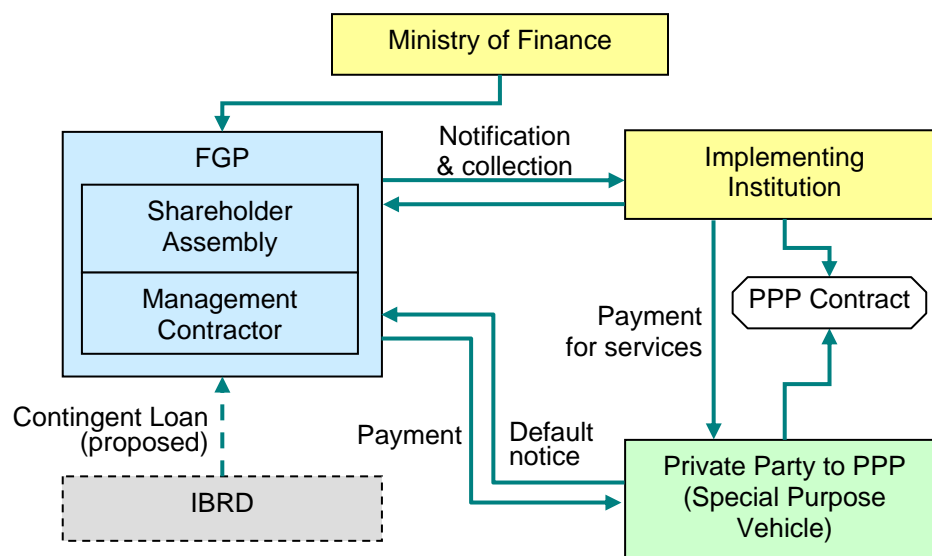
- Establishing the process for project valuation and analysis
- Designing and preparing potential PPP project guarantee proposals, for approval by the Shareholder Assembly
- Drafting guarantee contracts and representing FGP in judicial processes, and
- Publishing financial statements and information on the stock of guarantees.

Guarantees are triggered by non-payment of the implementing institution, if unrelated to performance issues. Disputed claims are subject to a private law process of arbitration. The framework contains a commitment to pay within a certain time frame of either the trigger, or the resolution of a dispute—the FGP’s private entity status exempts it from the constitutional requirement of complying with judicial decisions in chronological order. The guarantee agreement includes a provision for the FGP to recover from the Institution the cost of paying a claim under the guarantee.

The World Bank has agreed in principle to provide contingent capital to the FGP, most likely in the form of a contingent loan, to ensure funds are available should guarantee calls exceed the capital in the fund. This increases the credibility to the private sector of FGP guarantees.

The institutional structure for managing guarantees in Brazil is summarized in Figure 5.2.

Figure 5.2: Brazilian Guarantee Management – Institutional Structure



5.2.4 Operating policies

The operating policies of the FGP are not yet clearly established, particularly with regard to the criteria and processes by which the eligibility of projects for guarantees will be assessed. Developing these is part of the mandate of the FGP management. Some provisions have been made for how the fiscal risk arising from the contingent liabilities will be managed:

- The present value of all guarantees provided by the FGP is capped at the level of its assets. There is, however, not yet a definition on how the “present value of the guarantees” is calculated
- FGP can use various types of guarantee instruments, but each must be covered with assets of similar characteristics—in terms of liquidity, average life, and so on—although the capitalization of the FGP with shares only may limit the capacity to achieve this.

5.3 Indonesia

In the early to mid 1990s Indonesia established a large number of PPPs, mainly in the power, road, and telecommunications sectors. In the absence of any defined framework for Government support to PPPs, these deals were opaque, often involving general, ambiguous guarantees such as letters of support to PPAs. When the Asian financial crisis hit Indonesia in the late 1990s, the drop in demand and devaluation of the Indonesian rupiah left many projects unsustainable, and subject to forced renegotiations or cancellation.

Public private partnership development in Indonesia was at a halt until 2005–2006. At this time a new focus on PPPs in infrastructure emerged and the Government began to develop a legal and institutional framework for infrastructure PPPs. The key objective of this framework is to mobilize private investment in infrastructure by provision of credible Government guarantees.

5.3.1 Overview

The Government is currently developing a new risk management framework, which will include an independent Guarantee Fund. This Fund will take on many of the responsibilities for guarantee management currently held by the Ministry of Finance, with the exception of policy setting. The government will select the Fund's Board, which will be responsible for the decision to issue guarantees, while most other responsibilities will fall to a management contractor. Provisions against guarantees will be made by allocation of the Fund's assets (hence, the stock of guarantees is capped by the size of the fund).

Presidential Regulation 67, issued in 2005 (PR67) defined the legal basis for PPPs in Indonesia. This was supplemented by the Ministry of Finance regulation PMK38, issued in 2006, which provided a framework for managing the associated risks (defining acceptable risks, and processes to manage their fiscal impact). Both regulations have since been circumvented in practice. The new institutional structure has yet to be legally established.

5.3.2 Projects and risks

The PMK38 regulation established broad categories of risk against which the Government should consider issuing guarantees, based on the principle that that risk should be allocated to the party best able to mitigate or absorb it. These included political risk, demand risk, and certain project performance risks, such as land acquisition and contract changes. The regulation also stipulated that projects must be technically and financially feasible, and awarded through competitive tender, to be eligible for guarantees. In reality, a number of projects that do not fulfill these criteria have since been approved for Government support.

5.3.3 Institutional structure

The Risk Management Unit (RMU) within the Ministry of Finance oversees the guarantee process. The RMU's responsibilities—as defined in the PMK38 regulation—are to verify the compliance of the project with the criteria outlined above, and to analyze the fiscal costs and risks resulting from proposed support. The decision of the Minister of Finance whether to provide a guarantee, as proposed by an implementing institution, is based on the recommendation of the RMU, along with verification by the National Committee for the Acceleration of Infrastructure Provisions (KKPPI) that the project is in line with policy priorities. The PMK38 regulation provided for budget allocations against guarantees, which must be approved by Parliament, to be transferred to a specific fund account.

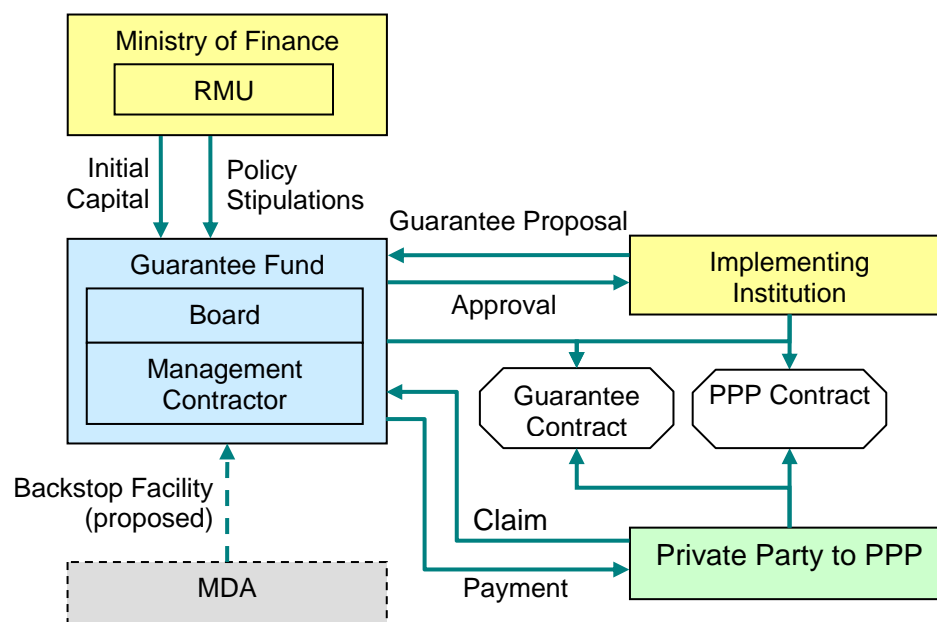
In order to better manage fiscal risk and improve the credibility of guarantees, the Ministry of Finance has since decided to establish an independent Guarantee Fund (GF) as a separate legal entity. The Guarantee Fund will be capitalized by Government through budget allocations and the transfer of state assets such as shares of SOEs. It will be governed by a Board chaired by a representative of the Ministry of Finance, with responsibility for deciding whether to issue any proposed guarantee, and will be managed by a private institution. Its responsibilities will include:

- Reviewing guarantee proposals, evaluating the associated contingent liability, and recommending to the Board whether to issue a proposed guarantee
- Managing the claims process
- Allocating reserves to cover issued guarantees, and managing its assets
- Monitoring and reporting on its financial situation, and on the stock of guarantees and contingent liabilities

Under this proposed institutional structure, the RMU retains control over policy with respect to guarantee management, such as the methodology of valuing contingent liabilities. The Government intends to pursue a backstop facility from a multilateral development agency (MDA) to ensure the ability of the GF to pay should a guarantee claim exceed its assets.

The proposed institutional structure for managing guarantees in Indonesia is summarized in Figure 5.3

Figure 5.3: Indonesian Guarantee Management – Proposed Institutional Structure



5.3.4 Operating policies

The PMK38 regulation introduced the broad criterion that guarantees would be issued only when the resultant fiscal cost and risk does not “exceed the fiscal capacity of the State to

bear.” The new institutional structure will concretize this principle, by limiting the Guarantee Fund to issuing guarantees only up to the value of its assets, thereby both ensuring provision against expected losses, and placing an overall cap on the exposure to guarantees. Detailed policies such as the method to be used for valuing contingent liabilities have yet to be developed.

5.4 Chile

Chile began its PPP program in the early 1990s, with highway concessions as a solution for reducing its infrastructure deficit while maintaining fiscal discipline and ensuring that highways were properly maintained once they were built. The Concessions Law was passed in 1991, and the concessions program began in earnest in 1994. Chile’s concession program now includes highways, airports, jails, and other types of public infrastructure (such as stadiums and public transport transfer stations).

The Government of Chile offers some guarantees to infrastructure PPPs. Its goal in doing so is to reduce the risk profile of a given project in which investment decisions made by the Government could lower the project’s cost of capital and thus the total cost of the project. The Government considers that its guarantee program has successfully achieved these objectives.

The Government is in a strong fiscal position. It has maintained a structural budget surplus of one percent of GDP since 2001. The major risk rating agencies—Fitch Ratings, Moody’s and Standard & Poor’s—has rated its sovereign bonds as “investment grade” since before 2000. Its sovereign risk, measured in basis points, was the lowest in Latin America for eight years, until falling just below Mexico’s in September 2007. Chile’s framework for managing the fiscal risk of government guarantees reflects its sound fiscal position, and is geared toward monitoring the fiscal implications of the guarantees.

5.4.1 Overview

Chile’s framework for managing government guarantees to infrastructure projects centers around valuing the contingent liabilities that arise from these guarantees. In 2003, the Government instituted a policy for valuing, reporting, and monitoring all of its contingent liabilities. This includes not only guarantees to infrastructure projects, but also to the debt of state-owned companies, financing for higher education, and minimum pensions. Although the policy has been followed continuously since 2003, it was made into law by the Fiscal Responsibility Law (*Ley de Responsabilidad Fiscal*), approved in 2006.

The Concessions Law (*Ley de Concesiones*) and the Law of Financial Administration of the State (*Ley de Administración Financiera del Estado*) also underpin Chile’s policies on issuing government guarantees.

The Government—through the Ministry of Public Works—is currently party to concessions for 20 inter-city highway projects, 7 urban highway projects, and 10 airports. All but two of the inter-city highway projects, and all but one of the airports, have a minimum revenue guarantee. Only two urban highways have a minimum revenue guarantee.

5.4.2 Projects and risks

The Government provides minimum revenue guarantees to projects in which decisions made by the Government have a significant effect on the revenues of a project. The guarantees are designed to cover debt service, but not equity. The largest component of its

program of guarantees to infrastructure projects is minimum revenue guarantees to highway projects. Given Chile's geography, traffic on some highways depends significantly on linking and competing routes, and investment decisions regarding these routes (construction, upgrading, and so on) impact the level of traffic on the highways under concession. The Government also provides minimum revenue guarantees to airport projects.

Until 2005, the Government provided a guarantee against devaluation of the Chilean peso. Under this guarantee, the Government paid the concessionaire if the peso lost more than 10 percent of its value against a hard currency, and the concessionaire paid the Government if the peso gained more than 10 percent against a hard currency. Concessionaires could decide whether to accept this guarantee or not. If they accepted the guarantee, they would need to pay a premium equal in value to the present value of the contingent liability to the Government from this guarantee. The Government no longer issues guarantees because the development of the domestic capital market allowed concessionaires to raise peso-denominated debt.

Under the Law of Financial Administration of the State, the Ministry of Finance must approve the procurement documents of any concession or PPP contract before it goes to bid. The terms of the guarantees are included in these documents. There are no separate formal rules for guarantee approval.

The Contingent Liabilities, Guarantees and Concessions Unit (*Unidad de Pasivos Contingentes, Garantías y Concesiones*) in the Ministry of Finance is responsible for reviewing and approving the guarantees included in the procurement documents.

There are no formal rules regarding the types of risks that the Government may accept through guarantees, or the projects that it may provide guarantees to. However, all public investment projects—including concessions, are subject to a thorough evaluation involving the Ministry of Public Works, Ministry of Planning and Cooperation, Ministry of Finance, and the Comptroller General. The objectives of this evaluation are to ensure that projects:

- Are consistent with the Government's infrastructure plan
- Pass a social cost-benefit analysis
- Are undertaken by the public sector or private sector depending on which is best-placed to carry them out, and
- Are acceptable from a macroeconomic and fiscal sustainability perspective.¹²

In addition, the set of risks and projects that the Government has guaranteed is well-defined. The procurement documents follow this pattern except in extraordinary circumstances. In addition, the Government cannot guarantee losses beyond 10 percent of a project's cost.

Companies bidding on a concession may choose to accept the guarantee offered in the procurement documents or not. If they choose to accept it and win the concession, they must make a payment to the Government equal to the present value of the expected cost of the guarantee, as measured by the Government. Despite this payment, if the Government has undervalued the guarantee, or if the performance of the risk factors changes over the life of the project and the Government has to pay more on the guarantee than originally expected, the guarantee could have a positive net present value in the eyes of the investor.

¹² International Monetary Fund, *Public-Private Partnerships, Government Guarantees, and Fiscal Risk*. Washington, D.C. 2006.

5.4.3 Guarantee valuation and monitoring

In order to manage the Government's exposure to risk through contingent liabilities, the Government must value and report its contingent liabilities. The Contingent Liabilities, Guarantees and Concessions Unit of the Ministry of Finance estimates the present value of its contingent liabilities using stochastic analysis through Monte-Carlo simulations to measure the risk associated with the risk factors underlying the guarantees, and Black-Scholes to value the guarantees.

Since 2003, the Government has been reporting the value of its contingent liabilities in its annual Report on Public Finances (*Informe de Finanzas Públicas*). Starting in 2007, the Government is issuing a more detailed annual report on contingent liabilities. In these reports, the Government also publishes the value of the payments that it knows it will have to make under its guarantees. The obligation to report the value of contingent liabilities was formalized in the Fiscal Responsibility Law of 2006.

The minimum revenue guarantees are paid at the end of the fiscal year. Government agencies and ministries that are party to guarantees—including the Ministry of Public Works—subtract the value that must be paid on the guarantees from the next year's budget to determine the amount of money they may spend in the next year. For example, concessionaires' revenue shortfall in 2007 determines how much the Government must pay to them under the minimum revenue guarantee. The Government knows what this amount is at the end of the 2007 fiscal year. This amount is subtracted from the Ministry of Public Works' budget for the 2008 fiscal year. This procedure is in line with the "maximum fiscal commitment rule," which simply states that government agencies must not spend any more than their budget in a given year.

Although payments on Government guarantees come from line ministries, the Government's net exposure from minimum revenue guarantees is zero—or at least offset—because of the initial payment that the concessionaire makes, equal to the present value of the expected payments under the guarantee. However, the Government folds the guarantee fee into its consolidated accounts and has not set up accounts to show guarantee claims offsetting the guarantee fee. The Government values the contingent liabilities from guarantees without taking into account the concessionaire's payment of the guarantee fee.

Under the minimum revenue guarantee, the concessionaire may also choose to extend the period of its concession rather than receive a cash payment. The Government takes this into account when calculating the present value of its commitments under guarantees.

The value of the contingent liabilities associated with guarantees to infrastructure PPPs has been very low since the policy of valuing and reporting them began in 2003. Their value has fluctuated between 0.15 and 0.25 percent of GDP. The Government's budget is typically around 30 percent of GDP, so this means that the present value of all contingent liabilities from infrastructure PPPs is approximately 0.3 to 0.8 percent of the Government's budget in a given year. Additionally, two highway concessions account for 80 percent of the total value of contingent liabilities. Thus, the evolution of the value of the liabilities is fairly predictable based on these two projects.

The present value of the future payments under guarantees to infrastructure PPP projects at the end of the 2007 fiscal year was US\$346 million. This was 0.21 percent of the year's

estimated GDP. In 2006, the expected value of future payment was US\$267 million,¹³ which was 0.18 percent of the year's GDP (US\$146 billion).

The Government has considered establishing a guarantee fund for infrastructure PPPs. However, because the value of the contingent liabilities in relation to GDP and the Government's budget is so small, the Government has determined that the benefit of establishing this fund would be minimal. The Government monitors the value of the contingent liabilities but has not found it necessary to put into place any other mechanisms to cover its exposure from these liabilities. If the amount of liabilities grows in the future, it may consider establishing this type of mechanism.

5.5 Victoria, Australia

Under Australia's federal system of government, most infrastructure development falls within the responsibility of State governments. PPP policies have largely been developed at a State level—the policy of the state of Victoria is a good example.

Victoria introduced a PPP program in 2000, since which time sixteen projects have been successfully developed. The program's primary objective is achieving value-for-money in public expenditure on infrastructure.

5.5.1 Overview

The Victorian State government has very strong finances: it operates a fiscal surplus, and has a low level of debt. Its vulnerability to fiscal shocks is therefore low: Standard & Poor's considers its "finances are strong, and provide the state with a solid buffer to absorb even a relatively severe fiscal shock"¹⁴. This means there is little need for explicit fiscal risk mitigation measures to cover government guarantees to PPP projects.

Nonetheless, the Victorian Government has introduced a comprehensive management framework for PPPs—"Partnerships Victoria"—to ensure that the risks the Government undertakes through PPP projects are justified and provide good value-for-money.

The "Partnerships Victoria" framework was outlined in a policy document and has been periodically updated with the publication of implementation guides. There is no specific legal framework for the development of PPP projects, although project-specific legislation has been passed for certain major projects, for example when new regulatory authority is necessary.

5.5.2 Risk and project selection

The main thrust of the Partnerships Victoria policy is the definition of those risks the Government will accept in relation to PPP contracts.

The initial policy document laid down the principle that, after pre-supposing that the private party bears all project risks, the Government should "take back" those risks it can manage at lower cost. Two further principles were also established: whoever is allocated risk must have the freedom to choose how to handle and minimize it, and the materiality of the risk should be a consideration in its allocation.

¹³ For 2007, \$181.4 billion Chilean pesos at the average exchange rate for January-November 2007, of Ch\$524.58 per US\$1. For 2006, \$141.5 billion Chilean pesos at the average exchange rate for 2006, of Ch\$530.28 per US\$1.

¹⁴ Standard & Poor's: Victoria's AAA rating: A Comparative Study of Financial and Economic Performance, 2006

The Government set out its initial approach to the allocation of each type of PPP project risk in the Risk Allocation and Contractual Issues Guide, issued in 2001. In 2005, in light of its experience in creating and implementing PPP projects, the government published the Standard Commercial Principles Guide, which acts as a basis for all PPP contracts. This includes an updated set of risk allocation preferences, and defines how these will be reflected in the terms of a PPP contract. Table 5.1 gives a summary of how risks are typically allocated or shared between the Government and the Private Party to a PPP contract.

Table 5.1: Risk Allocation Matrix for Public Private Partnership Projects in Victoria

Risk Category	Example Risks	Typical Risk Allocation
Site	Site availability and approvals, site conditions, including environmental risks, native title and cultural heritage.	Generally borne by private party, except risks arising from the protection of native entitlements and cultural heritage. Unforeseeable environmental risks may also be accepted by government.
Construction	Facility design, construction and pre-commission testing	Private party, unless caused by government-mandated change.
Implementing institution and financial	Insolvency of institution, interest rate change pre-completion, availability of financing on assumed terms, tax changes.	Government bears institution's insolvency risk. Interest rate changes prior to completion may be shared, subsequent financial risk, including any arising from tax changes, borne by private party.
Operating	Inputs, maintenance, operator failure, technical obsolescence, changes in output specification	Private party, except Government-provided inputs (such as water supply), and any changes in output specification
Market	General economic downturn, competition, demographic change, inflation	Either borne by private party, or shared, if Government as service consumer has agreed to payment commitment. Competitive changes with any government involvement generally borne by Government.
Network and Interface	Withdrawal of support network, interface with government-provided services	Generally borne or shared by Government.
Industrial Relations	Risk of strikes	Private Party
Legislative and government policy	Approvals, unanticipated changes in law, regulation changes	Approval and regulatory change risks (imposed by a statutory regulator) borne by private party. Risk arising from changes in State law or policy borne or shared by Government.
Force Majeure		Shared—private party bears asset damage risk, government bears risk of service interruption

Asset Ownership	Technical obsolescence, default and termination, residual value	Borne by private party, with exception of residual value risk.
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The evaluation process for each PPP project is also clearly outlined in the Partnerships Victoria policy. This involves a quantitative cost-benefit analysis of PPP provision, including a valuation of the guarantees incorporated in the PPP contract, in comparison with other alternatives such as public sector provision.

5.5.3 Institutional structure

The Victorian Department of Treasury and Finance has overall responsibility for PPP policy. Ministers and department heads are responsible for procuring PPP contracts within their portfolio and departmental responsibility, and have the authority to enter into contracts on behalf of the state government. State Cabinet approval is required, however, at several stages in the planning and procurement process, which is set out in the Partnerships Victoria policy. Any guarantees that form part of a PPP project are contained within the project contract; no Government guarantees are issued.

The Partnerships Victoria policy does not include any specific guidance on accounting or financial reporting of PPP projects, or any provision for budgeting against fiscal risk arising from these contracts. The State of Victoria reports all contingent liabilities as a note to the balance sheet in its accounts, as required by the Financial Management Act (1994).

5.6 Lessons from the International Examples

The examples presented in Sections 5.1 to 5.5 illustrate that, despite their largely common principles, there are both similarities and differences between different countries' systems for managing the provision of guarantees to PPP projects. Learning from tried-and-tested common features, and considering what drives the differences that exist, may help Pakistan decide on the best options for its own guarantee management framework.

As a starting point, certain basic institutional features are common to all or most countries, and are likely to form part of Pakistan's guarantee framework:

- Risk management frameworks are established by law—ensuring policies and responsibilities are mandatory and enforceable, and so credible to the private sector
- Central government approval is required for PPP projects—since it is the central government that ultimately bears the risk of PPP project guarantees, and is best placed to weigh up the costs and benefits
- A specialist unit within the Ministry of Finance oversees the policy with respect to government support or guarantees (or both) to PPPs—since some specialist skills and knowledge are required.

In the following Sections we summarize the sample countries' approaches to each of the proposed policy components outlined at the beginning of Section 5 above, and examine the implications for Pakistan.

5.6.1 Defining appropriate risks and projects

Since providing guarantees constitutes a cost to government, most countries seek to ensure this cost is justified. By defining the risks the government is prepared to bear, and the types of project it will support in this way, countries can attempt to maximize the benefits from provision of guarantees to PPPs. The sample countries' different approaches are summarized in Table 5.2 below.

Table 5.2: International Approaches to Risk and Project Eligibility Criteria

	Colombia	Brazil	Indonesia	Chile	Victoria
Defining risks	Specific risks and mitigation mechanisms defined by sector	None	Principle defined	None, but strong precedent	Specific risks and appropriate contract terms defined
Selecting Eligible Projects	Total exposure to risk must be <10% of project cost	None	Projects must be in priority sectors, technically and financially feasible, & selected through competitive tender	None, but strong precedent	Full cost-benefit analysis of PPP project, including guarantees

The level of detail to which acceptable risks are defined varies between countries, and broadly increases with the country's level of experience in planning and implementing PPP projects.

In Indonesia, for example, the principles by which risks should be allocated, and some broad categories of risk the government may accept, are outlined, whereas in Colombia, with a longer history of PPP investment, specific acceptable risks are defined for each sector. In Chile, there are no formal rules, but there is strong precedent as to what types of risks and projects the Ministry of Finance has approved guarantees to. In Victoria, the acceptable risks, and best methods for allocating these through contract terms, have been laid out in more detail over time in successive policy guides.

This trend could occur for a number of reasons:

- As governments implement more PPP projects, they become more conscious of the necessity to accurately define risks the government is prepared to guarantee, to prevent excessive fiscal exposure (as was the case in Colombia)
- Governments may prefer to postpone the introduction of constrictive definitions of acceptable risks, while gaining PPP experience (as in Victoria, Australia)
- In the early stages of a PPP program, the total risk exposure to PPP projects is small relative to the government budget. The government may choose, at this

stage, to accept risks beyond those justified by optimal efficient risk allocation, in order to attract private investors and build confidence in the PPP program. That is, the government may rationally accept heightened fiscal risk as part of the cost of developing a culture and understanding of PPP. In Brazil, for example, the selection of risks to guarantee is left to the discretion of the FGP.

Thus far, Pakistan has been following the third option: leaving acceptable risks open to definition on a project-by-project basis. The danger of this strategy is that there is no clear guideline or discipline for deciding when, as the PPP stock grows, the cost of increased fiscal risk becomes too high. Colombia, for example, became exposed to significant costs from called guarantees, before introducing a framework with more stringent risk allocation.

The Government has recognized this danger, hence its interest in developing a framework for issuing government guarantees. Nonetheless, its experience with development of PPP projects is relatively limited; it may wish to establish principles and broad risk categories at this stage, and look to refine and develop detailed guidelines over time.

The extent to which the government seeks to control the types of PPP projects it supports through the provision of guarantees also varies between countries. In Victoria, each PPP project is subject to a full cost-benefit analysis, including a detailed estimation of the cost of providing guarantees. This provides the best possible analysis of the value of government’s support to PPP projects. It is, however, a very complex process.

Other countries, which may not have the analytical resources of Victoria, choose simpler measures of project “quality”. In Indonesia, criteria include sector prioritization, ensuring the project is roughly in line with government priorities, and basic indicators of a well-structured project, such as financial feasibility. In Colombia, provisions for guarantees are made directly by project implementing institutions; these entities must evaluate the relative priority of possible projects. Here, the criterion is limited to ensuring the guaranteed risk constitutes a small enough proportion of project costs (an indicator that the project has been well-structured).

The Government of Pakistan’s limited experience with PPP project development means implementing a full cost-benefit analysis is likely to be too demanding. Adopting the approach of Indonesia or Colombia—introducing relatively easily-analyzed criteria to ensure project quality and, if necessary, policy relevance—will be more fruitful.

5.6.2 Managing the fiscal risk

Section 6 outlined a number of possible measures countries could take to manage the fiscal risk that arises from provision of government guarantees to PPP projects. Table 7.3 summarizes the differing approaches of the sample countries.

Table 5.3: International Approaches to Fiscal Risk Management

	Colombia	Brazil	Indonesia	Chile	Victoria
Standard valuation approach	Defined	In development	In development	Defined	Defined
Setting aside	Expected cost	Expected cost	Expected cost	None	None

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funds to cover expected value of guarantees	covered through institution transfers to contingency fund	covered by allocation of guarantee fund assets, provided up-front by MoF	covered by allocation of guarantee fund assets, provided up-front by MoF		
Setting aside reserve funds against unexpected losses	None—covered from budget of implementing institution	Any remaining non-committed guarantee fund assets	Any remaining non-committed guarantee fund assets	None	None
Limit on overall exposure from guarantees	No explicit limit	Capped by size of guarantee fund	Capped by size of guarantee fund	None	None

Source: Castalia

Of the possible components of a system to manage the fiscal risk arising from government guarantees mentioned above, the one consistently present across countries is a standard approach to valuing contingent liabilities. Whatever risk management structures are in place, they rest on properly valuing the expected cost of the guarantees.

Other core aspects of the fiscal risk management framework, such as the existence of an overall limit on guarantees, and the extent and nature of budget provisions against expected costs, differ between sample countries. Again, this may be for a number of reasons:

- Experience with management of PPP guarantees
- Size of the stock of contingent liabilities which must be managed
- Vulnerability of government finances to fiscal shocks; for example, if a country has a fiscal surplus or low fiscal deficit and relatively easy access to loan financing, it is better able to meet sudden fiscal demands.

An important related factor is the degree of credibility of the government's guarantees. If the private sector perceives that the vulnerability of government finances to the contingent liability arising from government guarantee is low—whether because of the small stock of PPP projects, or lower vulnerability in general—it will have more reason to believe that the government will meet its commitments in case of a claim. Where this is not the case, there is a greater need for a dedicated fiscal risk management for government guarantee provision.

In Victoria, Australia, there is no need for an explicit framework for managing fiscal risk for guarantees. Victoria has an AAA rating, runs a fiscal surplus, and has low financial liabilities. While Victoria is very careful to take on only justified risks from PPP projects, it does not need to incur the expense of earmarking funds against guarantees to achieve credibility, or fiscal stability. The situation is similar in Chile, where the government's risk rating is very low, its fiscal position is very sound (structural surplus of one percent), the stock contingent

liabilities is small, and government guarantees have successfully lowered the cost of financing for guaranteed projects.

Both Brazil and Indonesia have chosen to establish an independent guarantee fund, which is separate from government accounts, privately managed, and capitalized upfront by transfers from central government. This system is costly—there is a direct cost of the management fee, and an opportunity cost of the set-aside funds. However, it buys the following benefits:

- Establishes a limit on the expected value of the stock of guarantees equal to the size of the guarantee fund
- Provides a budget allocation against the expected losses arising from a guarantee
- Unless the fund is fully allocated, provides some reserve funds against unexpected losses
- Places responsibility for assessing and valuing guarantee proposals in the hands of the private financial institution managing the fund.

In these systems, there is no requirement for proposing institutions to make budget provisions against guarantees to their own PPP projects. As discussed in Section 6, this weakens the incentive for the institution to accept appropriate risks, and accurately value guarantees. Instead, the private financial institution plays a “gatekeeper” role to ensure only properly valued and structured guarantees are issued.

In Colombia, in contrast, funds set aside in a contingency fund against expected costs of guarantees to PPP project are provided from the budgets of the proposing institutions, which also bear any cost of a call over and above the contingency amount. While the funds are managed centrally by a private financial institution, and decisions are subject to central oversight, institutions are essentially responsible for their own budget provisions, resulting in a strong incentive to accurately value and appraise proposed guarantees to PPP projects.

The advantage of Colombia’s approach is that, since implementing institutions must directly budget for the full cost of PPP projects including guarantees, these projects will be subject to more rigorous scrutiny and prioritization in the course of each institution’s internal budget process. However, it places a high demand on the capacity of the institutions to properly evaluate guarantees. Since individuals within institutions are exposed to political pressures—unless supervision and accountability of the process is strong—perverse incentives to under-value risks may remain. Where the PPP program is young, there may also be a need to build interest among institutions, and so central government may choose to take on more of the risk of projects at this early stage.

Pakistan’s vulnerability to fiscal shocks and sovereign credit rating is much more comparable to those of Brazil, Colombia, and Indonesia than Chile and Victoria. Mechanisms to manage the fiscal risk from guarantee provision will be important both to protect the government from these shocks, and to bolster the credibility of the government’s guarantees to PPPs. Moreover, Pakistan’s government institutions have limited experience with PPP projects, and specifically with valuing the contingent liabilities arising from guarantees. It may be wise, initially, to benefit from the experience and neutrality of an independent guarantee fund managed by a private contractor. Over time, the government could look to shift some or all of the cost of guarantee provision to the implementing institutions.

In Sections 6 and 7, we have extracted a number of lessons for Pakistan from the methods and practical experience of both private sector insurance providers, and other countries implementing risk management frameworks. In the following section we draw these lessons together with the theoretical discussion and present the proposed framework for issuing guarantees for the Government.

6 Proposed Framework for Issuing Government Guarantees

In this section, we present the proposed framework for issuing Government guarantees. This framework includes policies defining which kind of projects will be eligible to receive guarantees, and rules for which types of risk those guarantees can cover. It also includes a set of policies for managing the fiscal risk arising from those guarantees, and an institutional structure to ensure these policies are adhered to. In the course of developing this framework we have considered a number of options for each of these features. Here we recommend the options we think are best for Pakistan, drawing on the theoretical arguments, practical considerations, and international experience presented in the previous section.

Section 6.1 sets out the scope, objectives, and legal basis of the framework. Sections 6.2 and 6.3 set out the proposed policies defining eligibility criteria and risk management measures, respectively. In Sections 6.3 and 6.4 we outline the proposed institutional structure and processes for the management and administration of government guarantees to PPP projects. In particular, we outline the proposed structure of the Guarantee Fund, which will provide the institutional basis of guarantee provision, and the mechanism by which budget allocations against guarantees will be made.

6.1 Overview: Scope, Objectives, and Components of the Framework for Granting Guarantees

The Government has limited experience in structuring PPP projects and managing fiscal risk. Therefore, to ensure this framework for granting guarantees can be successfully implemented it is important to keep the framework as simple as possible, while including all necessary components to ensure that it will have the desired results. This was the overriding consideration in defining the scope of the framework. For example, while there may be other circumstances under which guarantees are issued and fiscal risk management is necessary, this framework focuses solely on government guarantees to PPP projects. Over time, the government may choose to embed this in a broader risk management framework.

For similar reasons, the framework will, initially, apply only to the provision of Government guarantees. This ensures the framework is essentially refining a process that is already centrally controlled by the Ministry of Finance. Extending this framework to include guarantees provided directly by government entities (implementing institutions) to private parties as part of PPP contracts will be more complex. It may also achieve limited further gain in fiscal risk management, since PPP projects with significant financial commitments by the implementing institution are unlikely to raise private interest without a Government guarantee. Nonetheless, any such direct guarantees also represent an implicit commitment by the federal government, which may come under pressure to support the government entity in the case of financial difficulty. To ensure comprehensive management of the fiscal risk arising from guarantee provision, the Government may consider extending this framework to incorporate direct guarantees.

Given these limitations of scope, the **objectives** of the framework are to ensure that the Government guarantees to support PPP projects are:

- Justified—that is, cost effective, and in line with government priorities, and

- Managed consistently with an acceptable level of fiscal risk.

The framework introduces the following new Government policies to achieve these objectives:

- **Selection criteria** to ensure guarantees are provided for appropriate projects, and to cover appropriate risks
- **Valuation** of the expected cost of a guarantee, and a budget provision against this expected cost, in addition to the already-existing cap on the total stock of contingent liabilities (established in the FRDL Act of 2005).

To ensure that these policies are properly implemented, the framework also establishes a new institutional structure—defining responsibilities and processes for the following functions:

- Management of Government policy with respect to the provision of guarantees to PPP projects
- Assessment of Government guarantee proposals, and decision on guarantee provision
- Valuation of contingent liabilities associated with guarantees
- Allocation of appropriate resources against losses associated with guarantees and management of these resources
- Assessment of validity, and processing, of claims against guarantees.

The framework is defined in the “Guidelines on Fiscal Management for Government Guarantees to PPP Projects”, referred to hereafter as the “Guidelines document”, and included in Appendix A to this report. We recommend the Government strengthens the framework’s legal basis by issuing the key aspects of the Guidelines document as Regulations under the FRDL Act (2005). These Regulations should:

- Outline the principles behind selection of eligible risk types and projects
- Legally establish the Guarantee Fund, and confer responsibility for entering into Government Guarantee agreements onto its Board
- Establish key constraints on the Guarantee Fund (such as adherence to the FRDL limit on total Guarantee volume)
- Outline, without describing in detail, procedures and necessary documentation for making and approving valid Guarantees.

A draft of the Regulations is included in Appendix B.

Establishing the framework through legally robust regulations, rather than simply as policy guidelines, is needed to legally confer the necessary powers to relevant Government entities to enable the framework to be implemented. It will also enhance the credibility of the fiscal risk management measures in the eyes of the private sector, increasing the effectiveness of the guarantees issued under the framework.

In the following sub-sections, we present the components of the framework in detail. Section 6.2 presents the criteria by which the eligibility of proposed guarantees to PPP projects will be judged. Section 6.3 outlines the set of measures the Government will

introduce to manage the fiscal risk arising from provision of guarantees. Section 6.4 describes the institutional structure for implementation of these policies. In particular, it outlines the proposed structure of the Guarantee Fund, which will provide the institutional basis of guarantee provision, and is the mechanism by which budget allocations against guarantees will be made. Section 6.5 summarizes the process for issuing Government guarantees.

6.2 Eligibility Criteria

As discussed in Appendix B, one of the major benefits of PPP is to allocate risks, and rewards, as efficiently as possible. While these guidelines are only applicable to Government guarantees, the Government guarantees reflect the risk allocation prescribed in the PPP contract. Since the provision of guarantees is a way in which certain risks are allocated to the Government, an important part of the framework for issuing guarantees to PPP projects is to define which risks the Government is best-placed to bear, and so should guarantee. Section 6.2.2 presents the risk allocation criteria that form part of the guarantee guidelines.

However, even when a project is well-designed and risks are allocated efficiently, it may not be in the Government's interest to support it with a guarantee. Provision of a guarantee is a form of government expenditure and, just like any other, it is important to ensure as far as possible that this spending is prioritized appropriately and achieves value-for-money. Since guarantees will remain outside of the normal budgeting process, an alternative mechanism to achieve these ends is needed. For this purpose, the guarantee guidelines include eligibility conditions for projects, as described in Section 6.2.1.

6.2.1 Types of projects eligible to receive guarantees

The Government typically sets its policy priorities to reflect its overall estimation of the net benefits of different combinations of policies over time. Given this general direction, in an ideal budget process each line ministry or government institution would carry out a cost-benefit analysis for each proposed expenditure. The limited budget would be allocated to the combination of expenditures which achieve the greatest net benefit.

Government guarantees to PPP projects are a form of government expenditure, and should ideally be subject to this same form of cost-benefit analysis. Although the cost of providing a Government guarantee to a PPP project is uncertain, it can be quantified as the expected payments from the guarantee. Quantifying the benefits—in terms of lower cost of capital, or the lower cost of a PPP project versus the alternative of public sector provision—is even more complex.

Rather than attempt this cost-benefit analysis for each proposed PPP project and associated guarantee, the framework instead includes criteria for selecting projects to which Government guarantees may be provided. In order to be eligible for a Government guarantee, the PPP project must be:

- Economically viable—that is, it has a positive net overall economic impact
- Financially viable—that is, the project's rate of return is greater than its expected weighted average cost of capital
- Competitively procured, and
- In selected sectors—transport, municipal services, and energy.

The first three criteria take the place of a more rigorous cost-benefit analysis, and are designed to check the proposed project is well-structured, and provide an indication that the provision of a third party guarantee will achieve value-for-money. As with any other Government expenditure, guarantees should only be provided to support projects with a net positive economic impact for the country.

Some PPP projects that the Government wishes to develop have a positive net economic benefit but are not financially viable (that is, the private party cannot achieve a return greater than its costs). For these projects, the Government has introduced mechanisms to provide subsidies through the Viability Gap Fund. Requiring a project to be financially viable to be eligible for a guarantee ensures guarantees are not used as a form of disguised, or implicit, subsidies. Ensuring that guarantees are not used as implicit subsidies—as would be the case with a guarantee on the return on a project that is not financially viable, for example—is in line with best practices for sound fiscal management.

The final criterion is intended to ensure that the government’s expenditure on guarantee provision is broadly in line with policy priorities, since the objective of the PPP program is to mobilize investment in infrastructure provision.

6.2.2 Types of risks eligible to receive guarantees

The Guidelines state that guarantees may be issued to cover only:

- Project risks that the Government is able to directly influence
- Risks that are uncontrollable and for which insurance is not available on reasonable commercial terms.

These conditions are based on the widely-adopted principle of risk allocation in PPP projects, discussed in Appendix C—a risk should be allocated to the party best able to manage it. The Government should certainly seek to guarantee those risks it can either directly influence, or is best placed to reduce the impact of the risk on the value of the project. There are may be risks in PPP projects that neither party is able to control. In these cases, to “manage” the risk simply means to absorb its impact. The Government may, therefore, choose to guarantee risks that are uncontrollable, cannot be insured, and which the private party considers itself unable to absorb.

The risks that the government should choose to bear, according to this principle, will vary by sector and by project. They could include, but are not limited to:

- Political risk, such as any change of law that either directly affects the value of the project, or adversely impacts the business environment
- Breach of contract risk, such as a change in the contracted tariff path, the required project outputs, or delays or changes in cost of land acquisition by Government
- Force majeure risk, if not insurable on reasonable commercial terms
- Demand risk, in particular where demand depends on government actions, such as development of a competing infrastructure project.

At this stage of implementation of Pakistan’s PPP program, the specification of acceptable risk is limited to this general principle. Over time, the Government may wish, as other countries have done, to specify in more detail the types of risk it will guarantee, and the measures it will implement to manage these risks.

6.3 Managing the Fiscal Risk of Government Guarantees

Section 4 discussed the fiscal risk arising from the provision of government guarantees, and presented some potential mechanisms for managing this risk. The basis of all such mechanisms is the rigorous valuation of the contingent liabilities. The Guidelines specify, simply, that the value of a contingent liability associated with a government guarantee is calculated as the present value of the expected cost of the guarantee. In practice, calculating this value is not simple. A proposed methodology is presented in Section 7 of this report. Over time, the Government may wish to introduce a more detailed valuation policy along these lines.

As a cornerstone of the framework for issuing government guarantees to PPP projects, the government will introduce a financial provision against the expected cost of each guarantee. Rather than simply introduce a budget line for an amount equal to the expected losses under its guarantees, the Government has decided to establish a special guarantee fund, capitalized up-front, as an entity separate from the Government's consolidated account. The total value of the Government's stock of contingent liabilities will not be allowed to exceed the capital in this fund. While this is an expensive option, both financially—requiring an up-front commitment of government resources—and in terms of the effort required to establish the fund, it has significant advantages. It means that the stock of contingent liabilities from guarantees, as well as the financial provisions against them, will be kept separate from the balance sheet of the Government. It also:

- Requires only a one-time parliamentary approval, rather than annual approval of a budget line. This reduces transaction costs over time and commits the Government up-front to financial provision towards future guarantees
- Enforces budget discipline by removing the possibility that a provision for guarantees established in the budget would be reallocated to other budget areas
- Allows multi-year spending commitments
- Requires separate reporting and accounting for Government guarantees. This increases the transparency of guarantee provision.

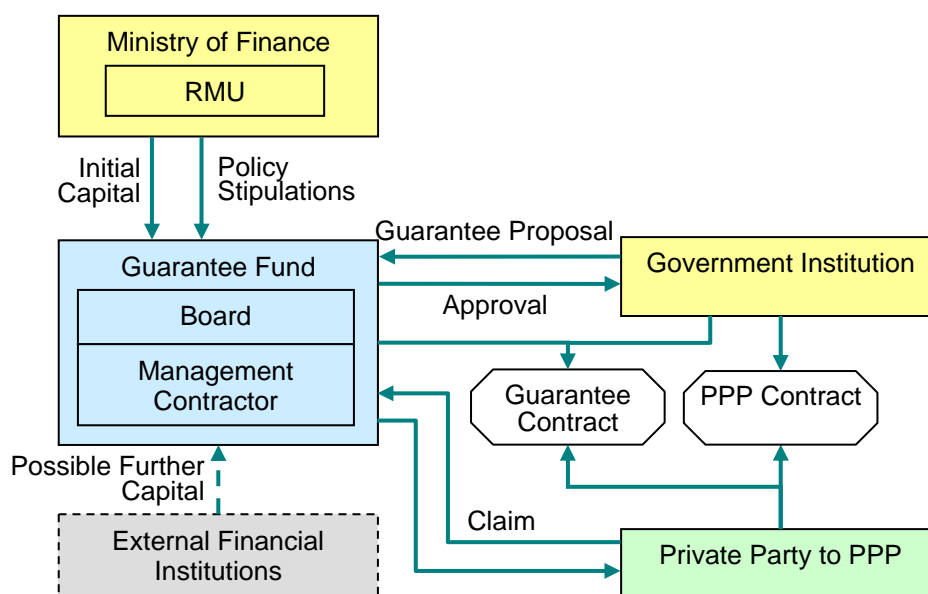
Since the guarantee fund is capitalized up-front, until its capital is fully committed to cover expected losses from guarantees, it also constitutes reserves against unexpected losses.

The total size of the guarantee fund's capital effectively provides a cap on the total value of government guarantees. This cap is controllable by the Government, which capitalizes the fund. It is not, however, constrained by the limit in the FRDL Act of 2005 on government guarantees, since the contingent liability arising from guarantees provided by the guarantee fund will not form part of the government's balance sheet.

6.4 Institutional Structure

To ensure smooth implementation of the policies outlined in Sections 6.2 and 6.3, the framework also establishes a new institutional structure for the management and administration of government guarantees. Two new bodies will be introduced—a Risk Management Unit within the Ministry of Finance, with responsibility for the management of Government policy regarding guarantee provision, and the Guarantee Fund itself. This section presents the structure and functions of these new entities, which is summarized in Figure 6.1 below.

Figure 6.1: Guarantee Management – Proposed Institutional Structure



6.4.1 The Risk Management Unit

The Guidelines document introduces new policies with regard to the provision of guarantees, as outlined above. These policies provide initial direction. As the Government gains more experience with PPP project implementation, these policies should be refined and updated. This will be the responsibility of the Risk Management Unit (RMU), an operating unit of the Debt Policy Co-ordination Office in the Ministry of Finance. Its responsibilities will also include monitoring the compliance of the Guarantee Fund with these policies, and reporting of the guarantee stock, as required by the FRDL Act. This ensures the Ministry of Finance retains oversight of the provision of third party guarantees to PPP projects.

6.4.2 The Guarantee Fund

The Ministry of Finance will create a Guarantee Fund, incorporated as a Government-owned company, whose initial capital will be provided by a budget allocation by the Ministry of Finance. The Guarantee Fund will be governed by a board chaired by a representative of the Ministry of Finance. Its day-to-day operations and management will be contracted out to a private financial institution. Besides providing the mechanism by which the Government will make upfront budget commitments to cover contingent liabilities arising from the provision of guarantees—as outlined in Section 8.3—the Board and management team will manage the entire Guarantee assessment, approval, and administration process.

The Board of the Guarantee Fund will have the responsibility, amongst others, for approving or denying requests from Government Entities for Government guarantees to PPP projects, and entering into guarantee agreements. Since the Board will be appointed by the Federal Government and chaired by a representative of the Ministry of Finance, this

ensures that decisions regarding the provision of guarantees are ultimately kept within the control of the Government.

The Guarantee Fund's management team will, in turn, be responsible for appraising requests for guarantees made by government entities, and making a decision recommendation to the Board. This recommendation will be based on the policies initially outlined above: the adherence of the proposed guarantee and project to the selection criteria, the valuation of the contingent liability, and the availability in the fund of uncommitted capital. Other functions provided by the Guarantee Fund management are:

- Valuation and monitoring of contingent liabilities from outstanding guarantees
- Allocating assets to cover the contingent liabilities from guarantees, and managing these assets to increase their value
- Reviewing the validity of claims against guarantees, and processing claim payment
- Maintaining and reporting its accounts
- Marketing its role among government entities and domestic and international financial institutions.

As discussed in Section 6.3, the total value of the government's stock of contingent liabilities will not be allowed to exceed the Guarantee Fund's capital. When 80 percent of this capital has been committed to cover contingent liabilities either contracted or in the planning stages, the Board will request additional transfers from the Ministry of Finance. These transfers will, of course, be subject to the overall cap on the government's exposure to guarantees of two percent of expected GDP. The Guarantee Fund may, in addition, pursue external funding or capital, in which case it may exceed the cap on the total value of the guarantee stock up to the value of the external capital secured.

Outsourcing the management and administration of guarantees to an external Guarantee Fund has a number of advantages over the alternative of maintaining these functions within the Ministry of Finance. These include:

- Independence from political influence, in particular the temptation to under-value guarantees to meet budgetary and investment targets
- Separation of implementation and oversight activities, resulting in better accountability for approval and valuation decisions
- Strong technical capacity of a private financial institution in the complex processes of risk valuation
- Potential for the Guarantee Fund to build its own relationships, for example with external financial institutions, and achieve credibility among private investors higher than that of the central government.

The main disadvantage of outsourcing these functions, in addition to the increased on-going cost of the private financial institution's contract fee, is the relative complexity of establishing the Guarantee Fund as an independent entity. To ensure that guarantees are appropriately managed while this institutional structure is developed, interim responsibilities and procedures have been defined, as outlined in Section 8.6 below.

A limitation of this institutional structure is that it does not require the implementing institution of a PPP project to meet the expected cost of the guarantee. This is required in Colombia's framework for managing government guarantees, for example. Not requiring this aspect weakens the incentive for the implementing institution to properly prioritize the expenditures on guarantees to PPP projects under its jurisdiction. As discussed in Section 6, the institution may even seek to misrepresent the cost of a proposed guarantee, since it is insulated from the risk this poses. The onus falls on the Guarantee Fund to ensure that guarantees are properly valued. While this is an appropriate simplification at this relatively early stage of PPP implementation, in time, the Government may wish to consider introducing a mechanism for institutions to contribute to the Guarantee Fund.

6.5 Request and Approval Procedures

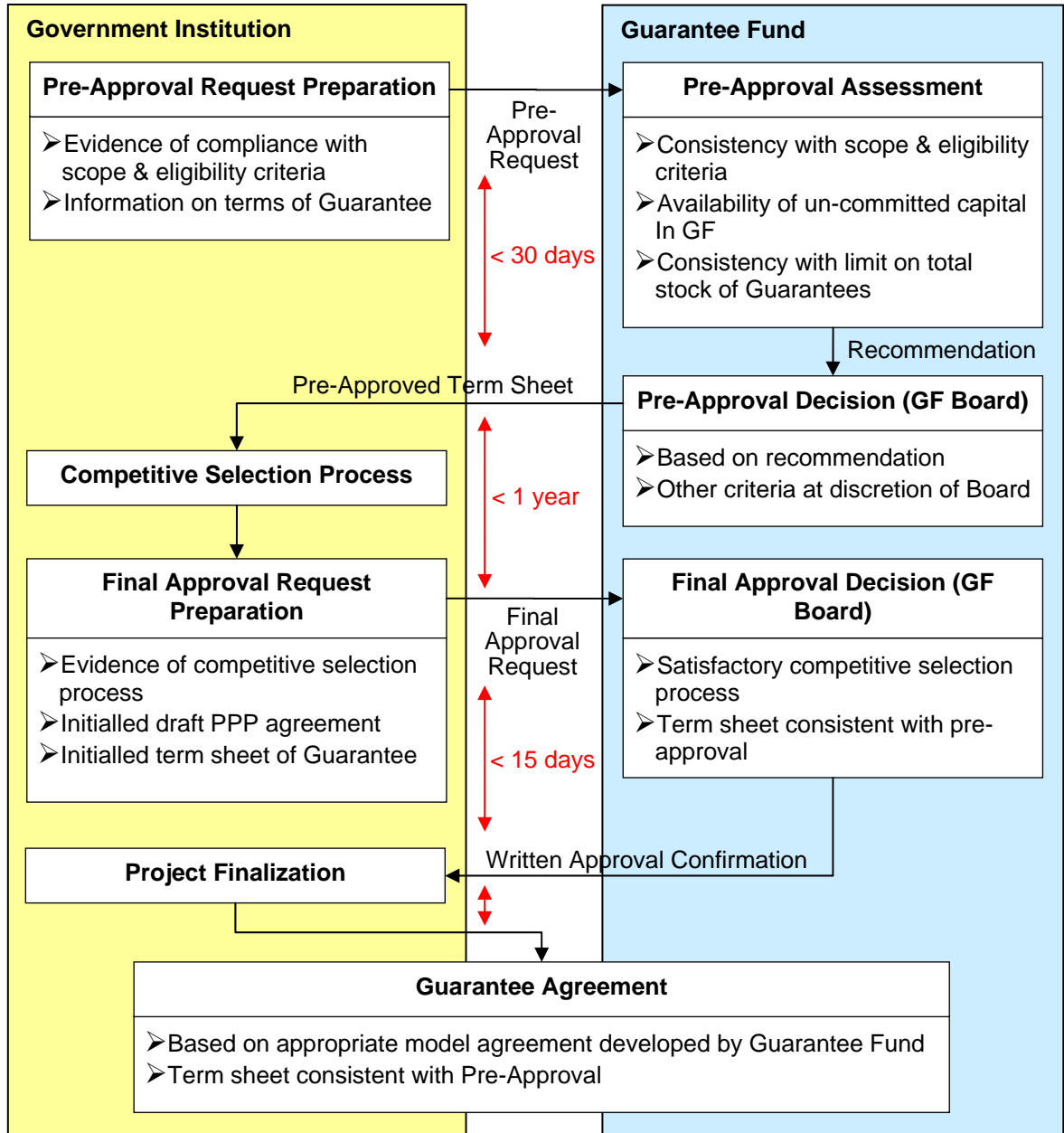
The successful implementation of this framework requires a number of different government agencies to cooperate in the management of government guarantees to PPP projects. To ensure the interactions of these agencies are smooth, well-defined processes for designing, approving, and issuing guarantees to PPP projects are needed. The Guidelines document outlines this process, and the requirements of each party at each stage. The process design seeks to achieve a trade-off between ensuring that each guarantee request is carefully considered and analyzed with respect to its fiscal impact, and having an expedient process that will not create a bottleneck in the overall PPP approval process.

The main assessment of a proposed guarantee occurs at a pre-approval stage, following the completion of the PPP project feasibility study, and before starting the competitive selection process. The implementing institution must submit a request for pre-approval to the Guarantee Fund. The fund will assess the request according to the policies outlined above, and if approved, issue a pre-approved term sheet to the institution. The institution can then proceed with the selection process.

Once the competitive selection process is complete, and prior to financial closure, the institution must submit a final approval request to the Guarantee Fund for a Government guarantee to the PPP project. The final approval decision will be based on the satisfaction of the Guarantee Fund that the selection process was competitive and that the term sheet is consistent with the pre-approval, and will be confirmed to the institution in writing. As part of the process of financial closure, the implementing institution, private party, and the Guarantee Fund will enter into a Guarantee Agreement, based on model agreements which will be developed by the Guarantee Fund and the pre-approved project term sheet.

The proposed procedures for the request and approval of government guarantees to PPP projects, including the time lines in working days for the completion of each step, are summarized in **Error! Reference source not found.** below.

Figure 6.2: Guarantee Request and Approval Procedures



7 Valuing Contingent Liabilities

The Guidelines require the Guarantee Fund to set aside enough capital to cover the exposure from issuing a guarantee. The amount of capital that the Guarantee Fund should set aside should be equal to the value of the contingent liability related to the guarantee issued. This section describes an approach to estimate the value of that contingent liability.

The first part of the section (Section 7.1) explains why it is so difficult to estimate the value of contingent liabilities from government guarantees to PPPs in infrastructure. Despite the major assumptions and approximations that are needed to arrive at an estimate, we think that having a rough estimate is better than having no estimate. The second part of this section (Section 7.2) explains, by using an example, the methodology that can be used to develop this estimate.

7.1 Difficulty of Valuing Contingent Liabilities for Infrastructure Projects

Contingent liabilities originate when the government enters into a binding commitment to make a payment or forego revenue if a certain event occurs. The occurrence and timing of this event is uncertain, as is the amount that the government will have to pay if and when the event occurs.

For example, when the President executed the Implementation Agreement for a particular power plant it created a binding obligation to the Government to make a payment to the IPP if the WAPDA—the counterpart to the PPA—fails to pay the IPP any and every amount that WAPDA agreed, in the PPA, to pay the IPP. It is uncertain however, if and when WAPDA will default on its payment obligations to the IPP, and what portion of the payments to the IPP would need to be absorbed by the Government.

This means that the Government is exposed to the possibility of having to make substantial payments to the IPP, but it does know if and when these will happen, and for what amounts. This is what we defined as fiscal risk in Section 4.

As a strategy to managing fiscal risk, the Guidelines require the Guarantee Fund to set aside capital for an amount equal to the value of the contingent liability associated with government guarantee. This means that the Guarantee Fund would need to estimate the value of the contingent liability in order to set aside the corresponding capital.¹⁵

There are at least two options for deciding what should be the value of a contingent liability. First, set the value of the contingent liability at a value equal to the “expected” payment from the guarantee—that is, the probability weighted payment. Second, set the value of the contingent liability at an amount equal to the “maximum” possible payment from the guarantee. The latter should in theory be larger than the former, and would therefore require setting aside a larger amount of capital. The choice between these two options goes back to the discussion on managing fiscal risk in Section 4. In that section we explained that the common practice is for governments to value a contingent liability as the “expected”

¹⁵ The details on how much capital should be set aside for every dollar of contingent liability, and what types of assets should make up that capital have not been developed yet, but it is reasonable to expect that, at the very minimum, one dollar of contingent liability should be matched with one dollar of capital, and that assets should be liquid assets.

payment from the guarantee (or, more precisely, as the present value of all expected future payments from a government guarantee).

To determine expected future payments the Government will need to:

- Firstly, identify the major risk factors that affect the likelihood of the guarantee being called, or the guaranteed event occurring. For example, in the case of Government's guarantees to WAPDA's IPPs, the major risk factors that could trigger a WAPDA payment default
- Secondly, define the probability distribution function that best represents each of those risk factors. This probability distribution function can be determined based on historical data for each factor. For example, if a major risk factor is the Rupee to US Dollar exchange rate, the probability distribution function for this risk factor can be developed using exchange rate historical data.

Insurance companies have the benefit of having access to abundant data on prior loss experience that can be used to identify with reasonable accuracy the major risk factors and develop the probability distribution function for these risk factors.

The main difficulties of applying this approach to value contingent liabilities from government guarantees to PPP projects are that:

- Events covered by government guarantees to infrastructure projects can be affected by a long list of risk factors, not all of which are easily identifiable and quantifiable
- There is little or no historical data or sufficient prior loss experience on risk events of infrastructure projects that can be used to build a credible probability distribution function.

These issues tend to be more significant when contingent liabilities are being valued for the first time. This means that assumptions and approximations would need to be made, and these would largely be based on experience and judgment rather than on data. If the people at the Guarantee Fund that will be responsible for valuing contingent liabilities do not have the skills and experience in this type work, they would likely make poor judgments and produce poor results. Providing expert advice to the Guarantee Fund during the first few guarantee transactions would be a way of getting around this issue.

As the people at the Guarantee Fund responsible for this work acquire more skills and experience, and have access to more data, the exercise of valuing contingent liabilities will become less complex and produce more reliable results—this has been the experience in Colombia.

That said, it would take many years of collecting data and analyzing infrastructure project risks to have the data and prior loss experience information needed to develop a reasonably accurate estimate of the contingent liability (or at least an estimate that is comparable in accuracy to that of an insurance company). This means that the value of the contingent liability, during the short and medium term, will at best be a rough estimate.

Having a rough estimate is better than having no estimate, but this means that there is a higher probability that the “actual” value the contingent liability is different from the “expected” value. The Guarantee Fund could take actions to cover this additional risk by

setting more capital aside. These are the type of operating policy decisions that the Risk Management Unit would need to make as it establishes the Guarantee Fund.

7.2 Steps to Valuing Contingent Liabilities

Contingent liabilities for infrastructure projects are commonly valued using stochastic analysis through Monte-Carlo simulations. A Monte-Carlo simulation uses a random number generator to take a sample of outcomes of the risk factor, and for each outcome, it records the payment from the guarantee issued by the government.

The record of guarantee payments from the simulation is then used to build a probability distribution function for the guarantee payments. With this probability distribution function one could determine the guarantee payment that represents a level of confidence, the maximum or minimum payments, or the probability the payment is above a certain amount.

A Monte-Carlo simulation however, involves making approximations that affect the accuracy of the results, but there are no other simple alternatives to this technique that provide more accurate results. There are excel add-ins like @risk or Crystal ball that can be used to very easily do Monte-Carlo simulations.

Below we explain in more detail the steps that are involved in applying this technique, and how it can be applied to value the contingent liability of the guarantees issued for WAPDA's IPPs.

7.2.1 Step one: Develop a model of the guarantee

The first step is to understand the terms of the guarantee and to develop a simple excel-based model that calculates the guarantee payments for each year or period in which the guarantee is valid, and the present value of all expected guarantee payments.

The key terms of the guarantee that need to be understood are:

- The events that could trigger a call on the guarantee
- The amount that would be paid if the guarantee is called, and
- The term during which the guarantee will be valid.

These terms are usually defined in a separate guarantee agreement or in the PPP contract.

Example

According to the Implementation Agreement used for WAPDA's IPPs, the Government guarantee to WAPDA's IPPs will be triggered when WAPDA fails to pay the IPP the amounts agreed in the PPA, by the due dates defined in the PPA.

The PPA defines numerous payments that WAPDA is required to make to the IPP, of which the two major ones are:

- **Capacity payments**—This payment is made every month and is calculated by multiplying the available capacity by a capacity price expressed in Rupees per KW. A portion of the capacity price is indexed to the Rupee to US Dollar exchange rate, the other portion is fixed
- **Energy payments**—This payment is also made monthly and is calculated by multiplying the net electrical output of the plant (expressed in kWh) by the energy price (expressed in Rupees per kWh). A portion of the energy prices is indexed to

the price of fuel, another portion to the Rupee to US Dollar exchange rate, and another to inflation.

These payments are due within 30 days of being invoiced every month. The PPA, however, also establishes that if WAPDA fails to pay these amounts before the due date, the IPP can issue a payment default notice, and if WAPDA fails to pay the overdue amounts within 35 days of that notice being issued, the IPP has the right to terminate the PPA. If the PPA is terminated due to a WAPDA event of default, the IPP would be entitled to a “termination payment” equal to the sum of the IPP’s outstanding debt, the equity invested by the IPP reduced at a pre-agreed rate, and the net cashflow during a period of up to four years discounted at 12 percent.

This suggests that there are two steps to resolving a WAPDA event of default on its payments to the IPP. First, if WAPDA does not pay within 30 days of the invoice being issued, the IPP could call the guarantee and the Government would be required to pay the overdue capacity and energy payments. Second, if the Government or WAPDA do not pay within 35 days of the IPP issuing a payment default notice, the IPP could invoke a WAPDA event of default, terminate the PPA, and claim a termination payment from WAPDA or the Government.

If the Government was making a rational choice in terms of honoring or not its payment obligations under the guarantee, it is reasonable to assume that it would prefer to pay the overdue capacity and energy fees, rather than being exposed to paying the termination payment.

Based on this understanding on how the guarantee would work, we can develop a simple excel-based cash flow model that calculates the expected guarantee payment for every year. The expected guarantee payment for each year is calculated as the difference between the expected cash that WAPDA would have available for paying the IPP, minus the expected cash payment to the IPP.

Figure 7.1 presents a highly simplified version of this model—we have only included the first ten years, but the model covers a 30-year period.

Figure 7.1: Simplified WAPDA Cash Flow

ASSUMPTIONS	1	2	3	4	5	6	7	8	9	10
Annual Sales Growth	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Annual Sales (TWh)	70	71	71	72	73	74	74	75	76	77
Average Tariff (Rs/kWh)	5	5	5	5	5	5	5	5	5	5
Collection Efficiency	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Inflation	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Consumer Price Index	100	106	112	119	126	134	142	150	159	169
Devaluation Rs/USD	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Exchange Rate Rs/USD	60	62	64	66	68	70	72	74	76	78
Change in Fuel Price	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Fuel Price (Rs/btu)	5.0	5.2	5.3	5.5	5.6	5.8	6.0	6.1	6.3	6.5
<i>Billion Rupees</i>										
CASHFLOW										
Cash Revenue	228	230	232	234	237	239	241	244	246	249
Cash O&M Expenses	100	106	112	119	126	134	142	150	159	169
Cash Debt Service	70	70	70	70	70	70	70	70	70	70
Cash Before IPP	58	54	50	45	40	35	30	24	17	10
PAYMENTS TO IPP										
Capacity Payment	30.0	30.5	30.9	31.4	31.8	32.3	32.8	33.3	33.8	34.3
Energy Payment	10.0	10.5	10.9	11.4	11.9	12.5	13.0	13.6	14.2	14.9
Total Expected Payment to IPP	40.0	40.9	41.8	42.8	43.8	44.8	45.8	46.9	48.0	49.2
Expected Guarantee Payment	-	-	-	-	3.3	9.5	16.2	23.4	31.1	39.3
Contingent Liability	\$1,602									

The first part of the table shows the key assumptions that are used to calculate the cash that would be available to pay IPPs, as well as expected cash payments to IPPs. In this highly simplified model, we assumed that only six variables were needed to forecast cash available and cash payments—these variables are: sales growth, average tariff increases, changes in collection efficiency, annual inflation, devaluation of Rupee against the US Dollar, and changes in fuel prices.¹⁶

Based on these assumptions the model calculates WAPDA's cash revenue, operation and maintenance (O&M) costs and debt service payments. We assumed that WAPDA will service its debt before it pays the IPPs. This means that the cash available to pay IPPs is equal to revenues minus O&M costs, minus debt service.

The assumptions are also used to calculate the payments available to IPPs. We assumed that the base capacity payment—that is, the payment for the first year of the PPA—is Rs30 billion per year. Half of this amount is adjusted every year based on the fluctuation in the exchange rate. We assumed that the base energy payment will be Rs10 billion per year. Half of the energy payment is adjusted every year based on changes in consumer price indices; and the other half based on changes in fuel prices. The base capacity and energy assumptions are very rough assumptions that ignore the expected availability and utilization of the plants.

¹⁶ We have assumed that WAPDA generation plants and IPPs only use one type of fuel.

In practice we should make more detailed assumptions, but for illustrating how this model works, we think it is best to simplify the model as much as possible.

The expected guarantee payment for every year is calculated as the difference between the cash before IPP payments, and the total expected payment to the IPP.

The value of the contingent liability is calculated as the present value of all future expected guarantee payments. The present value is calculated using the risk free rate for Pakistan; we use this discount rate because all risks associated with the expected guarantee payments—as explained in the section that follows—would have already been considered through the Monte Carlo simulation. We have assumed a risk free rate for Pakistan of 5.5 percent.

7.2.2 Step two: Identify major risk factors and define probability distribution function

The second step is to identify the most sensitive variables that affect the likelihood of the guarantee being called. This would require using the cash flow model to run sensitivity tests. Having identified the most significant risk variables, define—based on historical data or simply on judgment—the probability distribution function that best represents each variable.

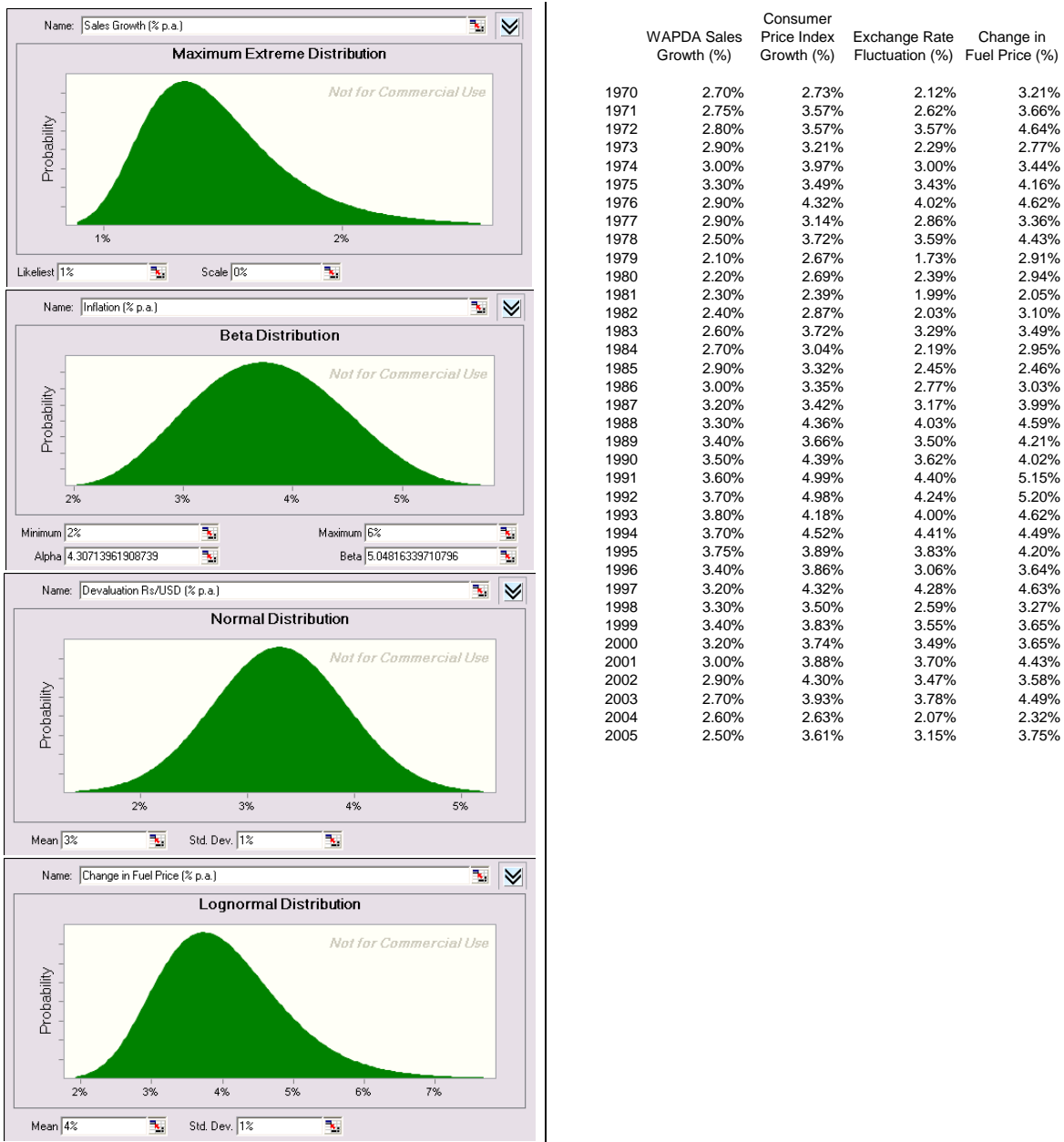
Example

Ideally, we should develop a detailed financial model of WAPDA that, based on detailed assumptions on all relevant variables, forecasts WAPDA's financial statements (including cash available to pay IPPs, payments to IPPs, and guarantee payments). This model will be used to test the sensitivity of the guarantee payments to changes on the detailed assumptions, and to identify which assumptions or variables could have a material impact on the amount of the guarantee payments. For our example, we simply assumed that of the six variables for which we made assumptions, only four would have a material impact on the guarantee payment; these are: sales growth, inflation, devaluation of the Rupee against the US Dollar, and change in fuel prices. These variables are the “major risk factors” for which we want to run a Monte-Carlo simulation.

Having identified which variables are the major risk factors, we need to identify or define the probability distribution function which best represents the behavior of this risk factor. Ideally, we could use historical data on these variables to construct a probability distribution function. Historical data on the four variables selected is likely to be available, but we were unable to find it. We therefore built a historical data set on each variable from 1970 to 2005.

Based on this historical data, and using the “Fit” function of Crystal Ball, we identified the probability distribution function that was the “best fit” for that data. Figure 7.2 below presents the historical data that we built, as well as the probability distribution function that best fits this data. For simplicity, we have assumed that the four major risk variables are not correlated.

Figure 7.2: Probability Distribution Function



Having defined the probability distribution functions we can use Crystal Ball to run Monte-Carlo simulations for each of the major risk factors. In theory, because our risk variables have been defined as per annum changes on sales, consumer prices index, exchange rate, and fuel prices, we should separately simulate the behavior of each variable for each year. Usually a simulation involves running around 10,000 trials for each variable. If we simulate each variable for each year, we would need to run 1.2 million trials. This would require a significant simulation time and computing capacity. To simplify our analysis, we have assumed for this example that the value of the risk variable will remain unchanged for five

years—that is, we will only simulate the variable one year every five years, or six times during the thirty year term of the guarantee. The cells highlighted in green on Figure 7.1 show the years for which we ran simulations.

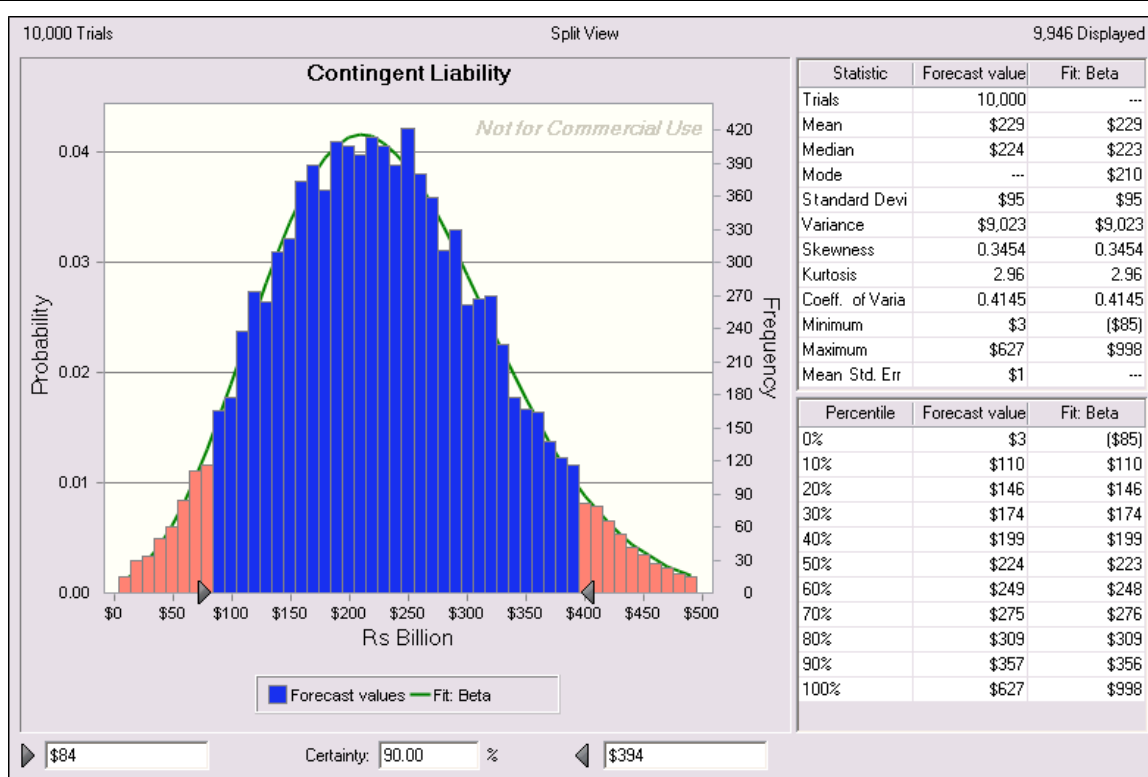
7.2.3 Step three: Run Monte-Carlo simulation to estimate value of contingent liability

Once the major risk factors have been identified, and probability functions assigned to each, we use Crystal Ball to run the Monte Carlo simulation on these factors. The outcome of this simulation is a probability distribution function for the value of the contingent liability.

Example:

The results obtained for our example are presented in Figure 7.3.

Figure 7.3: Results of Monte Carlo Simulation



These results tell us that it is 90 percent certain that the value of the contingent liability is less than Rs394 billion. It also tells us that the mean value of the contingent liability is Rs229 billion, and that the maximum value could be Rs627 billion. We have also found that Beta probability curve provides the best fit for these results.

The value that the Guarantee Fund would set aside to cover the exposure from providing this guarantee depends on the risk tolerance that the Government wishes to adopt for this Fund. If the Government was risk-averse, it would probably set aside capital to cover the maximum expected value of Rs627 billion. Setting all this capital aside however would mean that less guarantees could be offered. In Colombia for example, the government set asides

capital for an amount equal to the contingent liability with a certainty of 90 percent. If Pakistan adopted the same policy, in this example it would need to set aside Rs394 billion to cover the expected cost of this guarantee.

Although the results and the method applied seem to give a sense of accuracy, it is important to remember that these results are based on significant approximations and assumptions which could undermine their accuracy and reliability. It is possible to reduce the approximations and improve the assumptions by:

- Developing a more detailed cash flow model that provides a more comprehensive representation of the risk variables that influence the value of the contingent liability, and
- Gathering historical data that could be used to build more realistic probability distribution functions.

That said, in practice it will be very difficult to capture in a cash flow model all possible risk factors, or to get all the historical data needed to develop the probability distribution function. This means that there will always be a certain level of inaccuracy associated with these results. One option for managing this inaccuracy is to increase the amount of capital that the Guarantee Fund sets aside, but this is a conservative policy that increases the cost of providing a guarantee. In a country where limited funds are available to backstop guarantees, this policy will reduce the number of projects that can be guaranteed. This is an imperfect outcome of this approach, and one which represents a systematic weakness of valuing contingent liabilities for guarantees to infrastructure projects.

Appendix A: Guidelines for Issuing Government Guarantees

This appendix includes the draft guidelines for issuing Government guarantees that Castalia submitted to government stakeholders and the World Bank on November 2, 2007. The rationale behind these guidelines, and their content, was discussed and agreed upon with these stakeholders during meetings in September and December 2007.

Ministry of Finance

Guidelines on Fiscal Management for Government Guarantees to PPP Projects

DRAFT, 02/11/2007

Whereas:

The Government of Pakistan recognises the importance of improving and expanding infrastructure services for sustaining economic and social development, as set out in its Medium Term Development Framework 2005-2010. As part of this Framework, and to help finance growing infrastructure needs, the Government has developed a Public Private Partnership (PPP) program for Pakistan. This program aims to develop, amongst other things:

- An institutional structure to coordinate and promote PPP activities
- A facility to provide long-term, fixed-rate financing in local currency
- Policies and a mechanism for viability gap funds for PPP projects
- A framework for providing Government guarantees to PPP projects, whilst managing the fiscal risk associated with these guarantees.

And Whereas:

The Government must abide by the Fiscal Responsibility and Debt Limitation Act (FRDL) 2005, which places an upper limit of 2 percent of estimated Gross Domestic Product in any Fiscal Year on the total amount of new and renewed Government guarantees.

The FRDL Act also lays out the structure of the Debt Policy Co-ordination Office and its obligations. These include monitoring and regular reporting on measures in the FRDL Act, including compliance with the upper limit on guarantees.

Therefore:

In accordance with its policy objectives, the Government of Pakistan has decided to establish a fiscal management framework for providing Government guarantees to PPP Projects. The aims of this framework are to ensure that such guarantees are: (i) credible to

private investors; (ii) limited to risks the Government may appropriately assume; (iii) compliant with the FRDL Act; and (iv) managed consistently with the control of budget risk.

This document defines the criteria for providing Government guarantees to PPP projects, as well as the institutional structure and procedures for requesting, approving, monitoring and administering such guarantees. Hence, this document, along with the FRDL Act (2005) and any Regulations to that Act, establishes the fiscal management framework.

ARTICLE I

General Provisions

Section 1 – Objectives: These Guidelines set the:

- 1) Types of risks and PPP Projects that can be guaranteed by the Government
- 2) Criteria for deciding if a specific PPP Project is eligible to receive a guarantee
- 3) Institutional arrangements and operating policies for administering guarantees
- 4) Procedure for requesting and approving these guarantees

Section 2 – Scope: These Guidelines apply to Government Guarantees issued:

- 1) To support a PPP Project that is prepared and procured by a Federal, Provincial or Local Institution
- 2) With the explicit consent of the President of the Islamic Republic of Pakistan, or by the Guarantee Fund Board on behalf of the President, as a third party to the Project agreement between the Institution and the Private Party.

At a future date the scope of the Guidelines will be expanded to cover Government Guarantees that fall outside of the scope described in the two points above.

Section 3 – Definitions of Terms: Unless otherwise stated, the terms used in these Guidelines shall have the following meaning:

“Competitive Selection Process” means the process whereby a Private Party is granted the right to undertake a PPP Project, and which involves transparent and open competition among at least two unrelated bidders;

“Contingent Liability” means a potential payment obligation that will materialise only on the occurrence, or non-occurrence, of one or more uncertain future events. For the purposes of this document:

- i. A **“Contracted Contingent Liability”** means the expected value of the Contingent Liability arising from the terms of an executed Government Guarantee Agreement;

- ii. A **“Committed Contingent Liability”** means the expected value of the Contingent Liability arising from the terms of a Pre-approved Government Guarantee;

“Financially Viable” means the internal rate of return of the project is equal or greater than the expected weighted average cost of capital;

“Government” means the Federal Government, a Provincial Government or a Local Government, as the case may be;

“Government Guarantee” means a commitment made by the Government, usually in the form of a contract, to make a payment to the Private Party, incur an expense or forego revenue if a certain event(s) occurs;

“Guarantee Fund” means a company incorporated and limited by guarantee in accordance with the Companies Ordinance 1984 to manage and administer Government Guarantees. The Guarantee Fund shall comprise the Guarantee Fund Board, Guarantee Fund Management, and the Guarantee Fund Capital;

“Infrastructure Project Development Facility” or **“IPDF”** means the company incorporated by the Federal Government under Section 42 of the Companies Ordinance, 1984, to perform such functions as may be assigned to it by the Federal Government under this Act;

“Institution” means:

- i. Government,
- ii. person (individual, company, or other association) performing functions pursuant to any law in connection with the affairs of a Government, or
- iii. a person whose ownership or control is vested in a Government or whose ownership or control is vested in a person falling within number ii) above;

Explanation: For the purposes of number iii) above, the expression ‘ownership’ means the direct or indirect ownership of more than fifty-one percent of the voting rights in a person, and ‘control’ means the ability, directly or indirectly, to direct or cause the direction of the votes attaching to the majority of its issued shares or interests carrying voting rights, or to appoint or remove or cause the appointment or removal of those of its directors or equivalent office bearers holding the majority of the voting rights on its board of directors or equivalent body;

For the specific purposes of this document, “Institution” means the Government body which proposes the PPP project and signs the PPP contract with the Private Party;

“Net Economic Benefit” means the present value of Economic Benefit minus the Economic Costs of the PPP project, where:

- i. **“Economic Benefit”** means the positive contribution to gross national product (or other measure of value) from an economic activity or project;
- ii. **“Economic Cost”** means the additional use of resources necessary to carry out an economic activity or project – that is, over and above the resources used in the absence of the project; and

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- iii. the present value shall be calculated using an appropriate discount rate that reflects cost of capital of the government;

“Public Private Partnership” or “PPP” means a commercial transaction between an Institution and a Private Party by which the Private Party:

- i. performs an Institutional function on behalf of the Institution; and/or
- ii. assumes the use of public property for its own commercial purposes;
- iii. assumes substantial financial, technical and operational risks in connection with the performance of the Institutional function or use of the public property; and
- iv. receives a benefit for performing the Institutional function or from utilizing the public property, either by way of:
 - a. consideration to be paid by the Institution from its budget or revenue; or
 - b. charges or fees to be collected by the Private Party from users or customers of a service provided to them; or
 - c. a combination of such consideration and such charges or fees;

“Public Private Partnership Agreement” means the written agreement between the Institution and the Private Party that sets forth the terms and conditions for the implementation of a Public Private Partnership;

“Private Party” means a person that does not fall within the definition of “Institution” above;

“Risk” means the possibility of an outcome or returns which are different than expected – usually, of loss, or less-than-expected returns **“[Risk Factor] risk”** means unexpected variation in returns arising from unexpected variation in the risk factor;

“Viability Gap Fund Company” or **“VGF Company”** means a company incorporated and limited by guarantee in accordance with the Companies Ordinance 1984, which is governed by a Board appointed by the Federal Government, and whose budget shall come from transfers made by the Ministry of Finance following requests by the Board of the VGF Company;

“Viability Gap Funding” means the funds that the VGF Company will transfer to an Institution, or to a Private Party on behalf of the Institution, to cover part or all of the difference between the expected true cost of a PPP Project and the expected revenue from the tariffs charged or unitary payment made for the services provided by such PPP Project;

“Winning Bidder” means the Private Party that was fully technically compliant with the bid documents, including having the technical qualifications and accepting the technical specifications of the PPP project, and that proposed the lowest value for the financial bid variable in the Competitive Selection Process for a given PPP.

ARTICLE II

Eligibility Provisions

Section 1 – Types of Risks. Government Guarantees shall be issued only to cover project-specific risks that the Government is able to directly influence, or risks which are either uncontrollable or economy-wide, and for which insurance or risk-hedging products are not available on reasonable commercial terms.

To adhere to this general principle, the specific risks which can be covered by Government Guarantees will vary by sector, and by project. Examples of this kind of risk may include, but are not limited to:

- 1) **Political Risk**, such as any change of law which either directly affects the value of the project, or adversely impacts the business environment;
- 2) **Breach of Contract Risk**, such as a change in the contracted tariff path, the required project outputs, or delays or changes in cost of land acquisition by Government;
- 3) **Demand Risk**, where demand for services falls short of forecasts; or
- 4) **Force Majeure Risk**, if not insurable on reasonable commercial terms.

Section 2 – Eligible Projects: A PPP Project shall be deemed eligible to receive a guarantee if it is:

- 1) **Economically Viable:** The Net Economic Benefit of the PPP project shall be greater than or equal to zero; and
- 2) **Financially Viable:** The PPP project shall be Financially Viable, after inclusion of pre-approved Viability Gap Funding where appropriate; and
- 3) **Competitively Procured:** The Private Party that will undertake the PPP Project is selected through a Competitive Selection Process; and
- 4) **In Selected Sectors:** The PPP Project belongs to one of the following sectors: transport and logistics, mass urban public transport, municipal services, and energy.

ARTICLE III

Management and Administration of Government Guarantees

Section 1 – Policy management: The Ministry of Finance will establish a **Risk Management Unit (RMU)** as the government body responsible for managing the risk arising from the provision of Government Guarantees to PPP projects. The RMU shall be established as an operating unit of the Debt Policy Co-ordination Office, with the following responsibilities:

- 1) Issuing additional policies and procedures related to the provision of Government Guarantees to PPP Projects;
- 2) Monitoring the adherence of the Guarantee Fund to its prescribed operating policies and procedures; and

- 3) Annual reporting of the outstanding stock of Government Guarantees, and the provisions made by the Guarantee Fund against the associated liabilities, as required by the FRDL Act (2005).

Prior to the establishment of the Guarantee Fund as a permanent arrangement to administer Government Guarantees, the RMU will have additional, temporary functions, as described in Article V below.

Section 2 – Guarantee Management and Administration: The Ministry of Finance will create a Guarantee Fund to assess, approve, issue, and administer Government Guarantees to PPP Projects, The Guarantee Fund will be incorporated as a company limited by guarantee in accordance with the Companies Ordinance, 1984. The functions, governance, management, operating policies and funding of the Guarantee Fund shall be as described below.

- 1) **Functions:** The Guarantee Fund will be responsible for:
 - i. **Product management:** reviewing requests for Government Guarantees from Institutions and, if approved, entering into Government Guarantee Agreements.
 - ii. **Claims management:** reviewing payment claims made by Private Parties under Government Guarantee Agreements; deciding on their validity; and representing this position in front of arbitrators in case of disputes.
 - iii. **Marketing:** informing Institutions about the Government Guarantees offered; and developing relationships with project finance lending institutions and credit rating agencies.
 - iv. **Capital management:** allocating assets to cover the Contingent Liabilities from Government Guarantees; managing its assets to maintain or increase their value; and limiting the total value of Government Guarantees issued, always in accordance with policies defined by RMU.
 - v. **Administration and Treasury:** making payments to Private Parties in respect of valid claims; keeping account of its income, expenses, assets and liabilities; reporting on the status of its accounts; office and personnel management.
- 2) **Governance:** The Guarantee Fund shall be governed by a Board, chaired by a representative of the Ministry of Finance, whose other members are appointed by the Federal Government. The Board shall have the powers to, amongst others:
 - i. Approve or deny requests for Government Guarantees from Institutions
 - ii. Approve the procedures to be followed for submission, appraisal and approval of Government Guarantees
 - iii. Approve model Government Guarantee Agreements
 - iv. Request additional budget allocations from the Ministry of Finance.
- 3) **Management:** The Guarantee Fund will be managed by a private financial institution selected through competitive tender by the Board. The private financial institution will be responsible for all of the functions of the Guarantee Fund listed above, except those assigned to the Board.

- 4) **Operating Policies:** The operating policies of the Guarantee Fund will be defined by the RMU in accordance with the following principles:
- i. **Valuation of contingent liabilities:** The value of a Contingent Liability associated with a Government Guarantee shall be calculated as the present value of the expected cost to the Fund of the guarantee.
 - ii. **Accounting and Reporting:** The Guarantee Fund will produce annual financial statements using Pakistani private sector accounting rules.
- 5) **Funding:** The Guarantee Fund shall be capitalized with an initial transfer made by the Ministry of Finance. The Board will request additional transfers when eighty percent of the Guarantee Fund Capital has been allocated to cover Contracted or Committed Contingent Liabilities arising from Government Guarantees: both those issued by the Guarantee Fund, and by the Ministry of Finance as part of the temporary arrangement described in Article V, Section 1. These transfers will also be subject to the limit on the total value of the Contracted Contingent Liabilities stated in the FRDL Act (2005).

ARTICLE IV

Request and Approval Procedures

Section 1 – Request for Pre-approval: Any PPP project which is expected to require a Government Guarantee must have this proposed guarantee pre-approved prior to launching the Competitive Selection Process. The Institution sponsoring the PPP Project will submit to the Guarantee Fund a request for pre-approval, which shall include:

- i. Evidence demonstrating compliance of the requested Guarantee and the PPP project with:
 - a. The scope of these Guidelines, as defined in Article I, Section 2; and
 - b. The eligibility provisions defined in Article II of these Guidelines
- ii. Information on the terms of the Government Guarantee requested, and data to enable estimation of the associated Contingent Liability.

Detailed instructions that Institutions should follow to prepare and submit their requests for pre-approval will be provided by the Guarantee Fund.

Section 2 – Pre-approval: Within thirty (30) business days from the date on which the Guarantee Fund received a request for pre-approval prepared in accordance with the instructions, the Guarantee Fund shall reach a decision on pre-approving, recommending changes to the terms of, or denying the Government Guarantee request.

The Guarantee Fund can extend this deadline once for a maximum of thirty (30) business days if the information or evidence included in the pre-approval request was insufficiently detailed or verified to enable a decision to be reached within the initial thirty day period, and the Guarantee Fund has issued a letter to the Institution requesting specific, additional information.

Requests from Institutions will be reviewed by Guarantee Fund on a first-come first-served basis.

The decision of the Guarantee Fund shall be based on its assessment of whether:

- i. The PPP Project is consistent with the scope of these Guidelines as defined in section 2, Article 1;
- ii. The PPP Project and proposed guarantee comply with the eligibility provisions listed in Article II;
- iii. The Guarantee Fund has sufficient uncommitted capital to cover the Contingent Liability associated with the Government Guarantee requested by the Institution, or the Guarantee Fund has certainty that it can secure the additional capital required;

The Guarantee Fund Board may, at its discretion, add further criteria for consideration in assessing a Guarantee request, including the relevance of the PPP Project to the Government's development priorities.

The decision of the Guarantee Fund shall be documented in a Term Sheet that defines the key terms of the pre-approved Government Guarantee. Once a Government Guarantee has been pre-approved, its associated Contingent Liability shall be considered by the Guarantee Fund as a Committed Contingent Liability, against which Fund assets must be allocated.

If it is necessary to materially revise the term sheet after the Pre-approval has been granted, as a result of the pre-bid interaction with the potential bidders, a new Pre-approval request shall be made. If after a period of one year from the date of Pre-approval, no request for Final Approval has been made, the Pre-approval shall be considered revoked: the Institution shall have to re-submit the Pre-approval request, should it wish to pursue the PPP project after this date.

Section 3 – Request for Final Approval: After completing the Competitive Selection Process, the Institution will submit to the Guarantee Fund a request for final approval of the Government Guarantee for the pre-approved PPP project. The request shall include:

- i. Evidence that the Competitive Selection Process was carried out, as well as a report summarising its results; and
- ii. An initialled draft of the PPP Agreement between the Private Party and the Institution; and
- iii. The term sheet of the Government Guarantee initialled by the Private Party and the Institution.

Detailed instructions that Institutions should follow to prepare and submit their requests for final approval will be provided by the Guarantee Fund.

The final approval by the Guarantee Fund shall be based exclusively on its satisfaction that the selection of the Winning Bidder followed a Competitive Selection Process, and that the initialled draft PPP Agreement and term sheet are consistent with terms of the pre-approval.

Section 4 – Final Approval: Within fifteen (15) business days from the date on which the Guarantee Fund received a request for final approval prepared in accordance with the instructions, the Guarantee Fund shall determine whether the PPP Project is approved to receive a Government Guarantee. The decision of the Guarantee Fund shall be communicated to the Institution in writing.

Section 5 – Government Guarantee Agreement: Within sixty (60) business days from the date on which the Guarantee Fund has issued its final approval, the Institution, Winning Bidder, and the Guarantee Fund shall enter into a Government Guarantee Agreement, which will be based on the appropriate model agreement approved by the Guarantee Fund Board, and on the term sheet defined at the Pre-approval stage. Once a Government Guarantee Agreement has been signed, the associated Contingent Liability shall be considered a Contracted Contingent Liability, against which assets must be allocated by the Guarantee Fund, and which must be considered part of the stock of Contingent Liabilities that is subject to the limits established in the FRDL Act (2005).

Appendix B: Regulations on Management of Government Guarantees to PPP Projects

DRAFT, 07/12/2007

Whereas:

The Government of Pakistan is establishing a management framework for issuing Government Guarantees to PPP Projects. The aims of this framework are to ensure that such guarantees are: (i) credible to private investors; (ii) limited to risks the Government may appropriately assume; (iii) compliant with the FRDL Act; and (iv) managed consistently with the control of budget risk.

And Whereas:

The Fiscal Responsibility and Debt Limitation Act (FRDL) 2005 is the legal basis of fiscal management in the Islamic Republic of Pakistan.

Therefore:

In accordance with its policy objectives, the Government of Pakistan has decided to issue these Regulations under the FRDL Act (2005) to legally establish its Management Framework for Government Guarantees to PPP projects.

ARTICLE I – GENERAL PROVISIONS

Section 1 – Scope

These Regulations apply to Government Guarantees issued by the Guarantee Fund to support a PPP Project that is prepared and procured by a Federal, Provincial or Local Institution.

Section 2 – Objectives

These Regulations define:

- 4) Responsibilities and powers of those parties involved in the provision of Government Guarantees to PPP projects; and
- 5) Policies for the management of Government Guarantees to PPP projects, which will ensure these Guarantees are justified, and managed consistently with an acceptable degree of fiscal risk.

ARTICLE II – INSTITUTIONAL RESPONSIBILITIES

Section 1 – RMU

The Ministry of Finance will establish a **Risk Management Unit (RMU)** that will be responsible for:

- 1) Issuing and updating guidelines and policies related to Government Guarantees; and
- 2) Monitoring and reporting on the stock of Guarantees and adherence of the Guarantee Fund to the policies prescribed below.

Section 2 – Guarantee Fund

The Ministry of Finance will create a **Guarantee Fund (GF)** as an incorporated fully government-owned company, which is responsible for:

- 1) Issuing Government Guarantees to eligible PPP projects, according to the policies presented within these regulations;
- 2) Ensuring these Government Guarantees are issued and managed in accordance with the fiscal risk management policies outlined in these Regulations; and
- 3) All aspects of managing and administering issued Guarantees, including managing capital resources and personnel, administering claims, and financial reporting.

These regulations delegate from the President of the Islamic Republic of Pakistan to the Board of the Guarantee Fund the legal power to issue those Government Guarantees which fall within the Scope defined in Article I above.

Section 3 – Sponsoring Institutions

Sponsoring Institutions, which may be at the Federal, provincial or local level, will be responsible for comprehensively fulfilling the procedures prescribed by the Guarantee Fund for Government Guarantee applications.

ARTICLE III – GUARANTEE MANAGEMENT POLICIES

The following policies will apply to all Guarantees issued and managed by the Guarantee Fund. They are subject to change by the Risk Management Unit (RMU).

Section 1 – Project Eligibility: A PPP Project shall be deemed eligible to receive a guarantee if it is:

- 1) Economically Viable;
- 2) Financially Viable;
- 3) Competitively Procured; and
- 4) In Selected Sectors: transport and logistics, mass urban public transport, municipal services, and energy.

Section 2 – Risk Allocation Criteria: Government Guarantees shall be issued only to cover:

- 1) Project-specific risks that the Government is able to directly influence; or
- 2) Risks which are either uncontrollable or economy-wide, and for which insurance or risk-hedging products are not available on reasonable commercial terms.

To adhere to this general principle, the specific risks which can be covered by Government Guarantees will vary by sector, and by project.

Section 3 – Fiscal Risk Management Measures: The following measures will apply to all Guarantees issued by the Guarantee Fund.

- 1) Valuation of contingent liabilities: The value of a Contingent Liability associated with a Government Guarantee shall be calculated as the present value of the expected cost to the Guarantee Fund of the guarantee.

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- 2) Allocation of assets against Guarantees Issued: Once a proposed Guarantee is pre-approved, the Guarantee Fund will allocate against that guarantee assets equal to the value of the associated contingent liability.
- 3) Total exposure from Government Guarantees: The total value of the contingent liabilities associated with Government Guarantees issued shall not exceed the capital of the Guarantee Fund.
- 4) Further capitalization of the Guarantee Fund: The Guarantee Fund will request further capital from Government when 80% of its assets have been allocated against Guarantees. The Guarantee Fund may also seek capital from external sources.

Appendix C: Basics of PPPs

There is no single definition of PPPs. This appendix starts, in section C.1, by looking at the common international definitions of PPPs, and then describes how the concept of PPPs has been defined in Pakistan. In section C.2 we discuss the reasons for pursuing PPPs—by understanding when PPPs can be better than public procurement we understand when government should support PPPs. The section concludes by explaining how PPPs are generally structured and how risks are shared between the public and private parties, in section C.3.

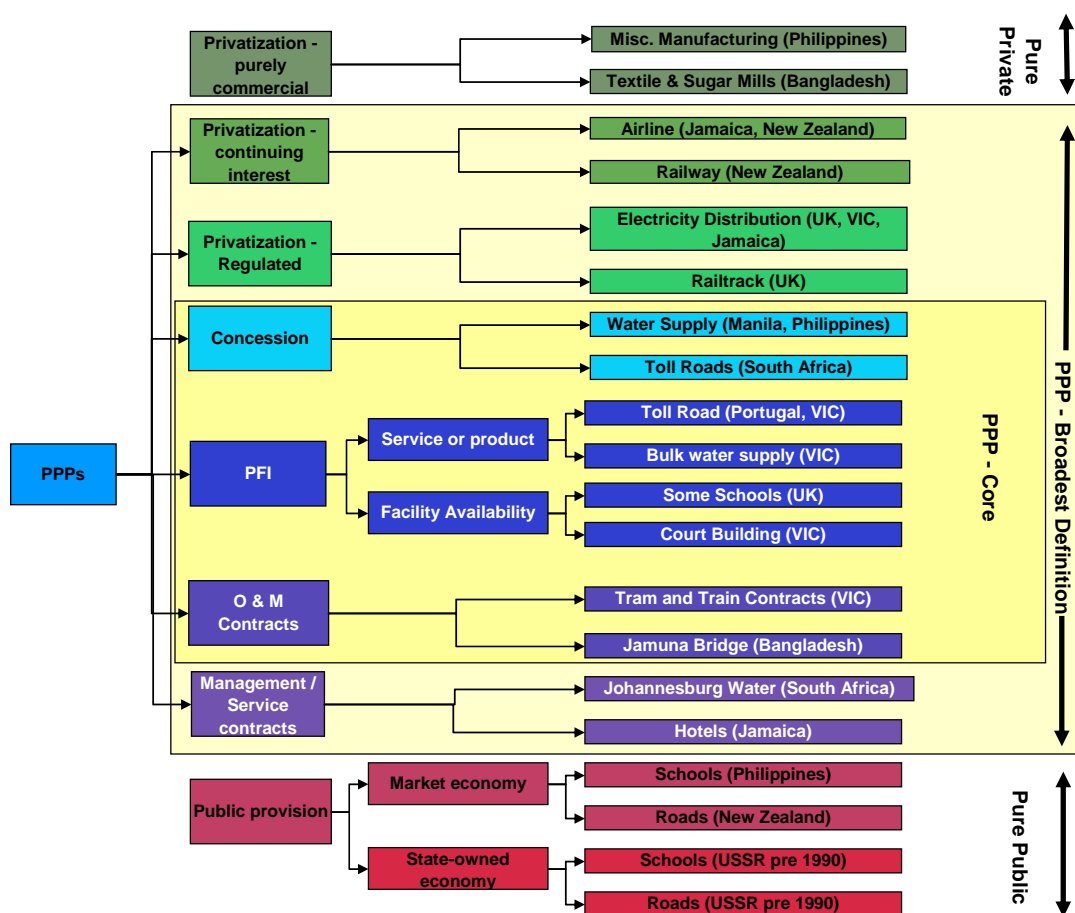
C.1 Definition of PPPs

The UK Private Finance Initiative (PFI) has driven much of the world's thinking about PPPs. Many countries borrowed heavily from the UK's PFI program in shaping their own PPP programs, and common definitions of PPPs therefore draw heavily on characteristics of PFI. PFI in the UK has mostly consisted of Design Build Operate Finance (DBOF) contracts, which typically last 20-30 years. Under this core PPP, the private operator either:

- Makes a facility available for some period of time, and ensures that during this time period the facility meets certain standards defined in the agreement
- Delivers a service over a period of time, and ensures that the service meets certain standards defined in the agreement, using the facility designed, built operated and financed by the operator.

In practice, however, the definitions many countries use for PPPs are much broader, and include a range of possible types of agreement between the public and private sector. Table C.1 shows the range of possible types of agreement between the public and private sector.

Table C.1: Spectrum of PPP Arrangements



Many countries with PPP programs further limit their definition of PPPs by transaction type, sector, value, or whether users or the government pay directly for the services provided by the operator. For example, until 1994 Korea limited its definition of PPPs to Build-Transfer-Operate (BTO) and Build-Own-Operate (BOO) contracts. PPPs may also be defined by a threshold value of investment or payments. In Portugal, PPPs are limited to partnerships involving the present value of payments to private partners of greater than 10 million euros or an investment of greater than 25 million euros.

Pakistan does not have an official definition of PPPs in place. Existing PPPs in the power and road sectors, which are discussed in section 3 of this report, fall into the core PPP category in table 3.1 above.

C.2 Reasons for Pursuing PPPs

It is important to examine Pakistan’s objectives for PPP in order to understand the risks and responsibilities the government would have to assume in order to make PPPs successful in Pakistan. In this section we explore these objectives—we look at the objectives commonly used in other countries, and we compare those with the objectives in Pakistan.

Common International Reasons for Pursuing PPPs

We explore two types of common reasons used internationally to explain why a government pursues PPPs. The first set of reasons are what we would label as ‘good’ reasons—that is, reasons that are consistent with the outcome that PPPs actually achieve. The second set of reasons are what we label ‘illusory’ reasons—that is, reasons that are not really consistent with the outcomes that that PPPs can deliver.

Good Reasons for Pursuing PPPs

The governments with the most developed PPP markets focus on using PPPs to enable the public sector to achieve value-for-money. Value-for-money is driven primarily by:¹⁷

- Risk transfer: relieving government of the cost of asset-based risks—that is, risk directly associated with building or operating assets
- Whole-of-life costing: through whole -of-life costing the government can achieve optimization between capital costs and operating and maintenance costs, a realistic projection of total cost of ownership, and a way of comparing competing designs on a like-with-like basis
- Innovation: providing wider opportunity and incentives for innovative solutions to service delivery—for example, while government would have traditionally resolved mass rapid urban transit objectives with rail-based systems, a PPP can lead the government to innovative solutions like a lower cost bus rapid transit system
- Asset utilization: developing opportunities to generate revenue from use of the asset by third parties, which may reduce the cost that the government would otherwise have to pay as a sole user.

These drivers allow for long-term cost savings and innovation not achievable through traditional public sector procurement.

The focus on value for money has come from experience. The governments that pioneered the use of PPPs, including the UK and the Victorian state government in Australia, launched PPP programs with the goal of attracting private finance when they found their own budgets constrained. Their initial use of PPPs was therefore driven by a desire to disguise public expenditure and push it off-budget.

Experience in those countries has shown that, in reality, it is unusual for PPPs to give governments access to **more** capital they would have been able to raise on their own. In other words, PPPs must be assessed using the same standards as for other forms of government spending. A Government and its citizens will, at the end of the day, always pay the full cost for services they receive from PPPs, either:

- Directly, through user fees, or
- Indirectly, through general taxation which the Government uses to pay the private operator any subsidies or to honor any guarantees.

¹⁷ Partnerships Victoria. Guidance Material, Overview. June 2001.

Illusory Reasons for Pursuing PPPs

The main illusory reason why some governments pursue PPPs is to access finance that would otherwise not be available. Accessing finance would not be possible simply by introducing a PPP. If an infrastructure provider is not assured that, between user fees and government subsidies, it will be able to recover its costs, the provider will be unable to raise the capital needed to build the project. This means that a PPP structure will not resolve the underlying reasons why this service is unable to raise finance. The government will not be able to attract private financing simply by deciding to do PPPs—cost-recovery would need to be resolved before private capital can be raised. Box C.1C.1 explains further the difference between cost recovery and financing.

Box C.1: The Difference Between Cost Recovery and Financing

It is important not to confuse the need for financing with the need for subsidies. Subsidies address the cost recovery problem, while financing problems may exist even if total costs are fully covered through a combination of tariffs and subsidies.

Error! Reference source not found. illustrates the situation of an infrastructure service provider with a need for financing. The service provider needs to make a major initial investment, for example, a electricity distribution system extension or new generation plant. In the future, during the operations phase of the project, the service provider will be able to sell electricity at a tariff which recovers his full cost of service. If the present value of the cash flows during the operations stage exceeds the present value of the negative cash flow during the investment phase, the provider will have recovered his full costs of service. Providers in this situation would be able to get financing, for example by borrowing to pay for the initial investment, and repaying the debt from the positive cash flow during the operations phase.

Figure C.1: Financing Need

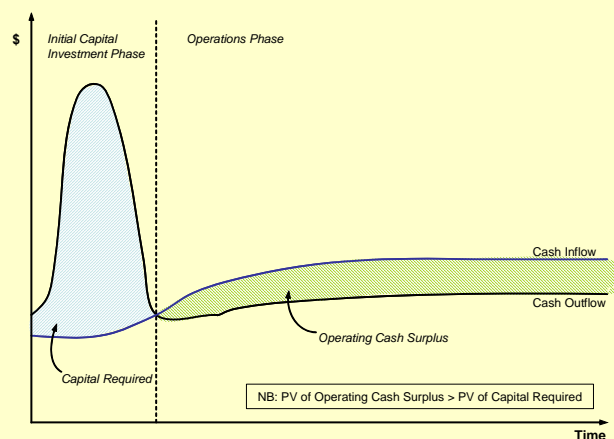
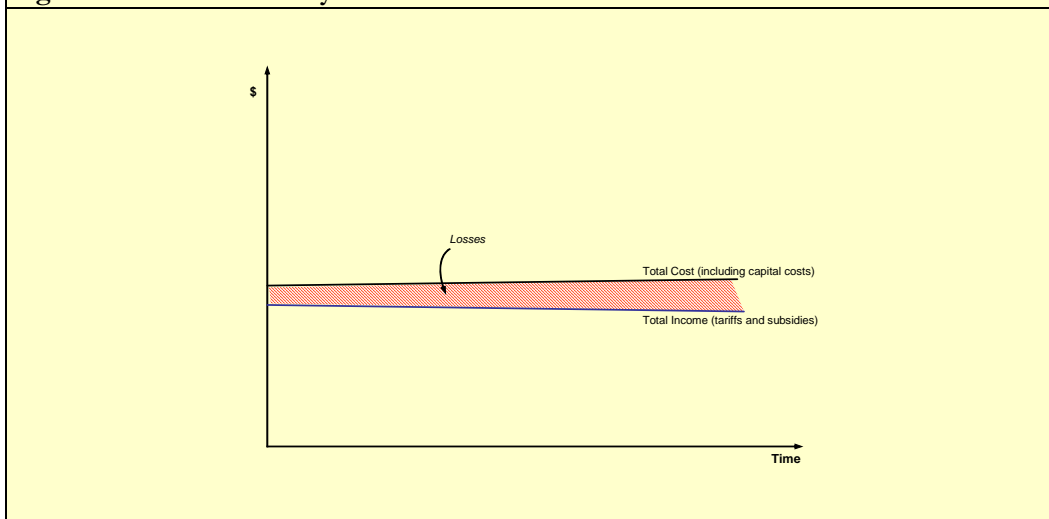


Figure C.2 shows the situation of an infrastructure service provider with a cost recovery problem. Total revenues from all sources (tariffs and subsidies) are lower than total costs, including capital costs.¹⁸ The provider whose situation is illustrated in this figure has a cost

¹⁸ Capital costs are meant to include both the cost of capital assets being used up and needed to be replaced, usually measured by depreciation, and the need to provide a return on capital invested, for example by making interest payments on a loan or allowing an equity investor to earn dividends.

recovery problem. The investor does not have enough income to cover the total cost for the foreseeable future. No amount of financial engineering would enable the service provider to access finance.

Figure C.2: Cost Recovery Problem



PPPs also generally do not give governments access to **cheaper** capital than they could raise on their own. Governments can almost always borrow more cheaply than the private sector, and private enterprises in emerging markets are rarely able to transcend the sovereign credit rating of the country in which they operate.¹⁹

Pakistan’s Reasons for Pursuing PPPs

Pakistan has mixed objectives in pursuing PPPs. It has done so primarily with a view to mobilizing investment in infrastructure sectors that it views as necessary, but is unable to accommodate within the budget. Other objectives, such as improving project efficiency and management effectiveness by allocating risks to private sector participants, have in the past been secondary considerations. As has been the case in other countries, however, the focus on achieving least-cost provision through the use of PPPs has increased over time. This change is also reflected in the current development of a framework for issuing guarantees in order to manage the fiscal risk associated with them. As discussed in the main document, the framework includes measures to ensure the Government is not exposed to excessive risks simply to attract private investors, and to prioritize well-structured projects with an appropriate allocation of risks.

Pakistan’s PPP programs focus on the power and road sectors, both of which have introduced a number of projects as outlined in section 3, and plan significant further investment. The specific objectives of the Government’s PPP programs in these sectors are as follows.

Power Sector

¹⁹ We consider it possible that, in countries with poor sovereign ratings and high sovereign borrowing costs, well structured PPPs may, in time, bring the cost of private sector financing below sovereign levels. This would be possible if revenue flows within a dedicated PPP financial body were insulated from the government’s fiscal constraints. In such a case, the cost of finance may reflect project risks, which would be lower than sovereign risks.

The 1994 Power Policy described the need for an ambitious investment program in generation capacity to meet growing demand. Among other measures, it emphasized the need for “resource mobilization” by attracting private investment in the sector, to the tune of Rs. 102 billion over five years. It was on this basis that the early IPPs, described in Section 3.2, were contracted.

The primary stated objective of the most recent Power Policy, in 2002, was “to provide sufficient capacity for power generation at the least cost”. It aims to do so by moving towards a completely private electricity sector—all new investment will be under PPPs. While the thrust of much of the policy is in providing incentives to mobilize private finance, this is done on the basis that PPP is the “least cost” means of power generation. This is consistent with an increased focus on efficient allocation of risk through the new framework for managing guarantees.

Roads Sector

There is no comparable policy laying out the PPP program for the road sector. Mobilization of resources is a key factor: the National Highways Association estimates that the Government will only be able to fund 50 percent of the US\$15 billion of new road investments planned for the next five years. Nonetheless, the NHA gives a two-fold reason for promoting PPPs: to bring skills/efficiency from the private sector, as well as to augment limited public resources. Achieving improved efficiency through PPPs depends on allocating risks and responsibilities appropriately.

C.3 PPP Structure

PPP structuring is about allocating risks between the government and a private party. This allocation is generally documented in a PPP contract. This means that by entering into a PPP contract the implementing institution accepts to bear some risks. In this section we explain how this structuring is done in practice.

PPPs are structured around a contract between the public and private partners, and many side agreements essential to the success of the project. The terms of the PPP contract and side agreements determine how risks and responsibilities are allocated between different parties. The contract also defines:

- The consequences of fulfilling those responsibilities. As long as the private partner fulfills its obligations, it will receive payment from the government, or directly from users of the service. As long as the public partner fulfills its obligations, it can continue to enjoy the benefit of the service provided by the private partner, and, in many cases (such as a concession agreement) may receive payment from the private partner
- The consequences of not fulfilling those responsibilities. If a private partner fails to fulfill its obligations, it may be subject to non-payment, financial or administrative penalties, litigation arbitration, or contract termination without payment. If a public partner fails to fulfill its responsibilities, it may suffer similar consequences.

A project risk is the probability that an event will occur which lessens or increases the value of the contract to any of the contracting parties. This definition recognizes that there can be

both up-side and down-side risks. Box C.2C.2 describes different categories of risk typically considered in PPP contracts.

Box C.2: What are Risks in a PPP Contract?

The following risks are most relevant to a PPP contract:

- **Construction:** The risk that quantities or prices of goods required for construction are different than originally estimated, or that the construction takes longer than expected. When construction takes longer than expected, the operator receives revenue later than forecast in the original financial model, reducing the net present value of the project. Construction delays may also impose higher labor costs on the project, as workers must be employed longer
- **Operational:** The risk that the infrastructure provided or service delivered from that infrastructure:
 - Fails to meet original design specifications
 - Has higher operations and maintenance costs than expected
 - Fails to have access to required project inputs or has access to those inputs but at a higher cost than expected
 - Is subject to interruption or cessation because of a fault of the operator
- **Commercial:** The risk that operating revenues will differ from expected revenues because demand or prices charged differ from what was originally expected when the contract was signed. Commercial risk is often broken down into sub-categories of:
 - Demand risk: The risk that customers use the service less than expected
 - Payment risk: The risk that customers do not pay the fee or tariff originally agreed, or do not pay their bills as much or in as timely a manner as expected.
- **Financial:** The risk that the project may not be able to obtain financing, or that the terms of financing (tenors and rates) will change from what was initially forecast
- **Exchange Rate:** The risk that, because project inflows are in a different currency than project outflows, variability in foreign exchange rates will affect project profitability. This can happen, for example, when a project is financed in one currency but payments to the project are made in a different currency. This can also happen when input costs (such as fuel) are incurred in one currency (often US dollars) but payments to the project are made in another currency
- **Regulatory:** The risk that changes in law or regulations affecting the sector in which the PPP takes place will affect project cash flows. Tariff risk is the most common regulatory risk, namely, the risk that a sector regulator will not uphold or enforce the level of tariffs which allow for cost recovery
- **Land Acquisition:** The risk that the project developer will not be able to acquire the land necessary to build and operate the PPP, or will not be able to acquire it at the cost originally expected
- **Force Majeure:** The risk that events beyond the control of both parties will occur. Force majeure risks are typically categorized as “insurable” and “uninsurable”. Acts of nature, such as earthquakes, floods or droughts are typically insurable. Some political events, such as acts of terrorism or wars, are typically uninsurable
- **Sovereign or Political:** The risk that changes in law, the political situation or political will have a negative impact on the project. This includes, for example the risk of repatriation of dividends or convertibility of foreign exchange

The principal benefit of using PPPs to develop infrastructure is that PPPs they allow the government to allocate risks more efficiently than if the infrastructure were developed and operated completely by the government or the private sector. Risks are allocated between the public and private partners based on which partner is best-placed to manage and respond to the specific type of risk. There will be some risks that the government is best-placed to manage and respond to, and others that are better managed by the private sector. Risks constitute part of the cost of the project—where a private investor takes on high risks in a contract, for example, he will expect high returns on the investment, increasing costs to the government or consumers.

To ensure the PPP project is as cost efficient as possible, each risk should be allocated to the party who can best manage it. The means of ‘managing’ a risk varies depending on its nature. Some risks may be directly controllable by a party to the contract—for example, the government chooses whether to procure a competing infrastructure facility. In other cases, one party may be best placed to reduce the sensitivity of the project value to the risk by building appropriate safeguards. Public and private partners will only want to take responsibility for risks they can influence and control. However, some risks cannot be controlled or mitigated by either party—in these cases, to ‘manage’ the risk simply means to absorb its impact. These risks may be shared, to reduce their impact on any one party.

According to best-practice risk management principles, risks should be allocated to the party that is best placed to:

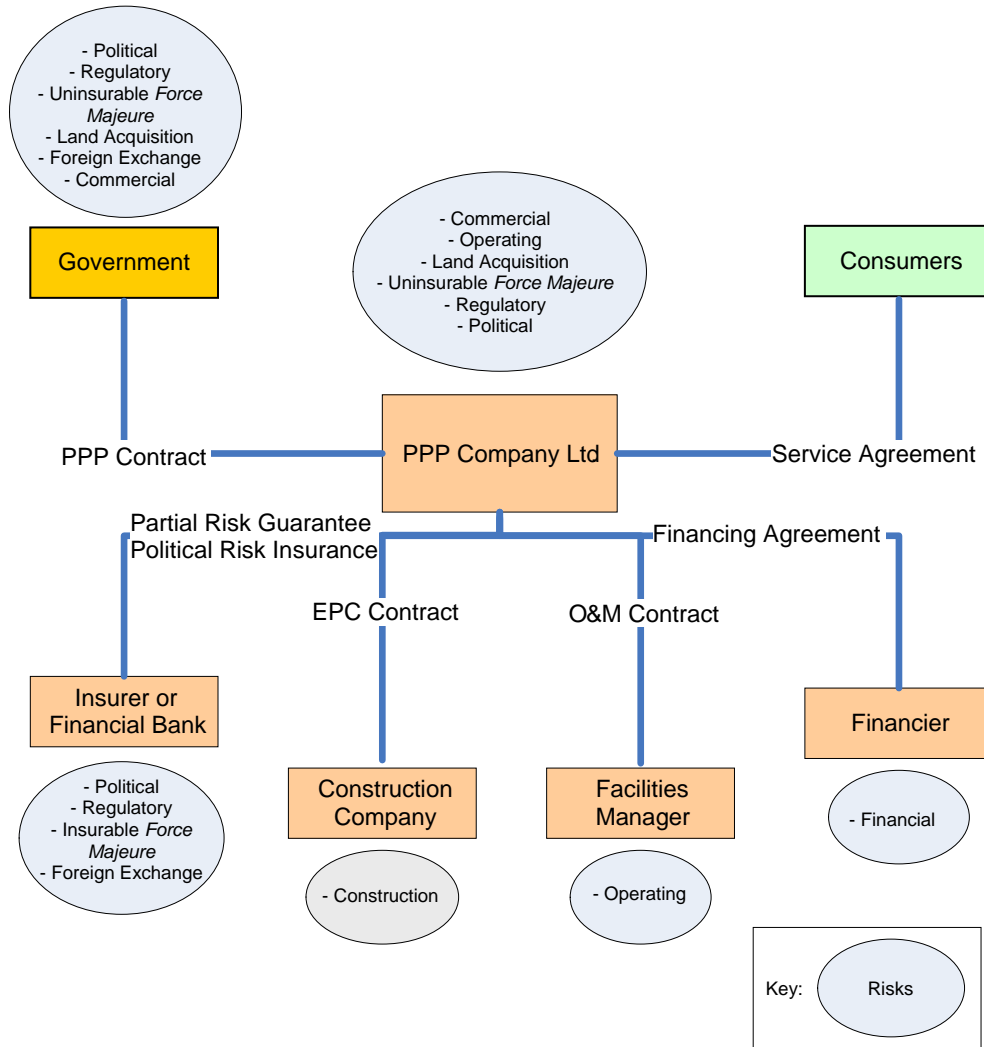
- Influence the risk factor
- Influence the sensitivity of total project value to the risk factor (anticipate or respond to risk factor)
- Absorb the risk.²⁰

The party that a risk is allocated to should also have control over decisions related to the risk factor. For example, the party that bears construction-related risks should be able to select the construction materials and techniques to be used.

Figure C.C.3 shows how risks are generally allocated between the private partner, public partner and other parties. Some risks appear next to multiple parties because risk allocation will differ from contract to contract, and because in any given contract different parties will share certain risks. In a toll-road concession contract, for example, the government may take some of the PPP company’s commercial risk by guaranteeing revenue for a base level of demand.

²⁰ Irwin, Timothy C. *Government Guarantees: Allocating and Valuing Risk in Privately Financed Infrastructure Projects*. Washington, D.C.: The World Bank. 2007.

Figure C.3: Structure of a Public Private Partnership for Service Delivery



A project sponsor (implementing institution) in a PPP typically takes on himself those risks he is best able to manage directly, and manages other risks by passing them on to other private sector firms that can manage them better. A private partner will typically sign separate partnership agreements with:

- An Engineer Procure Construct (EPC) contractor who takes on construction risk
- An operating and maintenance contractor who takes on some certain operating risks
- A lender (for example, a financial bank or private equity firm) who takes on financial risk associated with the loan or equity invested in the project.

A private partner may also source specialized insurance coverage—for example Political Risk Insurance from the Multilateral Investment Guarantee Agency.

In practice, the optimal allocation of each type of risk varies by sector, and potentially by project. Table C. C.2 shows how risks are typically allocated in toll road concessions.

Table C.2: Risk Allocation for Toll Road Concessions/BOTs in Different Countries

Risk	Who bears the risk, and under what circumstances?
Construction	The private partner usually bears the risk, except where there is insufficient information about the nature of the construction risks. Tunnel construction is one example of a situation in which the public partner might share the construction risk with the private partner because neither can know exactly the geological composition of the rock through which the tunnel needs to pass ²¹
Operational	The private partner usually bears the risk, except where there is insufficient information about the nature of the operating risks, or where the government controls companies which provide key inputs required for operation.
Commercial	<ul style="list-style-type: none"> ▪ Price risk: If the Government controls the toll, then the public partner will usually agree to a schedule of prices in the contract, and compensation to the private partner if those prices are not upheld ▪ Demand Risk: There is no common practice on who absorbs demand risk, as neither partner will have much control over demand. In Chile, Colombia, Korea and Spain, for example, public partners have provided revenue guarantees against low demand. In contrast, toll road PPPs in the Australia, Canada, and the US have been competed without minimum revenue guarantees. In some cases, if it is clear that the government can influence demand (by building or not building competing highways), the public partner it is more likely to take the demand risk.
Exchange Rate	Usually assumed by the private partner
Regulatory	Usually assumed by the private partner
Land Acquisition	Usually assumed by the public partner
Force Majeure	<ul style="list-style-type: none"> ▪ Insurable <i>force majeure</i> usually assumed by the private partner ▪ Uninsurable <i>force majeure</i> usually assumed by the public partner
Sovereign or Political	Usually assumed by the private partner

The party that bears a risk is exposed to the “possibility of loss, of uncertain but possible bad outcomes” related to the risk factor—this is the definition of risk. For example, in a toll road there is a risk that traffic is lower than expected, and this will adversely impact revenues. Therefore, by entering into a PPP contract, the government is exposed to changes in total project value resulting from a change in the risk factors associated with the risks it is bearing.

The government must have a way to decide when it will agree to bear certain risks. The decision to bear a risk should be based on an analysis of the costs and benefits of doing so. The cost of bearing a risk is uncertain, but it may be quantified as the expected cost of calls

²¹ Governments have offered to share construction risk in some notorious examples. Mexico launched a program of toll road concessions in 1989. In the first round of concessions, the government agreed that the concessionaire could request an extension of the contract term if construction costs were more than 15 percent above budgeted costs. Construction costs soared, and the government ultimately had to bail out many of the projects. There were some suspicions that the costs were being deliberately inflated by the contractors.

on the guarantee. Section 7 of this report presents techniques for valuing this expected cost. The government also benefits from bearing risks related to a PPP project. As stated above, the government must bear some risks in order for the project's risks to be allocated efficiently. When risks are allocated efficiently, the project's risk profile decreases, and financing for the project can be raised at lower interest rates. This decreases the total cost of the project, and thus the amount that users must pay in user fees or the government must provide in subsidies (if the government has chosen to support a project it knows is financially unviable on its own, such as through "viability gap" funding).

Thus, governments should bear risk when the benefit of doing so—reducing the total cost of the project—is greater than the cost of doing so—the expected cost of the expense incurred or revenue foregone if a certain event related to the risk factor occurs.

C.4 The Role and Structure of Guarantees

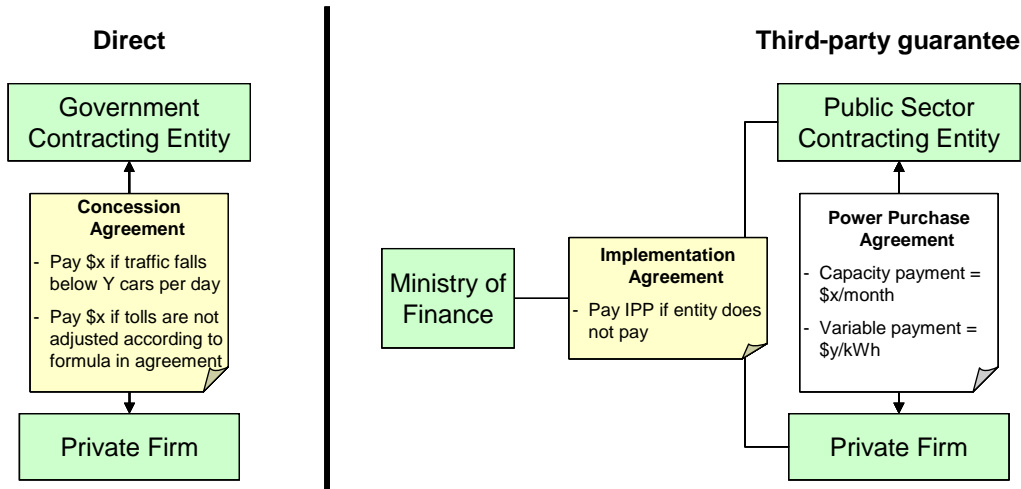
A government bears risk in a PPP contract through guarantees. A guarantee can be defined as: "a commitment made by the government, usually in the form of a contract, to make a payment to the private partner, incur an expense or forego revenue if a certain event occurs."

There are generally two structures under which guarantees are provided:

- In a PPP contract—we refer to this as a contractual obligation that creates a contingent liability
- As a Government guarantee.

Figure C.C.4 illustrates these guarantee structures.

Figure C.4: Guarantee Structures



Contractual obligations that create contingent liabilities involve commitments made by the government institution that is party to the contract (contracting entity). For example, in a toll road concession, the institution may offer a demand guarantee, which commits it to making a payment if traffic on the road falls below a certain level.

However, a further guarantee may be needed on the obligations of the government institution that is party to the PPP contract. There is a risk that the institution does not honor its obligations in the PPP contract. When this risk has a potential material impact on the PPP project's financial outcome—for example, when the PPP contract includes a minimum revenue guarantee—a Government guarantee is needed to provide a credible commitment that the government will honor its obligations under the PPP contract.

A Government guarantee improves the credibility of direct guarantees included in PPP contracts. It may be issued by the Ministry of Finance or another institution representing the Government, or by a multilateral agency such as the Asian Development Bank. A guarantee from an international agency may be used in conjunction with a guarantee from the Ministry of Finance or other central government institution. A Government guarantee involves the central government (Ministry of Finance or other institution) guaranteeing the obligations of the government institution that is party to the PPP contract. A multilateral agency may provide a further guarantees on the commitment of the central government in case the government's guarantee is called.

Guarantees issued by the government itself are more credible than guarantees made by government institutions that are party to PPP contracts because the government is less likely to default than the institutions are. The government has the power to tax, and a default on its obligations would worsen its risk rating in the international finance markets and make it more costly for the government to raise capital in the future. Because the Ministry of Finance manages the government's liabilities, it tends to be in charge of issuing guarantees on behalf of the government and managing them. Guarantees issued by international agencies such as the Asian Development Bank and World Bank are credible because these agencies have very good (usually AAA) risk ratings.

Thus, guarantees can provide various layers of security that give the lenders and shareholders of the PPP project company (IPP or concessionaire, for example) comfort that revenues to the PPP project company, or debt service payments to the lenders, will be as expected. These layers of security improve the risk profile of the project—the project becomes less risky, and financing for the project can be raised at lower rates. Appendix D discusses in more detail how the private sector views risk and how government guarantees increase the credibility of the government's commitment and lower the proeject's cost of financing.

As an example, Figure C.C.5 illustrates the typical security package for an Independent Power Producer (IPP) transaction.

Figure C.5: Typical Security Package for an Independent Power Producer

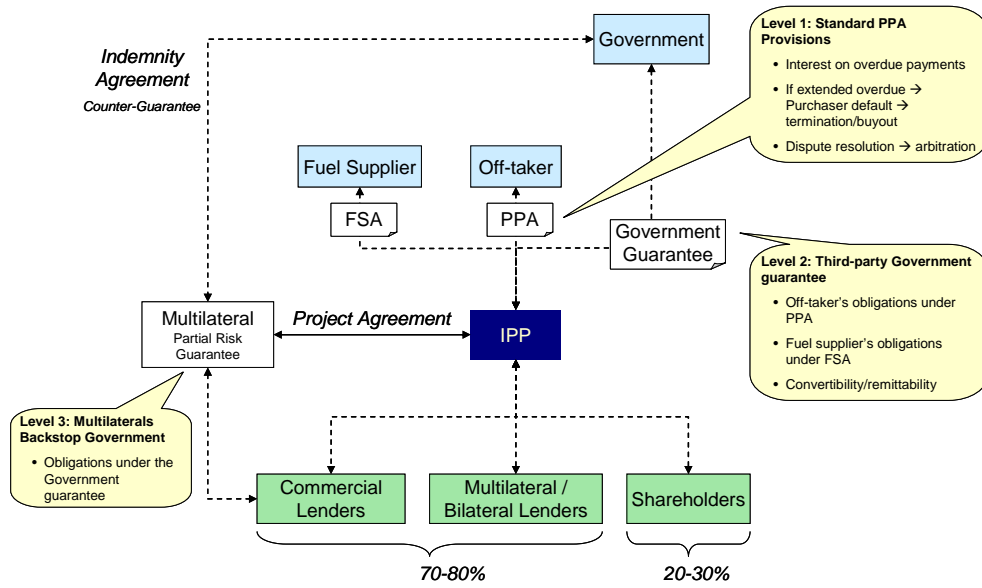
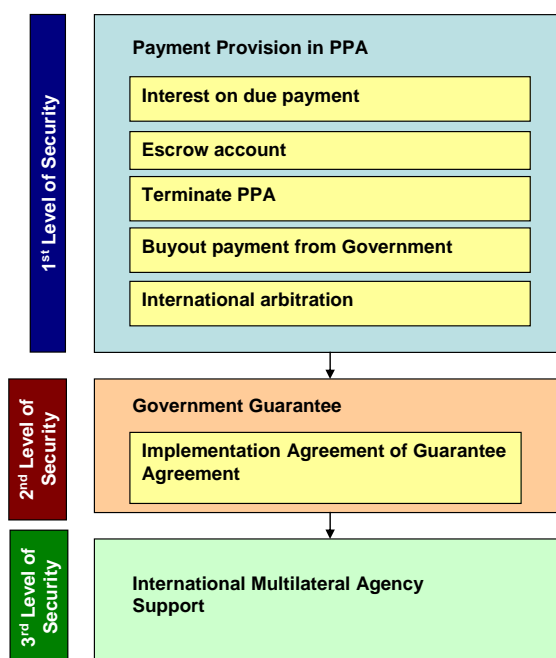


Figure C.C.6 describes how the Power Purchase Agreement, the government guarantee, and the multilateral guarantee provide different levels of security to the shareholders and lenders of an IPP project company.

Figure C.6: Levels of Security



The first level of security refers to the payment provisions in the Power Purchase Agreement (PPA). This is the contract in which an electricity utility (the Power Purchaser) agrees to the terms of its purchase of electricity from the IPP. The PPA will give some comfort to investors/lenders that the Power Purchaser will make payments on time, by:

- Making the Power Purchaser pay interest on overdue payments
- In some cases, requiring the Power Purchaser to establish an escrow account with a balance equal to 3 to 6 months of estimated payments to the IPP; and which can be automatically drawn by the Project Company if the Power Purchaser has not paid after a period of say 30 days (this is not used in Pakistan's PPAs)
- In case of unpaid invoices for an extended period, or a fully drawn escrow account, the Project Company has the right to terminate the PPA (this is not used in Pakistan's PPAs)
- In case of termination due to Power Purchaser payment default, the Project Company has the right to receive a buyout payment that is sufficient to cover outstanding debt, equity invested and a foregone return on equity
- If the Power Purchaser defaults on its buyout payment obligation, the Off-taker will have no further recourse, but to take the Power Purchaser to international arbitration.

The second level of security refers to the support that the government, usually a Ministry, provides to the project. Investors/lenders will simply not mobilize their capital if they think that there is a high probability that the Power Purchaser will default on its payment obligations under the PPA. International arbitration is not a secure mechanism for

investors/lenders to recover their capital. They would gain sufficient comfort from the government entering in an agreement (usually called Implementation Agreement or Guarantee Agreement) whereby the government commits to pay the Project Company if the Power Purchaser defaults on its recurrent or buyout payment obligations. The need for this level of security logical depends on the creditworthiness of the Power Purchaser.

The third level of security refers to the support that international multilateral agencies provide to the project. Commercial lenders, and in some cases equity investors, will not mobilize their capital if they think that there is a high probability that the government will default on its payment obligations under the Implementation or Guarantee Agreement. To backstop the obligations of the government, multilateral and bilateral agencies provide a Partial Risk Guarantee (PRG). This guarantee will generally only cover the commercial debt portion of the payments, and will be triggered only if the government defaults on its obligations (not the Power Purchaser), and will be counter-guaranteed with a sovereign guarantee.

Making provisions to manage the fiscal risk of providing guarantees, as outlined in this report, will further boost the credibility of government guarantees to PPP projects, and allow risks to be allocated as efficiently as possible.

Appendix D: Credit Ratings and Guarantees

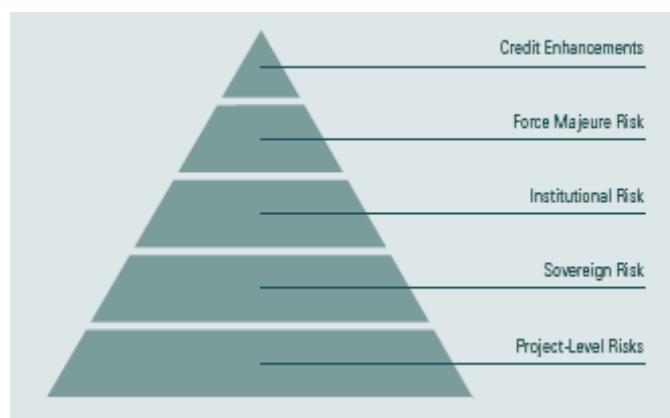
When designing guidelines for issuing government guarantees, it is useful to understand how guarantees lower the cost of financing for a PPP project. The cost of financing is determined by private capital markets' analysis of the creditworthiness of PPP investment opportunities. This appendix explains how credit rating agencies view the risks of PPPs and how project guarantees affect credit ratings, and through credit ratings, the cost of borrowing.

D.1 How do Credit Rating Agencies Analyze Projects?

A project's credit rating tells investors about the level of risk involved in lending to a particular project. The credit rating therefore determines the interest rate the private will have to pay to finance the project. Major credit ratings agencies (such as Standard & Poors, Moody's or Fitch Ratings) assign ratings to PPPs based on a project's expected cash flows.

In this section we present the framework Standard & Poors (S&P) uses to assess credit risks for PPP projects.²² S&P analyzes five types of risks associated with a project. We summarize each of the risks in the subsections that follow.

Figure D.1: S&P Framework for Project Analysis



Source: Standard and Poor's

Project-level risks

Standard & Poor's analyzes project-level risk in six categories:

- **Contractual foundation.** S&P analyzes the terms and conditions of all of the contracts and agreements which make up a project (for example, all of the agreements shown in Figure C.). The analysis seeks to determine the extent to which the contract protects the project from market and operating conditions and addresses the project's operating risks, and the extent to which the contract structure aligns the project's management's interests with the interests of lenders
- **Technology, construction, and operations.** S&P analyzes the likelihood that the project will be brought to completion and perform as designed

²² As described by Standard and Poor's Project & Infrastructure Finance "Project Finance Summary Debt Rating Criteria." October 2001.

- **Competitive market exposure.** S&P analyzes the project's likely ability to compete with its peers in the current market and over time. The analysis looks at industry fundamentals, commodity price risk, supply and cost risk, projected demand, foreign exchange exposure, the project's source of competitive advantage, and the potential for new entrants or new technologies which might erode the project's competitive position
- **Legal structure.** S&P analyzes whether the project exists solely to engage in the business activities being rated, or whether other activities or entities could affect the project's creditworthiness. The analysis looks at whether a project finance special purpose entity (SPE) has been created for the project. The analysis will also look at factors such as the legal jurisdiction in which the project will operate, the risk that legal agreements may be insufficient or incomplete, how trustee arrangements (if any) work, and inter-creditor arrangements which determine the priority of different lenders' rights to payment
- **Counterparty exposure.** S&P analyzes the likelihood that important counterparties to agreements will fail to fulfill their obligations. The most important counterparties are vendors of key project inputs (such as a supplier of raw materials, or EPC contractor), and principal customers (often called offtakers)
- **Financial strength.** Because lenders want to receive their principal and interest payments in a timely manner, S&P looks at the project's ability to make those payments in the face of various events. S&P will therefore look at the project's ability to meet loan payments given volatility in costs and revenue streams over the life of the project. Foreign exchange risk, inflation risk, or liquidity risk, for example, can all jeopardize a project's ability to make payments. The typical measure of a project's ability to make payments is its debt-service coverage ratio. The debt-service coverage ratio is the ratio of cash from operations to principal and interest obligations, where cash flow from operations is defined as cash left over after expenses and taxes.

Sovereign Risk

Sovereign risk relates to the possibility that a government will default on its payment obligations. In project finance, even if the government is not a counterpart to the contract, there is a risk that the government could impose foreign exchange controls that would reduce the value of the contract. Because of this risk, project ratings are generally limited by the sovereign credit rating of the country in which the project operates. The sovereign rating is therefore generally the ceiling for debt quality.

Institutional Risk

Institutional risk is the possibility that the businesses or legal institutions in a country may not function in ways that can be foreseen by the contract because laws or business practices are significantly different or less predictable than in most other countries. Institutional risks present themselves in countries that have little experience in contract law, an underdeveloped legal system, or an underdeveloped banking and financial sector.

Force Majeure Risk

Force Majeure risk is the possibility that events beyond the control of the various counterparties (to the project finance agreements) will prevent them from fulfilling their obligations under the agreements.

Credit Enhancements

S&P understands credit enhancements to be products offered by third parties to mitigate project risk. Credit enhancements are effectively insurance, and may cover, for example, sovereign risks, foreign exchange risks, political risks, regulatory risks, or default risks under specific circumstances. A guarantee from a credit-worthy party may be a kind of credit enhancement.

D.2 How Does this Analysis Apply to PPPs?

Rating agencies typically use the project finance framework outlined in Section D.1 to analyze the risks of PPPs. However, PPPs require extra attention to certain risks because

- Governments, and not private sector entities are parties to the contract
- The services provided by PPPs are often politically-sensitive “essential services.”

These special characteristics of PPPs brings with them special risks which, in turn, need to be addressed in the risk allocation of the PPP agreement.

Unique Risks of PPPs

Governments, unlike private counterparties to a contract, have the power to change laws and regulations which directly affect a particular project, or even to unilaterally terminate a PPP. In a contract between two private firms, the risk of such changes would be considered *force majeure* political risk. In a PPP, the public partner has at least some control over the decisions of government.

Public partners have a greater ability to interfere in PPPs, but they may also have more incentive to interfere, because of the essential nature of the services provided by many PPPs. Governments may find it hard to enforce tariff increases necessary for a PPP to continue operating, or they may be unwilling to let an operator cut-off service to non-paying customers.

The government’s motivation need not be entirely populist or political. To the contrary, the government may, under its own legal framework, have justification to jeopardize the PPP. As Fitch Ratings has pointed out, both corporate and administrative law often apply to PPPs, so that “the essentiality of the public service can persuade a court under certain circumstances to dictate against the interests of the private sector and cut off investors from the revenues and assets derived from the project.”²³

Because of the unique nature of the services provided by PPPs, governments may also be more reluctant to let financially troubled projects follow the course prescribed by bankruptcy laws. Lenders of course prefer to keep companies out of bankruptcy, but not if governments’ efforts to keep a troubled company limping along prevent the lenders from

²³ Fitch Ratings. “Public-Private Partnerships: the Next Generation of Infrastructure Finance”. Special Report, Project Finance. August 6, 2004.

receiving loan payments and prevent them from having access to collateral to which they are entitled in the event of default.

Risk Allocation in the PPP Agreement

Credit analysts consider that the public partner's power to unilaterally change or override the rules under which the contract operates as a significant risk. Fortunately, because the public partner can control certain risks, it can also include in the PPP agreement certain assurances against these risks. PPP agreements often include provisions protecting the private partner against political or regulatory risks. Such protections include, for example, provisions on:

- Extraordinary rate changes, so the private party can pass through to off-takers certain changes in cost that they are unable to control (but over which the government may have some control)
- Extensions of the term of the agreement in certain circumstances, so the private party has the opportunity to recoup revenues lost due to a government action
- Compensation in case the government decides to terminate the PPP agreement
- Dispute resolution mechanisms, which decrease the likelihood of termination, and submission to international arbitration rules to mitigate the risk that local law will jeopardize the public partner's ability to uphold its obligations.

Contract provisions like the above are essential to offset private parties' (and credit analysts') concerns about political and regulatory risk.

Debt Guarantees (Credit Enhancements) for PPPs

The previous section described certain protections the public partner could include in the PPP contract. Beyond such protections in the PPP contract itself, governments or other third financial institutions parties may offer to sell a private party guarantees or insurance that their lenders will be paid if certain specific circumstances interrupt project cash flows. The goal of the guarantees is to enhance the project's creditworthiness and hence its credit rating.

Many private parties will demand such guarantees from government (again, the government often charges a fee for the guarantee) if the project is clearly at risk of not being able to recover its full cost of debt service through user fees.²⁴

The World Bank institutions, including the IBRD's Project Finance and Guarantees Group, the Multilateral Investment Guarantee Agency (MIGA), and the International Finance Corporation (IFC) sell a variety of financial guarantees on debt. Some other international financial institutions and private re-insurers also sell such guarantees.

IBRD can offer, for example, Partial Risk Guarantees (PRGs), which cover specific government obligations for commercial lenders to private investment projects and thereby catalyze the mobilization of private financing for PPPs. PRGs have most often been used to cover certain political, regulatory or legal risks, such as the risk that the government changes tariffs or changes the laws affecting the private partner. PRGs do not cover commercial risks, however.

²⁴ *Ibid.*

D.3 How do Credit Ratings Agencies Score Projects?

Credit analysts determine a score for each of the risks described in Section D.1. The scores on each of the risks collectively determine the credit rating for the project.

The process of scoring each risk is subjective and requires considerable judgment. Figure D.2 shows the benchmark criteria Standard & Poor's uses to score institutional risk.

Figure D.2: Institutional Risk Benchmark Scores

Table 7

Institutional Risk Exposure Benchmark Scores	
Score	Characteristics
1	Well-developed legal system; significant precedent exists. Well-developed financial system. Significant history of transparency in financial reporting.
3	Developed legal system; reasonable precedent exists. Developed financial system; enforcement culture still developing. Transparency in financial reporting may raise concerns.
5	Developed legal system; limited precedent exists. Financial system beginning to develop. Contract culture developing. Transparency just taking hold.
10	No legal statutes for project finance. Bankruptcy code not developed or not enforced. Banking sector poorly monitored and/or poorly supervised. Little contract culture.

Source: Standard & Poor's

The process of determining an overall credit score is also subjective, and not simply a matter of adding the individual benchmark scores. A higher score for any given risk represents exponentially more risk to the project. As Standard & Poor's notes in the explanation of their rating criteria, "a deficiency in one small part of a transaction... could be cause for a speculative-grade [low] rating... A project could conceivably have relatively high benchmark scores in all categories but one and still achieve only a speculative-grade rating"^{25 26}

Credit analysts rate PPPs in the same way, taking into account the unique risks of the partnerships. Analysts will consider:

- Whether the project is structured to guard against the unique risks of PPPs (discussed in Section D.2). Analysts will pay particular attention to the government support provided, whether provided in the PPP contract, or through separate credit enhancing guarantees
- Whether the analyst believes the public partner (and other public entities that may be counterparties to the agreements) will be able to meet all of its obligations under the various agreements. Credit analysts will pay particular attention to

²⁵ Standard and Poor's Project & Infrastructure Finance "Project Finance Summary Debt Rating Criteria." October 2001. p. 32.

²⁶ Different credit ratings agencies use different scales for ratings. Securities with a rating of BBB and above on the Standard & Poor's scale are considered to be "investment grade", while those below are "speculative" and attract financing on less favorable terms.

whether the Government has other liabilities, contingent or non-contingent, which could jeopardize its ability to meet its obligations under the PPP agreement.

Constraints on Ratings

The ranges of credit ratings a project can receive are constrained by a number of factors.

- **Sovereign foreign currency rating.** Credit ratings for PPPs, as for any project finance arrangement, depend primarily on the foreign currency rating of the country in which the project operates. Projects rarely receive better credit ratings than a country's sovereign rating. Standard & Poor's notes that "In some rare instances, a project rating may exceed the sovereign foreign currency rating if the project has foreign ownership that is key to its operations, if the project can earn hard currency by exporting a commodity with minimal domestic demand, or if other risk-mitigating structures exist". Pakistan's foreign currency notes were rated by S&P in November 2007 as B+/B. Its local currency notes were rated BB/B.
- **Credit ratings of counterparties.** The credit ratings of counterparties are relevant if the performance of the project depends on the ability of those counterparties to pay. The offtaker (Power Purchaser, in the case of Pakistan's IPPs) is the most important counterparty. Standard & Poors says it "generally will not rate a project higher than the lowest rated entity (i.e., the offtaker) that is crucial to project performance, unless the entity may be easily replaced, notwithstanding its insolvency or failure to perform"
- **The implementing institution.** The credit rating of the government institution that prepares the PPP project—PPIB or NHA in Pakistan will constrain the project credit rating if the insolvency of the institution would lead to the insolvency of the project
- **Force majeure.** If the project has to absorb the risk of any *force majeure* events, Standard and Poor's will generally limit the credit rating to BBB.

The credit enhancing value of debt guarantees

There are various types of guarantees that can be offered for a PPP project—these can vary based on the events that they cover, as well as on the amounts that they cover. One type of guarantee is the so-called debt guarantee. This is a guarantee that covers all or part of the project finance debt in a PPP project—it is also the most common form of guarantee.

Debt guarantees, however, are not always as credit enhancing as private parties might hope, because as Standard & Poor's says, they "cover only specified risks and may not pay a claim until after the project sustains a loss; they are not guarantees of full and timely payment on the bonds or notes"²⁷ Debt guarantees are not commodities, and their credit enhancing value depends on the specific design of the guarantee. Important design considerations include:²⁸

²⁷ *Supra* at 18.

²⁸ These bullets are summarized from Fitch Ratings. "Public-Private Partnerships: the Next Generation of Infrastructure Finance". Special Report, Project Finance. August 6, 2004.

- Whether disbursement of the guarantee is automatic or subject to the government's budget appropriation process
- The priority of payments in relation to other government payments
- What mechanism triggers the guarantee, in particular, whether payment can be made before default occurs or only after it occurs
- Whether the guarantee makes clear the government's process for reviewing the call on a guarantee and calculating the guarantee amount, including who is responsible for the decision, whether the decision must be made with a specific timeframe, and how much room there is for the government to make subjective decisions about the guarantee request
- Whether government can afford the guarantee, given its other commitments, including contingent liabilities under other PPPs.

A guarantee fund can help give lenders confidence on many of the points described above, and increase the credit enhancing value of debt guarantees.

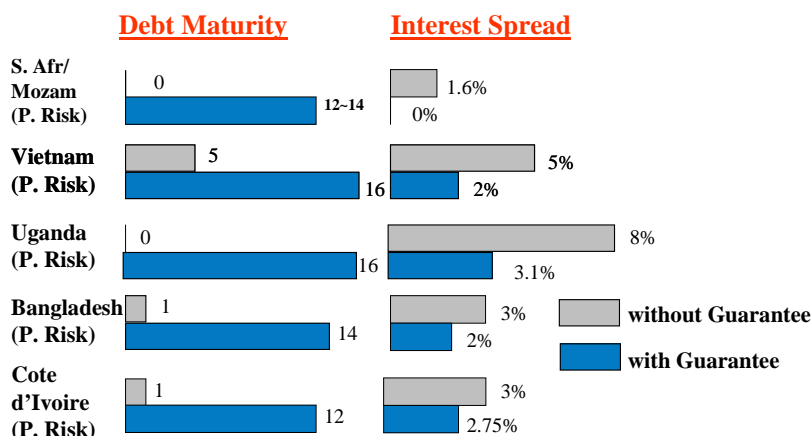
D.4 Empirical Data on the Value of Guarantees

Well structured guarantees clearly improve the project credit rating. Lenders will therefore be willing to offer longer loan maturities and lower interest rates to projects with well structured guarantees.

Because guarantees are all different, and because of the multitude of other risk factors credit ratings agencies must consider, it is not possible to know, in the abstract, the specific value of different guarantees in terms of credit rating or interest rate spread.

It is possible, however, to see general evidence of the value of guarantees. A good indication is the increase in maturity and reduction in interest rate achieved by projects with partial risk guarantees (PRGs) from international financial institutions. Figure D.3 shows how PRGs have helped to make longer term and lower interest rate loans available to PPPs in five countries. These partial risk guarantees lengthened debt maturities by 10 to 15 years, while reducing interest rates by between 0.25 and 5 percentage points.

Figure D.3: Better Terms Available to Projects with PRGs



Source: The World Bank, IBRD Project Finance and Guarantees Group

World Bank estimates of a wholesale approach to partial risk guarantees in Peru and Brazil suggest that a facility offering PRGs could improve project credit ratings by two to four notches, possibly allowing the project rating to exceed each country’s sovereign credit rating.

D.5 Implications for Designing a Guarantee Fund

The evidence is clear that a well designed Guarantee Fund can significantly lower interest rates and extend debt maturities, compared to ordinary government guarantees. A Guarantee Fund is not just a way to manage fiscal risk better—it can also be key tool in mobilizing finance for infrastructure.

The promise of a Guarantee Fund—to simultaneously reduce government risk while encouraging private investment—can only be achieved if lenders and rating agencies perceive the Fund as distinct from the Government. There is a real risk that a Guarantee Fund fully owned and controlled by the Government would be perceived by private investors as having the same credit-rating as the country.

Government can reduce the risk that lenders and rating agencies see the Fund as no more reliable than the government by using the design attributes we have recommended. These attributes include giving the fund its own capital, ensuring that this capital is adequate to fully cover its exposure, and endowing the fund with independent management and governance. All of these attributes will improve the creditworthiness of the Fund in the eyes of credit-rating agencies. The guidelines that we have developed and present in Section 6 reflect these considerations.

Appendix E: Allocation of Risks in IPP Projects

This appendix describes the allocation of each risk specified in the 2002 Policy for Power Generation Projects in detail.

▪ **Preconstruction Risk:**

- **Financial Closure Failure Risk:** Under Article II, Section 2.2 of the Implementation Agreement (IA), the failure on part of the company to reach financial closure within the prescribed period as specified in the Letter of Support (LOS) will lead to termination of LOS and the effective articles of IA, and the government will encash the Performance Guarantee submitted by the company to cover the liquidated damages. Company therefore assumes this risk.
- **Tariff Determination Risk:** Failure to settle tariff for unsolicited projects with the NEPRA or Power Purchaser shall lead to termination of the Letter of Interest. Power Purchaser or government shall not be liable for any costs incurred by the power purchaser in the entire process

▪ **Construction Risk:**

- Under Article III of the IA the private party will be entirely responsible for the design, insurance, finance, acquire, construct, complete, and commission the project. Company shall be responsible to acquire the site, and make any arrangements deemed necessary to procure the necessary equipment for the project.
- Company can transfer this risk to the Engineering, Procurement and Construction (EPC) Contractor by entering into the EPC contract. However, any delay or failure by the contractor shall be the responsibility of the company.
- Company shall obtain an All Risk Insurance Policy for the EPC contractor. The risk is thus passed onto eventual insurer in this case.

▪ **Construction Cost Overruns:** EPRA shall approve the tariff on the expectation of ‘fixed price EPC contract’; however, any legitimate cost escalation shall be adjusted in the tariff determined by NEPRA

▪ **Completion Delay:**

- **Lapse of Consent:** Government will facilitate the company in acquiring necessary consents from the relevant authority. Completion deadline shall be extended by a reasonable period in such case. However, company should make all necessary efforts to acquire the same by itself.
- **‘Customs’ Risk:** Government shall make sure that all machinery imported for the purpose of use in plant is released within 30 days of ‘delay notice’ issued by the company to the government.
- **Construction start delay risk:** Company shall bear this risk, unless the delay is due to Force Majeure, or breach by Power Purchaser of any agreement.

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Government shall have the right to (i) terminate the Implementation Agreement (IA), (ii) deduct liquidated damages.

- **Power Purchaser Performance Delay:** Failure on part of the power purchaser [including construction of the interconnection facilities by the required date] which effectively causes a delay in commissioning of the complex shall be reimbursed in the form of monthly payments to the IPP.
- **Force Majeure Delay Risk:** Power Purchaser shall pay to the company monthly compensation (equal to the interest accruing on the outstanding debt) for the duration of the force majeure event.
- **Security Risk:** The Government will provide the additional security personnel for the protection or security of the site in extraordinary cases. However, no distinction is made of between security need arising out of political or non-political events. The company shall bear the charges of additional security in such case.
- **Operation and Maintenance Risk:**
 - Company shall bear all risks associated with operation and maintenance
 - Contractor Performance Risk: Company is entitled to procure an O & M Agreement with a third party. Any termination of such agreement and any losses arising out of the same shall be the sole obligation of the parties involved
 - Government shall not be responsible for any liability of the company, except those pursuant to IA agreement
 - Company and the Power Purchaser shall hire qualified personnel for the operation of the plant. This step would help in mitigating this risk as a whole.
- **Mechanical Failure or Breakdown/ Technical Risk:** Company shall obtain and maintain insurance from financially strong and internationally reputable companies. Thus this risk is passed onto the insurance company.
- **Legal and Regulatory Risks:**
 - **Change in Taxes:** Company shall not be subject to taxation in Pakistan on its profits derived from electric power generation. Power purchaser shall reimburse the company for any change in tax that would result in increased costs to the power purchaser. Likewise any favorable change in tax that would result in savings for the Company shall be passed on to the power purchaser in the form of decreased tariff. Foreign Investors will be taxed according to the Bilateral Tax Treaties and hence they are immune against any change in local tax laws. Under this arrangement power purchaser assumes this risk.
 - **Changes in Custom Duties:** Custom Duty on import of machinery is fixed at 5%, hence protecting the company against this risk.
 - **“Non Discriminatory’ Usage” Risk:** Government can use the term ‘non discriminatory’ to gain political or commercial advantages because the PPA

does not comprehensively dilates the meaning of the term and the associated conditions under which the term can be applied

- **Structural Change risk:** GoP shall guarantee the obligations and payments of any succeeding entities formed as a result of any structural change leading to unbundling of the power purchaser.
- **Change in Law Risk:** GoP shall adequately compensate the company for any change in law (or interpretation thereof) adversely affecting the company to the extent that the company is restituted to the pre-change condition.
- **Governing Law Risk:** It is obscure as whether the Governing Law or the terms of the Agreement will have precedence in case of disagreement between the two. Company thus bears the risk in such cases.
- **Corruption Charge Risk:** Government can terminate the IA on charges of corruption/ corrupt business practices. Company shall pay the government adequate penalty if accusation is proved. Company therefore undertakes this risk.
- **Political Risk:**
 - **Currency Convertibility and Transfer Risk:** Company is allowed to maintain foreign currency bank accounts within and outside Pakistan, and to transfer any funds necessary to carry out its obligations under the Project Agreements and ‘Financing Documents’. In case of non availability of foreign exchange through normal commercial operations GoP shall make available the required foreign currency through the State Bank of Pakistan. Further, the company is free to transfer and repatriate any funds necessary to carry out its operations and obligations under Project Agreements. Thus the Government bears the currency convertibility, availability and transferability risk.
 - **Expropriation Risk:** Government of Pakistan guarantees that neither it nor any public entity shall expropriate the company’s assets. Government through this undertaking protects the company against this form of political risk.
- **Credit Risk:** The non-escalable component of the tariff provides for debt repayment, and is dependent upon the expected available capacity. PPIB reviews the ‘principal repayment schedule’ to ensure that it can be covered by the expected non-escalable tariff. However, in case of default by the company, lenders have the right to take over and subsequently operate or sell or transfer the complex. Company and the Government together bear this risk under such arrangement
- **Step In Risk:** Lenders can transfer the complex upon assuming its rights and interests in the event of default by the company. However, Government can impose certain conditions before granting its consent and approval for the transfer. Further, the Government would facilitate and expedite the transfer process. The risk is therefore shared between the government and the lenders (primarily the lenders)
- **Financial Risk:**

- **Interest Rate Risk:** Power Purchaser assumes the exchange rate risk by indexing the non escalable part of the tariff with the LIBOR and KIBOR for foreign and local loan respectively.
- **Foreign Exchange Risk:** The capacity payment and the operation and maintenance costs are adjusted for fluctuations in the exchange rate. The risk hence borne by the power purchaser.
- **Performance Risk:** Under the PPA, the lead investor must hold 20% of the Ordinary Share Capital of the company for a period of 6 years following the commercial operations date. This insures the lenders’ interest in the operations and business of the company
- **Force Majeure:**
 - **Payment Risk:** In the event of Force Majeure affecting the Power Purchaser or the Government, the latter shall continue to make tariff payments or guarantee payments to the company. Similarly, the Company shall be obligated to make any payments due on its part to the power purchaser or the Government
 - **Labor Risk:** Any strike, work to rule, go-slow or analogous labor action whether politically motivated or not, and either country wide or not shall be considered a force majeure event. Company shall be relieved of its obligations during continuance of such event (except for the monetary payments due). The power purchaser shall in this case pay to the company the capacity payments and the energy payments applicable according to the available capacity and net dispatched output.
 - **Pakistan Political Force Majeure/Change in Law Force Majeure:** Power Purchaser shall pay the company ‘Restoration Costs’ for any material damage or up gradation required as a result of such event. In addition power purchaser shall continue to make ‘full capacity payments’²⁹ to the company during the pendency of force majeure event and the restoration period
 - **Insurance Cost Risk:** Any increase in insurance cost resulting from ‘Pakistan Political Force Majeure Event’ shall be treated as a pass through item
 - Neither party shall bear the costs of losses incurred by the other party as a result of force majeure event except as stated in the foregoing cases. The affected part and the insurers bear the risk in all such cases.
- **Termination Risk:**
 - **Shareholder Risk:** The decision by the shareholders to wind up the company shall be considered a company event of default. Power Purchaser shall only pay compensation equal to the outstanding loan amount. This risk is thus borne by the company (or the shareholders).

²⁹ Where ‘full capacity payment’ would mean: Capacity payment calculated assuming Available Capacity equal to Average available capacity (i.e. the average of available capacity prior to the occurrence of PPFME or CLFME).

- **Company’s Default Risk:** In the event of company’s default government would have the right to acquire the plant and pay (a) any outstanding principal amount payable to the lenders on the date of acquisition of the complex, (b) any other loan for the capital improvements to the plant that are required as a result of ‘change in law’ or a ‘Pakistan Political Force Majeure Event’. Shareholders therefore bear this risk.
- **Government’s event of default:** Government shall pay (a) +(b)+(c) initial equity investment minus depreciation plus (d) discounted net (12%) future cash flows over the lesser of (i) 4 years (ii) remainder of the term, plus (e) additional equity amounts contributed for the restoration of plant following a force majeure event.
- **Change in Law:** In case of termination occurring due to change in law, the government shall pay the company in a similar manner as under the ‘Government’s Event of Default’. Government bears the termination risk in the following stated cases.
- **Termination due to Other Force Majeure Events:** Shareholders bear this risk as the government does not pay the discounted net future cash flows to the company.
- **Termination due to Pakistan Political Force Majeure Event³⁰:** Government and shareholders bear this depending upon certain conditions. Insurer also bear this risk as any termination resulting from force majeure event invoking insurance shall be used to make payments to the company.
- **Pre operations termination:** Company shall reimburse the government if such termination occurs, other than because of GoP Event of Default, Change in Law, or Pakistan Political Event. Company shall pay all costs relating to the project incurred by the government (power purchaser). However, this risk is shared between the government (power purchaser) and the company as the amount payable in such case cannot exceed \$200,000 (\$150000).
- **Environmental Risk:** It shall be the company’s responsibility to meet the requirements of Pakistan Environmental Protection Agency Act 1997. Any penalty for any breach thereof shall be paid by the company.
- **Contractual Risk:** Failure of the company to abide by the contract or prevarication in contract shall be dealt under company’s ‘Event of Default’, and would lead to ‘Termination for Company’s Default’.
- **Off-taker Risk:** The Government guarantees the payment obligations of power purchaser. In addition, the government shall have the right to cure the default of power purchaser upon issuance of a notice by the company. The government therefore commits itself to safeguard the company against the off taker risk.
- **Dispute Risk:** In case of a dispute referred to an “Expert”, the cost thus incurred would be borne by both parties equally.

³⁰ See Implementation Agreement Article XIV

- **‘Cost Escalation during Operation’ Risk:**
 - **Fuel Cost Escalation:** Power Purchaser bears this risk under the PPA through subsequent adjustment in the tariff.
 - **Other Costs:** Company/Private Party shall be responsible for any other cost fluctuations, except those specified in this draft.
- **Inflation Risk:** The tariff structure provides indexation for changes in local inflation as well as US inflation³¹
- **Technical Risk:**
 - **“Capacity Shortfall/ Revision”; Dispatch Risk:** Company shall pay the government liquidated damages for any downward revision in the declared contract capacity/ available capacity, or failure to comply with the dispatch instructions. This risk is therefore borne by the company.
 - **Up gradation Risk:** The costs incurred by the company to upgrade the complex or the interconnection facilities to comply with the requirements of the power purchaser (additional to the original requirements) shall be reimbursed to the company.
 - **Metering System Fault Risk:** Power Purchaser shall be responsible for the repair of the metering system.
- **Demand Risk:** Power Purchaser shall be the exclusive buyer of electricity under the Power Purchase Agreement. It shall make monthly capacity payments to the company for the availability of generation capacity, independent of whether the energy is used or not. The power purchaser therefore assumes the demand risk.
- **Revenue Risk:**
 - For gas projects power purchaser shall pay minimum annual energy payments on ‘take or pay’ basis
 - The revenue risk for hydro projects is covered to an extent by setting the concession period (for BOOT projects) at 50 years.
- **Fuel Supply Risk:** Company is responsible for entering into Fuel Supply Agreement with a reliable supplier and transporter. Government of Pakistan shall guarantee the performance of the fuel supplier
- **Water Supply Risk:** GoP shall guarantee the terms and conditions of ‘Water Use License’.

³¹ Indexation for US inflation was incorporated after amendment in the 2002 Power Policy

Appendix F: Summary of Legislation Relevant to Guarantees

This appendix summarizes the legislation relevant to guarantees and contractual obligations that create contingent liabilities for government entities (institutions) in Pakistan, apart from the FRDL Act (which was summarized in Section 3.5). This appendix covers:

- Legislation binding the Government of Pakistan to guarantee loans, dividends, or return on bonds and shares of certain entities
- Legislation committing the Government to cover any losses incurred by an entity
- Legislation committing the Government to assume liabilities in the case of default by certain public entities on their debt
- Other legislation related to guarantees.

F.1 Guarantees on Loans, Dividends and Other Returns

The Government of Pakistan is legally bound to guarantee loans, dividends, or return on bonds and shares of certain entities. The Government's exposure under these guarantees is limited in some cases. This appendix summarizes the legislation applicable to these types of guarantees.

House Building Finance Corporation (HBFC) dividend guarantee. The amount subscribed on the shares of the corporation and the minimum annual dividend thereon must be guaranteed by the Central Government, according to HBFC Act 1952, Act XVIII of 1952, Section 5.

National Development Finance Corporation (NDFC) bond/loan guarantee. The Federal Government may, at the request of the NDFC, guarantee the repayment of principal and payment of interest of any amount borrowed by the NDFC or any bonds or debentures issued by the NDFC with the prior approval of the Federal Government. The NDFC may, with the prior approval of the Federal Government, borrow from the State Bank of Pakistan or any other lending agencies or institutions. The total of the amounts borrowed, amounts due on the bonds and debentures issued, and the contingent liabilities of the NDFC must not at any time exceed twenty times the aggregate of the amount of paid-in share capital and reserves of the NDFC.

West Punjab Thal Development Authority Loan Guarantee. If any money borrowed under section 45 of the West Punjab Thal Development Act, or any interest or costs due in respect thereof, is or are not repaid according to the conditions of the loan, the Provincial Government shall itself make such payment and may attach the rents and other income of the Authority (West Punjab Thal Development Act, 1949 Chapter VII)

State Bank of Pakistan Shares to be Approved Securities. The shares of the State Bank of Pakistan are legally considered to be "approved securities" for purposes of the Insurance Act, 1938 and the Banking Companies (Control) Act, 1948. This means that they are guaranteed by the Federal Government. (State Bank of Pakistan Act, Act XXIII of 1956)

Regional Development Finance Corporation (RDFC) Bond/Loan Guarantee. The Federal Government may, at the request of the RDFC, guarantee the repayment of principal and payment of interest or return any sums borrowed by the Corporation under subsection

(1) of the Regional Development Finance Corporation Ordinance (1985) or any bonds, debentures, securities, or other instruments issued by the RDFC with the prior approval of the Federal Government. The total of the amounts borrowed, amounts due on the bonds and debentures issued, and the contingent liabilities of the RDFC must not at any time exceed twenty times the aggregate of the amount of paid-in share capital and reserves of the RDFC. (Ordinance XXII of 1985, Regional Development Finance Corporation Ordinance, 1985)

Capital Development Authority (CDA) Bond Guarantee. The CDA may, with the previous approval in writing of the Central Government, raise funds for the purpose of raising its working capital by issuing bonds and debentures carrying interest at such rates as may be approved by the Central Government. The repayment of the principal and the payment of interest due on the bonds and debentures issued by the Authority will be guaranteed by the Central Government. (Capital Development Authority Ordinance, 1960, Ordinance XXIII of 1960)

Pakistan Insurance Corporation (PIC) Share Return Guarantee. The shares of the PIC shall be guaranteed by the Central Government as to the repayment of the principal and the payment of annual dividend at such minimum rate as may at the time of issuing the shares be fixed by the Central Government by notification in the Official Gazette and shall be deemed to be approved securities for purposes of the Trusts Act, 1882. (Pakistan Insurance Corporation Act, 1952)

Peoples Finance Corporation (PFC) Bond Guarantee. The PFC may, for the purpose of raising working capital, with the prior approval of the Federal Government, issue and sell bonds and debentures carrying interest at such rates as may be approved by the Federal Government. The total of the sums due on such bonds and debentures issued and outstanding, and the contingent liabilities of the Corporation in respect of guarantees, must not exceed four times the total paid-in share capital and the reserve fund of the PFC. The bonds and debentures of the PFC are to be guaranteed by the Federal Government as to the repayment of principal and payment of interest at such rate as may be fixed by the Federal Government at the time the bonds and debentures are issued. (Peoples Finance Corporation Act, 1972)

Pakistan Maritime Shipping Minimum Return on Shares. Where the Federal Government takes over the management of an establishment but does not hold majority portion of shares in a company carrying voting rights, or controlling proprietary interests, therein, it shall, on behalf of such establishment, guarantee to the shareholders or proprietors of such establishment, a minimum annual rate of return equivalent to one per cent above the bank rate. (Pakistan Maritime Shipping (Regulation And Control) Act, 1974)

F.2 Obligations to Cover Losses

In other cases the government is committed to cover any losses incurred by an entity. These do not fall under the conventional definition of guarantees but result in contingent liabilities to be incurred by the government.

Lahore Development Authority Budget Deficit. In the case of deficit revenue of the Authority, the Government shall provide from its own revenues or from any other source, such sum as may be necessary for the efficient performance of the functions of the Authority under this Act. (Lahore Development Authority Act, 1975)

Balochistan Water and Sanitation Authority (BWASA) Deficit. In the case of a deficit in the revenue of the Authority, the Government shall provide from its own revenues or from any other sources, such sum as may be necessary for the efficient performance of the functions of the Authority under this Act. (Balochistan Water And Sanitation Authority Act, 1989)

Pakistan Telecommunication Authority Licensee Fees. Any surplus of fees recovered over the approved amount specified in the budget in a year shall be remitted to the Federal Consolidated Fund and any deficit from fees than the estimated amount shown in the annual budget shall be made up by the Federal Government through appropriations. (Telecommunications Ordinance, 1994)

Quetta Water and Sanitation Authority (QWASA) Deficit. In the case of a deficit in the revenue of the Authority, the Authority may request the Provincial Government to provide from its own revenues or from any other sources, such sum as may be necessary for the efficient performance of the functions of the Authority under this Act. (Quetta Water and Sanitation Authority Act, 2004)

Legislation covering the following obligations has expired since it was issued:

- **Pakistan Postal Services Corporation (PPSC) Deficit Finance.** The annual budget of the Corporation shall be approved by the Board and any deficit therein shall, during the first five years, be met by a grant from the Federal Government. (Pakistan Postal Services Corporation Ordinance, 1995)
- **Pakistan International Airways.** The Government must make good any losses sustained by the Corporation during the three years beginning September 30, 1953, but not thereafter unless otherwise determined by the Central Government. (Pakistan International Airlines Corporation Act of 1956)

F.3 Government Liability

The Government assumes limited liability in case of default by certain public entities on their debt. This includes the Pakistan Postal Services Corporation and the Pakistan Telecommunication Authority, as set out in the Pakistan Postal Services Corporation Ordinance, 1995 and the Pakistan Telecommunication Corporation Ordinance, 1990.

In PPP contracts wherever the term “National Highway Authority” (NHA) appears it implied that this includes Government of Pakistan (GoP), and wherever the term “GoP” is used it is implied that this includes NHA. Thus the government assumes liability of NHA under PPP contracts.

F.4 Other Legislation

Other than the above mentioned contingent liabilities that are incurred by either Provisional or Federal governments, an ordinance providing for the coverage of exchange rate risk on certain loans was also enacted in 1997 (Exchange Risk Coverage Ordinance, 1997)

National Insurance Corporation also provided export credit guarantees to exporters under the ‘Export Credits Guarantee Scheme Rules, 1962’, however the scheme was abolished in 2001.



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