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WORLD BANK/ GOVERNMENT OF PAKISTAN

OPERATIONAL DESIGN FOR THE PROJECT DEVELOPMENT FUND AND FOR THE VIABILITY GAP FUND

March 2010

FINAL REPORT

ORIGINAL

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CEPA

CONTENTS

EXECUTIVE SUMMARY

This Final Report is the fifth deliverable for the World Bank funded project "Operational design for the Project Development Fund and for the Viability Gap Fund". Taking into account feedback and further consideration of issues raised during the assignment,, it aims to:

- provide high level recommendations on the overall PPP framework in Pakistan, recognising international best practice but also taking into account the specific Pakistan context and the challenges faced therein;
- design possible structures for the Project Development Fund (PDF) and for the Viability Gap Fund (VGF) that are informed by the current local enabling environment for PPPs, including the institutional capabilities and the existing pipeline of PPP projects; and
- provide an estimate of funding requirements for PDF and VGF on the basis of the project pipeline analysis in Pakistan which has been undertaken last May.

Whilst we have sought to work as far as possible with existing recommendations, we have identified a number of issues which we think require changes to the existing documentation, most notably with the VGF.

This Final Report incorporates feedback from the World Bank and the Government of Pakistan, in light of which we have revised some of our higher level recommendations before developing our recommended approaches to PDF and VGF in greater detail.

Whilst our initial remit and terms of reference were to focus on the development of PDF and VGF, it became apparent during our visit to Pakistan in May 2009 that it was important to fit these vehicles into the broader PPP enabling environment in terms of legal framework, institutional structures and processes. As such we undertook a reasonably detailed review of existing arrangements in Pakistan and how these compared to international best practice, to the extent that this exists. We then made specific recommendations as to how such principles might be incorporated within Pakistan's arrangements, taking into account our understanding of this context. Following feed-back on our recommendations, we are of the view that achieving what we believe to be international best practice should be a medium term goal. Given, particularly, the institutional challenges faced in progressing the PPP programme, we believe an appropriate immediate strategy is to develop the capabilities which already exist, whilst aiming to build competencies elsewhere over the medium term.

Key aspects and recommendations provided in this report are summarised below.

Assessment of the enabling environment for PPP in Pakistan

High-level sponsorship and support for the PPP approach

The Government has made considerable steps in introducing the PPP programme and has a clear appetite for the programme to succeed. However, lessons elsewhere demonstrate the importance of continued support and sponsorship for a PPP programme, including ownership and responsibility for its outcomes. Moreover, it may be, in certain instances, necessary to set out PPP as being the only route through which Contracting Authorities might access government budgetary allocations for capital expenditures. It is essential that the private sector is not seen as an investor of last resort.

Management of contingent liabilities

The consultation process demonstrated the lack of management at centralized level of contingent liabilities, including those arising from government guarantees issued to private sector party on IPP projects and/ or to private sector lenders on publicly funded projects.

In general, there does not appear to be an evaluation process of the appropriateness of the requested guarantee and the assessment of the form and quantum of guarantee.

When it comes to the overall assessment of the government exposure, there is a risk that these contingent liabilities are not accurately and systematically considered. A few recommendations in this regard are as follows:

- Government should have the capability to evaluate whether or not it is necessary to provide a form of guarantee, to decide which form is most appropriate, and to negotiate it with the private party.
- Once issued, the guarantee generates a contingent liability for the Government. Monitoring the impact of these liabilities on the total Government exposure should be an important task of the public finance function.
- Evaluating and monitoring the risk of contingent liabilities requires strong financial skills and expertise. We would encourage GoP not to underestimate the complexity of these activities and the technical expertise required to undertake them.

Improving the understanding and capabilities of PPP stakeholders

The principal and unquestionable observation from our consultations was the overwhelming lack of capacity of the public sector to undertake and implement PPP infrastructure projects. There is a limited understanding of the rationale for PPP and the involvement of the private sector in the delivery of infrastructure services, which were previously the preserve of the public sector. There is a limited understanding of specific *risk-sharing* structures needed for PPP transactions, as the distinction among the different forms of PPP arrangements. There is also limited capacity in the public sector to initiate, develop, prioritise, package, and manage PPP projects.

In summary, one of the strongest needs identified in the consultations has been to build the capacity of all levels of government, but especially at the Line Ministries level for PPP projects. As with many states in India, this might be achieved by the establishment of PPP nodes within key Contracting Authorities, including State governments.

High level options

As introduced above, given the circumstances in Pakistan, where knowledge of PPP is limited and where IPDF is arguably the only institution focused on PPP issues, there are probably two options that might be considered.

The first of these would be look to develop the framework as set out in Section 2, which emphasises the need to develop the capabilities of Federal and Provincial Contracting Authorities to sponsor and deliver the PPP cycle. This would involve considerable investment in developing particularly line ministry capabilities.

The second would be to see this as a medium term objective, perhaps three to five years in the future and as a short term measure to build on the existing capabilities and functions of IPDF, although as set out, we believe that from a best practice point of view, a number of the functions we propose involve a number of conflicts. Moreover, this option is not without its costs either, as it is important that IPDF has better access to both expensive in-house – potentially through secondments from Pakistan's investment banks – and external PPP skills, with international experience in PPP transactions.

The principal criterion by which the two high level options might be evaluated is their respective potentials to break the impasse which is currently preventing PPP transactions from being undertaken. There are a number of specific challenges to be faced, such as:

- the widespread general lack of understanding of PPP and what it entails;
- the understandable desire of line ministries and some other Contracting Authorities not to have project sponsorship and ownership taken away from them by IPDF; and
- the need to increase confidence in IPDF by ensuring that they themselves can staff up with people adequately – for instance, secondees from Pakistani investment banks and/ or UK PPP/PFI-trained Pakistani diaspora – and by ensuring that they can provide experienced third party transaction advisors.

On balance, whilst we have concerns regarding a very centralised approach, we believe that the current situation in Pakistan warrants, at least temporarily, such an initiative, to "kick-start" the PPP programme.

The centralised approach would create a new "ring-fenced" division of IPDF which would provide development advisory services to contracting authorities and/ or sign joint development agreements (JDAs) with contracting authorities, in which IDPF and the contracting authority become joint sponsors of the project. This new division, known as Transaction Advisory and Development Services (TADS), would have a finite and clearly defined mandate, and be managed by a separate Director. Contracting

Authorities would have the option of utilising the services offered by TADS but would not be obliged to use them.

Design of the Project Development Fund (PDF)

Role and mandate

It is clear from our consultations there is a need for support to the project development process at all stages. Given our recommendations on the overall PPP framework, we suggest that PDF's resources be used to (i) provide resources for third party advisors for project development and transaction advisors, whether they be provided directly to the Contracting Authority or to TADS, and (ii) ensure that TADS can afford to second or contract a small team of experienced transaction advisors and infrastructure developers.

It is hoped that the deployment of these resources will improve the quality of PPP structures so as to attract private investors and deliver value for money to the Government. An intermediate aim is to develop the capacity of public sector institutions to manage, own and execute PPPs. The knock-on effects will be to increase the number of PPP transactions being completed and reducing public-sector budgetary commitments.

The PDF will have a Facility Manager (FM), whose role it will be to provide payment and, at the most, procurement services. In the case of the former, the facility manager would oversee the payment of third party contractors working for the different contracting authorities. As procurement agent, the FM's role would be to arrange the hiring of third party advisors, for instance in terms of developing terms of reference for a particular scope of support and running a competitive procurement process for them. PDF resources, albeit a much smaller proportion, will be used to fund the operations on the facility manager.

Institutional structure

We would argue that the PDF, as a pool of financial resources, might be housed within the MoF, with possible input from the Ministry of Planning and Development to help broaden the sponsorship of PPPs. We suggest the following:

- As mentioned above, it should have a Facility Manager (FM), who will have the role of payment agent and of procurement agent, if requested by the Contracting Authority.
- It should have a Board who will act as "Evaluation Committee" in awarding advisory support to PPP projects. All proposed disbursements above a certain threshold should be approved by the Board. The Evaluation Committee shall also have discretion over the terms of the funding provided to TADS.
- It should operate under a specific and clear investment policy and disbursement guidelines.

Responsibility for facility management

Given the capacity built to date and its wider role as a Secretariat for the PPP Taskforce IPDF would be an obvious candidate for this role. However, given its existing role in screening projects and as a 'Project Facilitator', and the proposed creation of TADS, conflicts of interest might arise. Also, given the IPDF role in the PPP policy development function, the FM role could be a distraction to this and *vice versa*. These drawbacks might be mitigated through the following:

- **Ring-fencing activities**. The FM will be hosted as a separate, ring-fenced, division of the IPDF, who would effectively be undertaking a trustee role of the PDF technical assistance facility. In practice, such ring-fencing shall be achieved through governance 'checks and balances' and operational 'Chinese Walls'.
- **Narrow FM role**. The role of the FM will be restricted to one of payment and procurement agent. This will involve limited capacity and in-house skills, and ensure that the FM does not gain a vested interest or sponsorship role in the projects it supports.
- **Mechanistic approach**. The PDF facility manager will not directly evaluate applications for funding in terms of the underlying project's viability. Rather, they will apply an explicit and stated set of evaluation criteria. This mechanistic approach is designed to ensure objective decisions on disbursements.

If these roles and responsibilities are clearly defined and possible conflicts managed, then IPDF may be appointed to manage the PDF.

Product offering

The PDF's main product offering shall be grants to Line Ministries to contract third-party advisers for project development activities and transaction support, as set out above. There are three routes to applying for PDF funds:

- **Option 1**: The Contracting Authority applies directly to the PDF for resources to appoint third-party Transaction Advisers.
- **Option 2**. The Contracting Authority or TADS, where the latter is acting as a project development adviser to the former, apply to the PDF for resources to appoint third-party Transaction Advisers.
- **Option 3**. The Contracting Authority or TADS, where they have signed a JDA, apply to the PDF for resources to appoint third-party Transaction Advisers.

The division of tasks, in the first instance, between the Contracting Authority and TADS, shall be the subject of their advisory agreement or JDA. The division of tasks, in the second instance, between the Contracting Authority/ TADS and the third-party Transaction Adviser, shall be the subject of their application to the PDF. The application and subsequent agreement with the FM shall detail the terms and conditions of the financial support provided.

The PDF shall also provide direct financial support for TADS to build capacity and skills in PPP transactions, for example through secondments from investment banks.

The PDF shall fund different activities through the project development cycle from "early stage" feasibility studies to "later stage" transaction advisory support in the structuring and negotiation phases. Early stage development activities, such as pre-feasibility and feasibility studies, are relatively low cost but they are risky as at this stage projects have a high development risk component in terms of probability of not progressing. Formal transaction advisory services such as those for structuring, procuring and negotiating the PPP, involve higher costs but are 'less risky', as, at this stage, the project viability has already been screened and prepared with structuring options.

Funding

While the PDF should be prepared to write-off early stage costs for projects that do not progress, it should aim to charge successful projects a development fee, defined as a multiple of external advisory development costs incurred at this early-stage of project development. The proportion of projects not achieving financial close will impact the sustainability of the PDF.

As to transaction advisory costs, it is assumed that the full cost of these services is recoverable at financial close, e.g. through a 'success fee', directly covering costs (i.e. no multiple, or perhaps a small margin). Therefore, the 'burn-rate' for PDF resources will be affected by the rate of projects for which transaction advisory costs are incurred but do not subsequently reach financial close.

TADS will charge its government partner a different structure depending upon whether it is acting in an advisory capacity or as a developer. As an adviser, it will charge the Contracting Authority a small negotiated fee. Where it enters a JDA with the Contracting Authority, TADS will capture the multiple element of the development fee, so that the PDF is repaid the cost element. Any profits made should then be put back into funding developer activities on its own account (potentially allowing the PDF to reduce its direct non-project subsidy to TADS to cushion the loss of development fee multiple).

Depending on the funding assumptions described above, the fund will need 'topping-up' in order to remain operational at a particular capacity. Otherwise, it will be wound down until resources are depleted.

Estimate of PDF funding requirements

In order to estimate the PDF funding requirements, we developed a Base Case scenario which is based on the project pipeline analysis we developed in May 2009. However, we have also developed an Expanded Case to reflect different assumptions on the size and quality of the pipeline. For each scenario, sensitivity analyses were undertaken to estimate the impact of different value of key variables on the PDF funding need.

In conclusion, this analysis provides an estimate of the external funding requirements for PDF to support operations for the first five years, under different scenarios and assumptions. The results of the analysis suggest the following:

- In a Base Case PDF is expected to support the development of 22 projects in five years, five of which are estimated to achieve financial closing by the end of Year 5. On these base assumptions, the external funding requirement over the first five years is almost US$7m. This amount is estimated to increase to US$10m, if more conservative assumptions are made around the success rate of project closing, the length of the project development process and the ability of PDF to generate revenues at project closing.
- In an Expanded scenario, i.e. where the project pipeline is developed more quickly than in the Base Case, PDF might have the opportunity to provide support to a larger number of projects in the first five year of operations. The ranges for external funds required and project closings based on the same sensitivities are between US$13m and US$19m for between 4 and 10 projects respectively.

Design of the Viability Gap Fund (VGF)

In developing the design for the VGF, we worked with the existing guidelines, we provided comments on the current guidelines and we suggested an approach to the VGF structure and product offering that should help address some of the identified issues

Comments on the current VGF guidelines

We believe that the current VGF guidelines are based on OBA best practice[1], rather than necessarily reflecting the potential subsidy requirements of the PPP projects in Pakistan. Our principal concern is that very few, if any, projects will be able to benefit from it given current rules, since the draft guidelines do not separate the causes of poor project viability. An unviable PPP project is one where: customers have low ability/ willingness to pay; projects lack customers in initial years and are below efficient scale; projects cannot attract/ access tenor financing at affordable rates; financiers are risk averse and require equity cushions; and where the life of an asset exceeds the PPP contract leading to high depreciation charges. In this context, there are three types of unviable project that might require subsidy:

- An economically justified project can lack viability, for whatever reason, but might involve little direct targeting of the poor. A road project is a good example.
- Other projects might be viable on certain terms, but the resultant customer coverage or user fees/ tariffs might exclude the poor. These projects can be modified during the definition stage, e.g. through additional network extension or connectivity, in order to include marginalised groups, but, without subsidy, this will reduce the project's viability.

[1] The envisaged scheme has much in common with rural telecommunications and electrification funds.

- There may be other projects specifically targeted at low-income groups with potentially high socio-economic pay-offs but with limited financial viability.

In addition, we would suggest that there are additional specific issues, including:

- *Minimum subsidy competition*. The evidence from India would suggest that everybody bids for the subsidy available when it is set at a maximum of 20%,[2] so it is hardly a differentiating factor in the overall competition. Setting an arbitrary limit such as this neither takes into account sector requirements, nor types of infrastructure.

- *Not a holistic subsidy evaluation*. Moreover, the VGF is one form of subsidy that might be received by the project – it is quite possible that other forms of subsidy are also provided to the project, such as government-backed credit guarantees for which the project does not pay a fee or premium. From a policy perspective, in evaluating maximum subsidy requirements, it is appropriate to take a more holistic review of the amount of subsidy resources allocated to a given project.

- *Potential for redeemability of grants.* This is quite difficult to build into a simple competition. Designing redeemability features can be important to avoid the provision of windfall gains to providers when outcomes are better than anticipated. Ideally, some or all of the subsidy should be paid back in such circumstances.

- *Limiting subsidy to the poorest.* This may be fine for the types of OBA-type connection subsidies envisaged, but such supply side subsidies are difficult to limit to the poorest when it comes to a range of other infrastructure which might be funded by the VGF, namely roads, ports, airports, power stations, water treatment facilities etc.

- *The requirement for majority ownership by a grant recipient.* We would assume that the rationale for this is to promote private sector efficiency. However, as most water and electricity distribution utilities responsible for connecting households are publicly owned, this would seem to limit the potential take-up of VGF grants to say, largely cellular telecommunications projects (especially combined with a need to target the poorest).

As set out, we believe that the above features will severely limit the applicability of the VGF to few, if any, projects.

Suggested approach

Based on this analysis, we presented a revised approach to the VGF which we believes builds on what has been developed already, but also provides for a much greater range of projects, whilst maintaining a rules based approach.

Key features of the suggested VGF approach are:

[2] Although the VGF support from the Government of India is set at a maximum of 20%, another 20% VGF can be provided by the sponsoring entity. A detailed case study on India's VGF and PDF is set out in Annex 1 of this report.

- **Design of "Gateway 1".** Gateway 1 is designed to support the extension of network connections to targeted groups of households, where the household affordability gap is clearly identified and quantified and the benefit of the subsidy is demonstrable. Gateway 1 will provide projects with fast access to capital grants post financial close and upon verification of the connections being made. Any savings made through lower subsidy requirements, i.e. where the bids offered by private-sector firms in the competitive private tender process are lower than the initial VGF allocation, will be repaid to the VGF.

- **Design of "Gateway 2".** Gateway 2 is a more involved and detailed route to accessing, and is designed for infrastructure projects which do not meet requirements for Gateway 1 and where the viability gap is not strictly driven by just a lack of household affordability. For example, a high degree of market risk can constitute a major obstacle to project bankability when it comes to Greenfield projects. For these types of viability gaps, structured financing subsidies are most likely the most appropriate form of subsidy. The main characteristics of financing subsidies are that they are subordinated to other financing participants and that they are designed to have a degree of "redeemability". This can be triggered by the project the subsidy is being used to finance reaching certain thresholds of sustainability (e.g. financial rate of return, repayment, volume benchmarks, etc.).[3]

- **Interaction of VGF approval process and tendering process**. At the early stage of the PPP project development cycle, it is often too difficult to assess whether or not there is a need for a subsidy and in particular, it would be difficult to estimate the amount and the type of subsidy needed. The application for subsidy should only be submitted once the project is close to the tendering phase of the PPP project development cycle, when feasibility studies have been undertaken. During the structuring stage, Contracting Authorities are most likely assisted by transaction advisers; who may also provide support to the sponsoring agencies in the application to VGF for subsidies.

- **An holistic subsidy evaluation.** The VGF is one form of subsidy that might be received by the project. Other forms of subsidy are likely to be provided, such as government-backed credit guarantees. We suggest an approach to approve VGF funds that takes an holistic review of any amount of subsidy resource allocated to a given project.

Roles and responsibilities

We suggest that the VGF should be placed under the MoF, alongside or as part of the department dealing with contingent liabilities. The PPP Task Force will appoint members to the VGF Board, who will have the ultimate responsibility for approving subsidy commitments. We suggest that the VGF seek support of external advisers with finance and subsidy expertise to undertake this estimate.

[3] The eligibility criteria for Gateway 1 therefore focuses on pro-poor development impacts whereas Gateway 2 projects are have broader economic impacts.

Funding

At this stage, given the limited data on projects that might be developed in the next years in Pakistan, it is not possible to estimate the precise need for VGF support which can only be assessed at a late stage of the project development cycle on a project by project basis.

Taking into account different assumptions in terms of project closing, size and form of subsidies, a preliminary estimate suggests that the following:

- should eligible projects for VGF comprise mainly small/medium size projects where a limited amount of VGF support is provided in the form of capital grant (Gateway 1), the estimate of VGF disbursed amount, over five years, could be approximately US$60m; and
- should VGF focus more on supporting large projects by providing structured financing subsidies, the estimate of VGF disbursed amount could increase to approximately US$100m.

It must be noted that depending upon the criteria set for VGF funding, the number, the size and the type of projects eligible for VGF funding might be different from those projected in this analysis, and in turn, the need for VGF funding might be different from the estimate provided in this section.

Project pipeline analysis

Currently, there is no definitive project pipeline tracking the progress and details of all PPP projects (either at IPDF or the Planning Commission). In this sense, it is important for one or more bodies to have a full and well appraised understanding of how to build a project pipeline. Key criteria and guidelines for developing a PPP pipeline are set out in Section 8 of this report.

The analysis of the current pipeline suggests that:

- Project origination is one of the key challenges for the success of the PPP programme.
- Projects identified to date form more a catalogue of possible projects than a substantiated assessment of the project opportunities for PPP arrangements.
- A majority of the potential pipeline projects are at inception/ early stages, and some, particularly in the power sector, are in the structuring phase.
- Key criteria for screening projects are to be set out and enforced at the Line Ministry level.

The central and most useful lesson from the PPP project pipeline is the nascent state of the program and the need for stakeholders (Line Ministries, IPDF, PPIB, etc.) to build experience and capacity with several successfully closed projects. Building such capacity will allow more systematic and extensive preparation of projects.

Conclusions and next steps

In this Final Report we provide a high level recommendation on the overall PPP framework in Pakistan, and update/ elucidate the structures for the Project Development Fund (PDF) and for the Viability Gap Fund (VGF), taking into account the current local enabling environment for PPPs, including the institutional capabilities and the existing pipeline of PPP projects.

In addition to the content of the Second Interim Report, this Final Report provides:

- an estimate of the PDF funding requirements for its first five years of operation, including the estimate of the use if funds, the cash-flow generated by operations and the remaining financial resources which will are to be provided by external sources; and
- a preliminary estimate of the amount of funds that VGF might need to subsidise projects which, on the basis of the existing project pipeline might apply for VGF funds in the future, should VGF be established.

1. INTRODUCTION

This Final Report is the fifth deliverable for the World Bank funded project "Operational design for the Project Development Fund and for the Viability Gap Fund". Taking into account feedback and further consideration of issues raised in the previous Reports, it aims to:

- provide high level recommendations on the overall PPP framework in Pakistan, recognising international best practice but also taking into account the specific Pakistan context and the challenges faced their-in;
- provide the analysis of the project pipeline for PPP projects in Pakistan, on the basis of consultations undertaken in Islamabad in May 2009; and
- design possible structures for the Project Development Fund (PDF) and for the Viability Gap Fund (VGF), that is informed by the current local enabling environment for PPPs, including the institutional capabilities and the existing pipeline of PPP projects.

Whilst we have sought to work as far as possible with existing recommendations, we have identified a number of issues which we think require changes to the existing documentation, most notably with the VGF.

This Final Report incorporates feedback from the World Bank and the Government of Pakistan on each of the above-listed issues, which were set out and discussed in details in previous reports. In light of the feedback received we have revised some of our higher level recommendations before developing our recommended approaches to PDF and VGF in greater detail.

In addition to the above, this Final Report includes:

- an estimate of the PDF funding requirements for its first five years of operation, including the estimate of the use if funds, the cash-flow generated by operations and the remaining financial resources which will are to be provided by external sources; and
- a preliminary estimate of the amount of funds that VGF might need to subsidy projects which, on the basis of the existing project pipeline might apply for VGF funds in the future, should the VGF be established.

Whilst our initial remit and terms of reference were to focus on the development of PDF and VGF, it became apparent during our visit to Pakistan in May 2009, that it was important to fit these vehicles into the broader PPP enabling environment in terms of legal framework, institutional structures and processes. As such we undertook a reasonably detailed review of existing arrangements in Pakistan and how these compared to international best practice, to the extent that this exists. We then make specific recommendations as to how such principles might be incorporated within Pakistan's arrangements, taking into account our understanding of this context. However, following feed-back on our recommendations, we are of the view that achieving what we

believe to be international best practice should be a medium term goal. Given, particularly, the institutional challenges faced in progressing the PPP programme, we believe an appropriate immediate strategy is to develop the capabilities which already exist, whilst aiming to build competencies elsewhere over the medium term.

Given the above, the report has been structured as follows:

- **Sections 2,3,4: Enabling environment.** In these sections, we first set out the key elements of an enabling environment for PPPs, in terms of an emerging consensus on what is considered to be best practice. We then consider some key elements of current arrangements in Pakistan, which differ in many respects from this, before making a number of specific recommendations as to how Pakistan might move towards this established best practice, whilst still recognising Pakistani contextual realities.
- **Section 5, 6 and 7: Design of Project Development Fund and Viability Gap Fund.** In this second part of the report, we set out suggestions for the design of the PDF and the VGF. The recommended options take into account the international best practice as well as the realities of the Pakistan context. These sections also provide estimates for the PDF and the VGF funding requirements in the medium-term.
- **Section 8: Project pipeline analysis.** In this section, we set out the current project pipeline for PPP projects and develop guidelines for screening them.
- **Section 9: Conclusions.** Our overall conclusions are set out in this section.

2. PPP INTERNATIONAL BEST PRACTICE

2.1. Introduction

In this section, we set out the key elements of an enabling environment for PPPs, in terms of what we believe to be an emerging consensus on what is considered to be best practice. This covers key aspects of an enabling environment, particularly the institutional competencies that are required for successful PPPs, together with some of the issues involved in developing PPP resource centres or units. The aim of the section is to provide a generic introduction to the issues before considering Pakistan in detail in subsequent sections.

2.2. Defining PPPs

PPPs are long-term contractual arrangements between the public and private sectors for the delivery of public services. The defining feature of PPPs, as against other forms of private participation in infrastructure, is that there is a significant degree of risk sharing between the two parties. Put simply, risk sharing means that both the government and the investors will suffer financially if the contract fails. The benefits of PPPs, discussed in more detail below, come about because both parties are incentivised to ensure the contract is a success over the full project life. The *degree* of benefits largely depends on how well risks are allocated between the public and private sector and how strong the incentives are built into the contract.

"A PPP is a long-term contractual arrangement for the delivery of public services where there is a *significant degree of risk sharing between the public and private sectors*."

The main features of a PPP include:

- **Risk transfer.** The key element of a PPP contract is the transfer of risk from the public to the private sector. The principle behind this risk transfer is that risk should be allocated to the party that can best manage it. Within the suite of PPP contracts, certain risks relating to the design, construction and operation of the infrastructure are transferred to the private sector, where it has a greater capacity (e.g. financial resources) and ability (e.g. skills and expertise) to mitigate the losses arising from the risks. Section 3.3 provides a detailed discussion on the types of risks and their allocation.

- **Long term contract.** A PPP usually follows a 'whole-of-life' approach to the development of the infrastructure, thus requiring the contract to be long term in nature. A PPP is typically for a period of ten to twenty years – although there are some PPPs that may be of a shorter duration of say three to five years.

- **Partnership agreement.** Key to this long term contract between the public and private sector is that it is viewed as a 'partnership', in that both parties have a mutual interest and a unified commitment. PPPs represent cooperation between

the public and private sectors, drawing on the relative strengths of each party, in order to establish a complimentary relationship between them.

Many types of private sector participation in the delivery of public services are not "true" PPPs. For example, governments outsource basic services such as rubbish collection or street cleaning to private sector providers, often on a relatively short-term basis (e.g. two to three years). In these cases the government retains almost 100% of the risk involved in delivering services to the public, so the commercial arrangement cannot really be described as a PPP. At the other end of the spectrum are privatisations and divestitures where governments transfer responsibility for asset construction and ownership, service delivery and revenue collection to private owners (there are many examples of this in the telecoms sector). In these cases, the private sector bears most, if not all, the risks involved.

The approaches and expertise needed to see a PPP project through from design to successful implementation are very different from those appropriate for outsourcing contracts or privatisations. Indeed, governments need to view PPPs as an ongoing commercial relationship with a private sector partner, not as a one-off procurement or sales transaction. This has implications for how governments design the institutional framework for PPPs and what type of technical capacity is needed.

2.3. Creating an enabling environment for PPPs

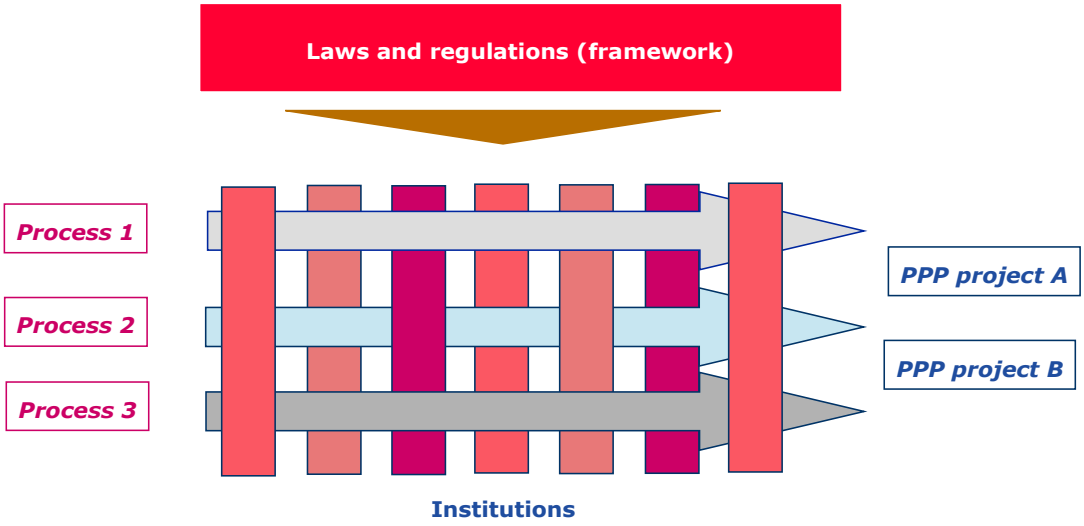
The enabling environment refers to the context within which PPPs are to take place in terms of the level of political support for PPPs, the policy framework, legislation and regulations, institutional capacities and competencies, and PPP processes.

The key elements of an enabling PPP environment can be grouped into three key broad elements:

- A **legal and regulatory framework** comprising a framework of enforceable laws and regulations which improves predictability for all parties as regards likely outcomes, thus improving confidence on all sides.
- Strong **capable public institutions** with responsibility for managing/ facilitating PPP processes and enforcing PPP agreements that minimise confusion and promote efficiency.
- Efficient, effective and coordinated **PPP processes**, built around the project cycle, that minimise transaction costs.

At a highly simplistic level, Figure 2.1 attempts to illustrate these aspects diagrammatically. We then consider each of these aspects in more detail below.

Figure 2.1: PPP framework, institutions and processes



2.3.1. Legal and regulatory framework

It is important to create standardised legal and regulatory frameworks to facilitate PPP transactions based on recognised international best practise.

Legal framework

The core PPP enabling legislation can comprise a single PPP law, together with sector specific legislation, or sometimes a series of other laws and regulations which, taken together, can provide the necessary authorities to enter into PPP contracts. In many countries, certain types of PPPs, particularly concessions, can rely on pre-existing privatisation legislation.

Taken together, however, the legal framework needs to clearly specify private sector investment rights, clear and transparent procurement processes (including approaches to deal with unsolicited proposals), contractual arbitration processes, remedial actions for bankruptcy/ payment defaults, amongst others. There also needs to be a clear delineation of the capacity for different institutions to enforce contracts.

In addition to many of the high level legal issues associated with PPPs which need addressing, there are also many secondary laws and regulations which need to be in place if transactions are to be undertaken in a timely manner. These can include availability of employment permits for foreign workers, land development/ land use rights, etc. From an international investor perspective, many of these issues may have been addressed by a "one-stop-shop" investment promotion agency (IPA).

Regulatory framework

The economic regulatory framework needs to be developed alongside the legal PPP framework, to reduce regulatory risks and promote private sector confidence.

There is often a tension, however, between what investors prefer and what is often seen as being regulatory best practice. For many years and in many countries, the policy aim

has been to create independent regulatory bodies – that is, *autonomy* from government and with considerable *discretionary* powers. In practice, most regulators have not been free from government influence, but many have employed a high degree of discretionary power, often used ill advisedly. The result has been the creation of a regulatory risk which has often been difficult for international investors, never mind those in domestic markets, to insure against.

Although, in the absence of renegotiation that is less able to deal with major changes to the operating context, "regulation by contract" would seem to offer investors and lenders greater confidence than full discretionary regulation, particularly where a regulatory institution has no track record of impartial regulation[4].

2.3.2. Institutional capabilities

The key institutional capabilities required to undertake PPPs successfully might be grouped into the following three broad, but separate, groups of competencies:

- Policy development, dissemination, monitoring and enforcement.
- Individual project sponsorship, design, preparation, execution and monitoring.
- Financial management of funded and contingent obligations.

Policy development, dissemination, monitoring and enforcement

A number of institutions need to feed in to the development of a PPP policy. Whilst this may be typically led by the Ministry of Finance and/ or Ministry of Planning and Development (or equivalent); policy ownership should be broad based, with widespread acceptance. In practice, however, this may be difficult to achieve, not least because it involves giving up an element of control which many line ministries are typically used to having.

Without powerful sponsorship, it is unlikely that a PPP programme will succeed. At the extreme, it is arguable that the UK's PPP programme was successful largely because the UK Treasury, which has always taken a strategic role in policy development in the UK, effectively decreed that this would typically be the only means by which ministries, departments, agencies and other authorities might pursue a whole range of capital expenditures such as road, schools, hospitals, prisons etc.[5].

Related to this, but a typically overlooked starting point for PPP policy, is the type of projects which the government wishes to pursue, the types of contractual arrangements it may seek to enter into, and any funding or other implications that follow this.

[4] Other forms of limiting the discretionary powers of regulators are also being considered as a way of addressing this problem.

[5] Note that most of the UK's economic infrastructure had been fully divested at the time of the programme, so the scope for PPPs in, say, the water sector, was limited to Scotland and Northern Ireland where such services had not been privatised.

PPPs differ most by way of the types and magnitude of risks that they shift to the private sector. The principal risks include:

- *Commercial risks* – which include contract performance risks, most of which are directly under the control of the private sector service provider, as well as construction and market risks, where other factors and influences come to bear.
- *Financial risks* – which principally include exchange rate and interest rate volatility risks, but also re-financing risks.
- *Political and country risks* – which arise due the risk from war, civil disturbances, changes in policy etc. and are usually the responsibility of the government, together with regulatory risks.

At a minimum, a government is likely to want to transfer a degree of performance risk to the private sector. Typical projects might involve the introduction of a management contract for the provision of water and sanitation services. At the other extreme, there may be a desire to transfer full market and financing risks to the private sector, through the award of concessions for roads, ports, airports etc.

As regards raising finance, in developed markets such as the UK, the Private Finance Initiative (PFI) has been extensively used. This normally involves government committing to a long term service contract (say 30 years), the payment stream of which is used by the investor/ service provider to raise long term debt for the project. As set out in Table 2.1, typically in emerging markets, PPP transactions have been closer to the concession based contract, where there is no such government support, with revenues coming directly from customers.

Table 2.1: Example of PPP approaches and projects

Characteristics	**"Concession"**	**"PFI"**
Key examples where approach has been used successfully	Airports, ports, highways/ roads, merchant power plants, cellular networks, electricity transmission, electricity and water distribution	Prisons, hospitals, schools, accommodation/ buildings, bulk water supply/ treatment, roads
Customers	Businesses and households; but sometimes government	Government or state-owned purchaser of services
Funding	Largely user charges (although utilities can provide off-take agreements)[6]	Largely direct government payments, although these may be supplemented with some user charges
Performance risk	Reliance on customer pressure and profit seeking behaviour to provide discipline, although some concession contracts may have specified performance standards	Generally, clear specified output-driven contract
Market risk	Normally high degree of risk	Normally, to a small degree, if any,

[6] There are some exceptions where the government may provide payments, for example, the annuity based road concession contracts in India.

Characteristics	"Concession"	"PFI"
	transfer	structured into contracts
Financing	Emphasis on private sector financing	Emphasis on private sector financing

In general, a PPP will be more challenging as the range and magnitude of the intended risk transfer increases. For instance, the successful introduction of merchant power plants, where investors and lenders face full market and financial risks, would be considerably more challenging, than say the introduction of performance-based road management contracts. More challenging PPP models in turn increase the likely role of the public partner in terms of the need to provide direct and contingent support to projects and its role in preparing and structuring the project. There will therefore be a corresponding need for capacity on the public side to design and transact the projects. Thus, the nature of the types of PPPs targeted will have a major impact on the government-side skills required to take them to market.

Enacting a PPP policy and law is insufficient for the development of an effective PPP programme. It is important that the policy and institutional implications are understood widely, such that dissemination and enforcement of the PPP policy must be clearly assigned and supported by the correct government body. It is especially important for line ministries, who will be expected to deliver on PPP policy, to understand the specific processes, relationships and rules involved in originating, preparing, tendering, negotiating and monitoring deals, in addition to the sector-specific issues that may arise. From the central government perspective, implementation needs to be monitored and, in the extreme, enforced where there is material non-compliance, such as projects where there is agreement that should be put into the PPP programme being financed by the traditional public sector route.

Project sponsorship, design, preparation, execution and monitoring

One of the most common constraints to infrastructure PPPs in developing countries is the inability of the government to originate and develop bankable projects. As a result, they are highly reliant on the private sector to develop projects, which are often provided on an unsolicited basis[7]. Whilst an advantage of the private sector developing projects is that they are developed with an understanding of what will be bankable, against this, they are typically developed very much from the perspective of private investor priorities without adequately capturing public sector priorities.

It is not necessary for a Line Ministry or other Contracting Authority to be an expert in developing and transacting projects. However, it is important that the processes

[7] Often projects are developed on the basis of an open solicitation where government specifies a particular output – say 1,500 mega watts of generating capacity and invites the private sector to come forward with potential solutions. This is different to a government identifying a specific opportunity and then assessing private sector interest in it, as it gives the private sector considerably more scope to develop its own solutions. In some instances, there can be merits to such an approach, especially where the private sector is willing to risk the upfront project development expense.

involved and the implications that flow from particular decisions are well understood. This is important because it is typically the line ministry, provincial or local authority, that is the Contracting Authority counter-party to the vehicle providing the desired PPP service. As such, the line ministry needs to live with the consequences of any contract for a considerable period of time. The Contracting Authority is therefore the entity which:

(i) signs the PPP agreement – whatever its nature – on the part of government; and

(ii) is responsible for managing the PPP agreement over its life.

Contracting Authorities can be central, provincial or local government, ministries, departments or agencies. Clearly, such a role is not trivial and it is essential that the entity acting as the Contracting Authority fully understands what is required to undertake the role.

It is usual for and advisable for ministries to hire expert advisors to help them develop and execute transactions – part of this role is to help government clients understand the PPP process better. In some instances, it has been known for investors to arrange and pay for advisory support to assist the public sector side in a transaction in order to make the process more informed and efficient[8]. Such advisory costs are typically recovered from the project at financial close.

Another weak link in successfully implementing PPP projects is the capacity for contract monitoring and enforcement. Whilst these processes are more downstream, it is important that the sponsoring Contracting Authority, periodically monitors the contractual performance of the private concessionaire and institute regular review and oversight mechanisms to provide early warning signals, should there be a risk of the operator reneging on key contractual terms.

To help build capacity in Line Ministries and other Contracting Authorities, some countries, especially India, have established PPP nodes. "Nodes" or "PPP cells" have been progressively introduced into central Line Ministries and State Governments to act as co-ordinators and facilitators of PPP activity. Clearly, the relative scale of each node is likely to differ according to the importance of PPP activity. Nonetheless, even where activity is more limited there is at least an identified official who can be contacted by different stakeholders.

Financial management

Whilst the Ministry of Finance (MoF)/ Treasury is responsible for managing a given country's finances, it is not that unusual where there are powerful line ministries for them to agree government commitments with investors and then to expect the MoF to sign up to sometimes highly onerous terms as a *fait accompli*.

A further problem is that although funded commitments are recognised, contingent ones are often either ignored or else totally undervalued.

[8] It is not uncommon, however, for the private sector side to have a much greater budget for advisory support than the government side, which in many instances has to make do with cheaper and less experienced advisors.

It is therefore essential that the PPP framework and processes provide for the Ministry of Finance (MoF) to be involved at all critical stages of the project cycle. In particular, the need for any potential public financial commitments – whether funded or contingent – need to be brought to the attention of the MoF as soon as they become likely and all commitments must be approved.

To undertake this role effectively, the MoF requires specialists who are able to assess such financial risks – the debt management office is often a good place to situate such a team. The skills required comprise macroeconomic, project finance appraisal, public debt management, and legal especially. The latter is included as some contingent obligations can arise from the particular drafting of contractual documents.

2.3.3. PPP processes

Finally, it is important that the roles and responsibilities of different institutions are clearly defined in PPP processes and that such processes are standardised to limit confusion and improve efficiency. Overlapping roles or cross cutting responsibilities can unnecessarily 'bureaucratize' processes.

The starting point for PPP processes is the PPP project cycle. Box 2.1 below summarises the main stages in the project cycle with a bulleted description of the key elements of each stage.

Box 2.1: Stages in the infrastructure project cycle

Stage 1: Enabling environment

- Laws
- Regulation
- Institutions
- Processes

Stage 2: Project Development

- Project scoping
- Pre-feasibility studies
- Feasibility studies
- Detailed project design
- Project structuring, including heads of terms agreements/ MoUs

Stage 3: Transaction support

- Procurement processes, including bid evaluation
- Negotiations with stakeholders, including subcontractors, financiers, government

Stage 4: Financing

- Final technical and commercial due diligence
- Financial close

Stage 5: Post implementation support

- Contract/ performance monitoring
- Renegotiations
- Refinancing

The project cycle requires participation from many different government bodies. Whilst individual countries need to develop systems which fit their own particular institutional architectures, Table 1.2 provides a simple illustration of the typical main institutional roles and responsibilities involved in developing PPP processes which support the PPP project cycle.

Table 2.2: PPP project cycle and processes

Project cycle activity	**Roles and responsibilities**			
	Line Ministry	**Ministry of Finance (MoF)**	**Ministry of Planning & Development (MPD)**	**Sector regulator**
PPP policies	Inputs sector specifics into overall policy	This is often led by either the MoF or MPD, ideally with Cabinet level support		Is consulted on regulatory implications
Sector strategy development	Prepares sector PPP strategy	Provides advice on potential for PPP	Develops country national plan	Is consulted on regulatory implications
Identification / origination/ screening	Identifies projects suitable for a PPP approach	Provides advice as required	Checks consistency with master-plan	
Feasibility testing	Undertakes detailed technical, legal and financial appraisal	Provides position on any financial support required	Assesses wider economic and social impacts	
Legal & financial structuring (i.e. project "packaging")	Develops most appropriate option to go to market with	Provides in principle financial commitments (funded and contingent)		Agrees regulatory framework/ provisions within draft contract
Procurement (through to negotiation)	Manages procurement/ transaction process	Signs off on financial aspects affecting national interest		
Contract operation	Manages contractual interface with services provider	Provides payments and/ or financing as per contract		Monitoring of contractual compliance. Economic regulation within scope of discretion allowed

In practice, many more institutions will be involved to those set out above.[9] Whilst the above table identifies many of the core primary activities there are many secondary activities that need to be undertaken, such as the allocation of land rights, assessment of environmental impacts etc. These can be seen as primary and secondary level approvals required to make the process flow smoothly. If undertaken appropriately, they offer appropriate checks and balances to PPP projects.

2.4. The role of PPP units/ resource centres

Clearly the implementation of PPP programmes involves considerable challenges of strategic foresight, institutional discipline and co-ordination. Consequently, they can provide major challenges to countries where civil servants with the requisite skills are a scarcity. To help address these skill shortages, many countries have pursued the approach of establishing a centralised entity (PPP unit or PPP resource centre) to help support PPP processes, comprising a mix of government and external advisory experts.

2.4.1. Developing a functional and institutional structure that takes into account potential conflicts of interest

In principle, such a PPP resource centre (PRC) could perform a range of functions, as they have done in many countries, from policy development through to transaction support. However, such roles can sometimes be in conflict; specifically:

- *Developing policy versus its implementation (for instance, through a transaction capability)* – these are typically best kept at arm's length, not least because the types of skills involved are quite different.
- *Transacting and then monitoring or ensuring contract compliance* do not go well together as they can involve the monitoring of own design.
- *Project design and development vs. public funding/ financing* – the development of a project and then the funding or financing of it – as project development involves promotion by the sponsor of the project; if designed by the PRC, there may be considerable pressure on the government to fund it even if it were not bankable.

As regards the above, it is not only that the roles may be in conflict, but also the skills required to undertake them can be extremely different. We would therefore recommend that the following typical priorities for PRC support, as discussed above, are housed separately, namely:

- the development of appropriate PPP policies, their promotion and sometimes enforcement;
- centralised project development and transaction support: in other words the packaging of PPP opportunities and their implementation thereof; and

[9] For example, the Ministry of Environment may need to provide social and environmental clearances and resettlement and relocation norms; and land ownership and rights may need to be obtained from the relevant national or sub-national authorities.

- developing appropriate direct and contingent financial support for projects, including ensuring that any government obligations are appropriately accounted for.

Ideally, these functions would report to separate authorities. Although, the precise institutional locations may differ to reflect the specific contexts of individual countries, it would be usual for financial management to fall under the MoF and policy implementation to fall under the main cross-sector body, such as a Cabinet Committee or Presidential Office. If this is not possible and they are to be housed together, then it is important that appropriate ring fencing of functions be established.[10]

As pointed out in a World Bank assessment of PPP units for policy in India, the scope of activities undertaken by a central unit may be a function of time, such that the need to support project development is greater where the PPP programme is more nascent.[11] Box 2.2 summarises international experience with PPP units in different countries, showing a wide range of approaches. Specific country summaries are provided in Annex 8, showing that the main function of PPP units has been in policy development and dissemination. Those judged to have made a positive contribution have been those targeting specific 'government failures' (i.e. barriers to project development in the policy framework). It is also fair to say that effective political support and sponsorship and even the ability to enforce policy are key determinants of PPP unit success. For example, in South Africa, the PPP unit must advise the Ministry of Finance whether a specific project is consistent with the budgetary sustainability of a department or line ministry.

Box 2.2: Assessment of PPP Unit roles

A 2007 PPIAF study[12] provides a summary of experiences with PPP Units in industrial and developing economies. Effectiveness is judged according to the success of the overall PPP programme (deal flow, value for money, reduced fiscal burden, operational efficiency, etc.) and the contribution of the unit to that performance. This is summarised in Annex 8, along with information on additional units in India and Egypt. The main lessons arising from the PPIAF paper and our assessment are:

- The role of a unit must be to deal with specific identified government failures. These could be poor incentives to procure PPPs within government, a lack of coordination between departments, a lack of capacity and skills, and high transaction costs. All of these features were apparent during our visit to Pakistan. Partnerships UK, as a corporate developer of projects, and the Treasury Private Finance Unit, the policy enforcement and dissemination unit, have targeted separate and defined government failures.
- The overall effectiveness of the government, in terms of coordination of departments, transparency and efficiency, is an important determinant of the effectiveness of a PPP Unit. PPP Units also operate best in environments where there is strong high-level political support and sponsorship for the PPP programme.
- A unit must have the requisite authority and power to undertake its specific roles, i.e.

[10] According to a World Bank report, "*A conflict of interest can occur when the unit has a strong mandate to promote PPPs and increase deal flow, while at the same time having the responsibility for screening deals and ensuring that the projects are affordable to the government. Conflicts also arise if the same body promotes or assists in developing projects and then is asked to carry out ex post evaluations. The best solution in both cases may be to split the functions.*" World Bank (2006): India: Building capacities for Public-Private Partnerships, Section 2.21

[11] Ibid.

[12] PPIAF (2007): Public-Private Partnership Units: Lessons for their design and use in infrastructure

stopping a poorly designed project according to some policy criteria (value for money) and the ability to promote positive projects.

- The location of a unit within government must make it easy to coordinate between government bodies and exert its authority. In Parliamentary systems, the Ministry of Finance tends to be the most authoritative body, although this is less clear elsewhere.

Those units that have balanced effective oversight and enforcement of PPP programmes with effective facilitation of projects and advice through their line ministries have been those with powers of enforcement and requisite technical capacities. South Korea's PIMAC and the Treasury Unit in South Africa are both adequately empowered in terms of reviewing projects and overseeing the procurement process. Indeed, the South Africa unit was initially designed to prevent ministries using PPP to circumvent budget constraints, putting an emphasis on risk management and value for money.

2.4.2. Characterising different PPP unit approaches

Different countries have pursued different approaches as regards their PPP programmes, particularly the role of PPP units. This needs to reflect the particular circumstances of the situation.

By way of example it is possible to characterise units in the following ways:

- **"Pathfinders"** in which the unit is empowered, through substantive high level support, to push through exemplar PPP projects. Such an approach is typically transitory and is best illustrated by the approach of the UK Treasury Task Force (1997-2000). We would argue that such approaches are only possible where government is already highly centralised, making such an approach possible.

- **"Gatekeeper"** PPP unit approaches are typically set up to keep a check on Contracting Authorities going off on their own and entering into contractual arrangements which have considerable financial ramifications. Such a role is typically built around building Treasury / Ministry of Finance competencies in situations where Contracting Authorities have considerable powers; for instance, because of federalised structures, or ownership of lucrative mineral rights etc. The PPP unit in the South African Treasury is arguably a good example of this.

- **"Resource-centre / advisory** approaches in which the PPP unit provides advisory support services to the line ministries, often across a wide range of subject matters. Again this approach tends to take place where the Contracting Authorities have quite considerable powers. The Infrastructure Investment Facilitation Centre (IIFC) in Bangladesh is an example of this approach.

- **"Corporate Developer" approaches** in which the PPP unit operates as a corporate, stand-alone vehicle, charging user fees. Partnerships UK (PUK) established in 1999 is an example of this in which it provides both advisory and developer services on its own account. Such an approach requires strong in-house advisory and developer skills; that is, as regards the latter, the ability to originate and develop, commercially viable projects.

2.4.3. Institutional location of a centralised unit and governance arrangements

Institutional location is extremely important as regards ensuring that any unit has a degree of sponsorship commensurate with undertaking its role successfully. Against this, whilst it is important that any unit has the right level of sponsorship, it cannot be allowed to become overly politicised or to become a part of an individual or group of individuals' power base. The fact that a PRC can command a high level of resources makes it a potential target for capture by different interest groups. Having an external Board, comprising a mix of different stakeholders, in certain circumstances, can help protect against this.

2.4.4. Funding mechanism(s) for a unit

PRCs – especially those involving external support, tend to be expensive. A key design issue to be addressed is whether any of these costs can be re-charged to projects, successful or otherwise. Typical ways of doing this involve on-charging at least third party (lawyer, financial advisor) costs to successful projects. Sometimes riskier, early stage costs can be passed on to the project as a "developer fee". Stand alone developers such as InfraCo and the IFC's InfraVentures, can aim to achieve a multiple of their development costs. It is unlikely, however, that on balance such developer fees will outweigh project costs that are written off because they do no proceed. Other approaches to this problem include a centralised revolving loan facility.[13]

2.5. Determining PPP success

The single most important factor in developing a successful PPP approach is high level political sponsorship.

As set out, it is arguable that the Private Finance Initiative (PFI) in the UK was successful in scope and up-take because the Treasury largely decreed that this was the only route through which capital programmes could be pursued. As such, most ministries, departments, agencies and local authorities have had no choice but to pursue PFI. The results of this have been widespread uptake, but at the expense, in some instances, of a sub-optimal approach being implemented.

It may be, however, that without such "strong-armed" sponsorship and control, there will be only limited uptake of PPP programmes. It is often the case that ministries wish to undertake only publicly funded projects, view PPP as a last resort, for instance, where public funding has run out. Such an approach is highly likely to fail for a number of

[13] Some PPP Units, such as in South Africa, have considered the use of a 'revolving fund' which is drawn on by the public sector developers of projects and then repaid by successful projects (either at financial close or as a part of a carried interest). The fact is, however, that early stage project development (identification, feasibility etc) is an extremely high risk activity with an associated high level of project development cost write-offs. It may be difficult for such a fund to break-even, even where the costs associated with successful projects are charged on to these projects at a two or three times multiple (as a private sector infrastructure developer would seek to do). It might be more realistic to anticipate a write-off of very early stage costs, but seek to recover later stage costs (from structuring onwards) which account for the bulk of project cycle costs. Such costs will be minimised where common structures and legal documentations are used.

reasons. First, to obtain private financing PPP typically is different to publicly funded projects. Second, the private sector is not an "investor of last resort" and to treat it as such will result, at best, in sub-standard projects which are guaranteed to the hilt by government, with no meaningful risk transfer to the private sector.

3. ASSESSMENT OF THE ENABLING ENVIRONMENT IN PAKISTAN

This section provides an assessment of the Pakistan enabling environment, largely based on the information gathered during the field visit to Islamabad in May 2009. We have then incorporated points of clarification raised in the feedback.

The assessment covers some of the key aspects of PPP enabling environment discussed in Section 3, namely: (i) **current institutional arrangements**; (ii) the **efficiency of current PPP processes**; and (iii) the **appropriateness of the role of PPP Unit**. As we will show, there are many areas in which Pakistan falls well short of international best practice.

As regards the first of these, current institutional arrangements, we have assessed the extent to which key institutions which might be expected to be involved in the PPP process perform their expected roles in terms of the three identified key functions of (a) policy development and enforcement, (b) project development and structuring; and (c) financial management. Whilst GoP has clearly expressed it support and overall support for the PPP programme, in our view it is important that where possible PPP approach is more actively pursued and enforced as a tool of policy. In addition, the roles of specific institutions within the PPP process still need to be clarified and better understood.

As regards the efficiency of the PPP process, we set out our understanding of the current PPP process and its apparent weaknesses. A major issue involves the identification of public sector originated PPP projects, which does not reflect the requirements of the private sector.

Finally, in Pakistan, the closest institution to a PPP Unit is the IPDF. So far, IPDF has played an active role, across functions, in promoting PPPs. In this section we present some of the choices as regards its role that might be considered moving forward.

As conclusion to this section, we provide an overall assessment of the Pakistan enabling environment and priorities for improvement. Note that we limited our discussion to the enabling environment for government originated projects. We have not covered unsolicited project proposals and how these are dealt with.

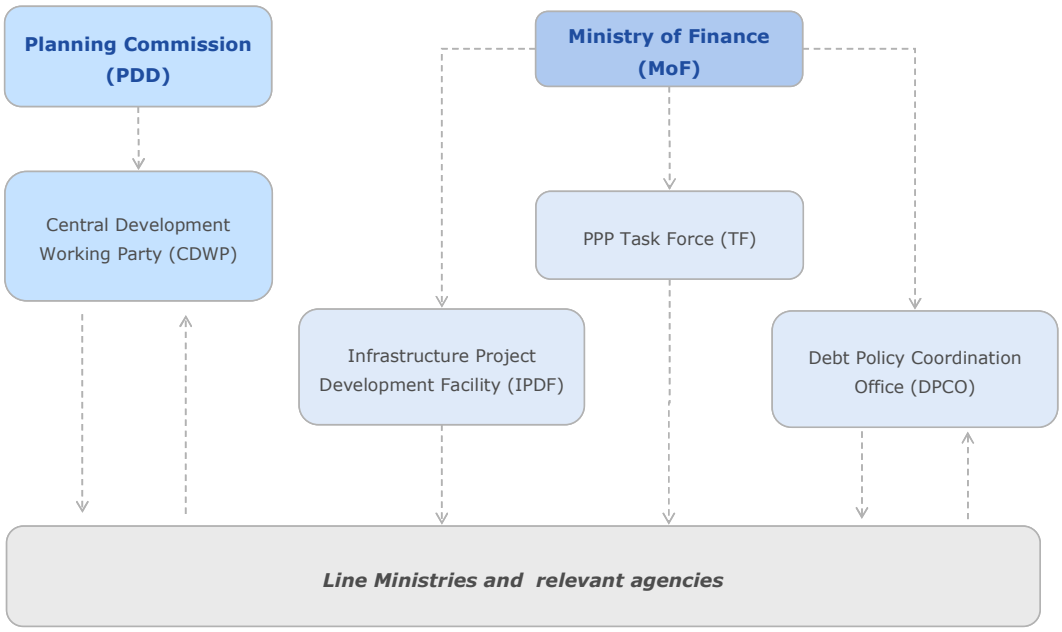
3.1. Mapping out and reviewing institutional arrangements

In order to assess the capacity of the various institutions in Pakistan to undertake the key functions of policy development, project structuring, and financial management, we have mapped the existing institutions involved in the PPP programme and examined their roles, responsibilities and competencies.

3.1.1. Mapping existing institutional roles and responsibilities

The mapping of the key institutional roles involved in the Pakistan PPP programme is set out in the Figure 3.1 below.

Figure 3.1: Existing institutions involved in the PPP program



The **Ministry of Finance** (MoF) is responsible for the entire PPP program. Through its various departments and bodies, it takes specific responsibility for:

- developing the legal, institutional and regulatory framework, and implementing the PPP programme;
- building ownership at the highest level in the Government for the PPP programme;
- making financial commitments to support the PPP programme and to fund specific PPP projects; and
- the financial risk management of existing PPP projects.

The departments and bodies established under the MoF and their roles and responsibilities as regards the PPP programme are set out below:

- The **Taskforce (TF)** is chaired by the Advisor to the Prime Minister on Finance and includes all key stakeholders across sectors and Ministries. The purpose of the TF is to formulate a policy, regulatory and legislative structure that is conducive to creating a PPP market in Pakistan. The TF operates through four Working Groups, tasked to focus on different aspects of infrastructure PPP development in Pakistan,[14] and is supported by the IPDF (see below).
- The **Debt Policy Coordination Office** (DPCO) is responsible for ultimate management of any funded or contingent financial obligation, including guarantees, arising from PPP arrangements.

[14] The task force is supported by four working groups responsible for PPP legislation, model contracts, subsidies, and fiscal management respectively.

- The **Infrastructure Project Development Facility** (IPDF), headed by the MoF, has been established to facilitate the promotion, generation and implementation of PPP projects. It also serves as a Secretariat to the PPP Taskforce. IPDF is *de facto* involved in different aspects of the PPP programme, from drafting of PPP guidelines to provision of project development support to contracting authorities. This institutional aspect is discussed in greater detail below.

The **Planning Commission** (specifically, the Planning and Development Division, or **PDD**)**,** whose traditional role is to review and approve projects under the Public Sector Development Programme (PSDP), has a similar approval role for PPP projects. The Planning Commission operates through the **Central Development Working Party (CDWP)** whose role is focused on approval of specific projects. It is chaired by the Secretary of the Planning Commission and contains one representative each from the Ministry of Finance and the Ministry or Agency sponsoring a project. The CDWP is responsible for approval of projects whose costs exceed the budget allocated to Line Ministries.

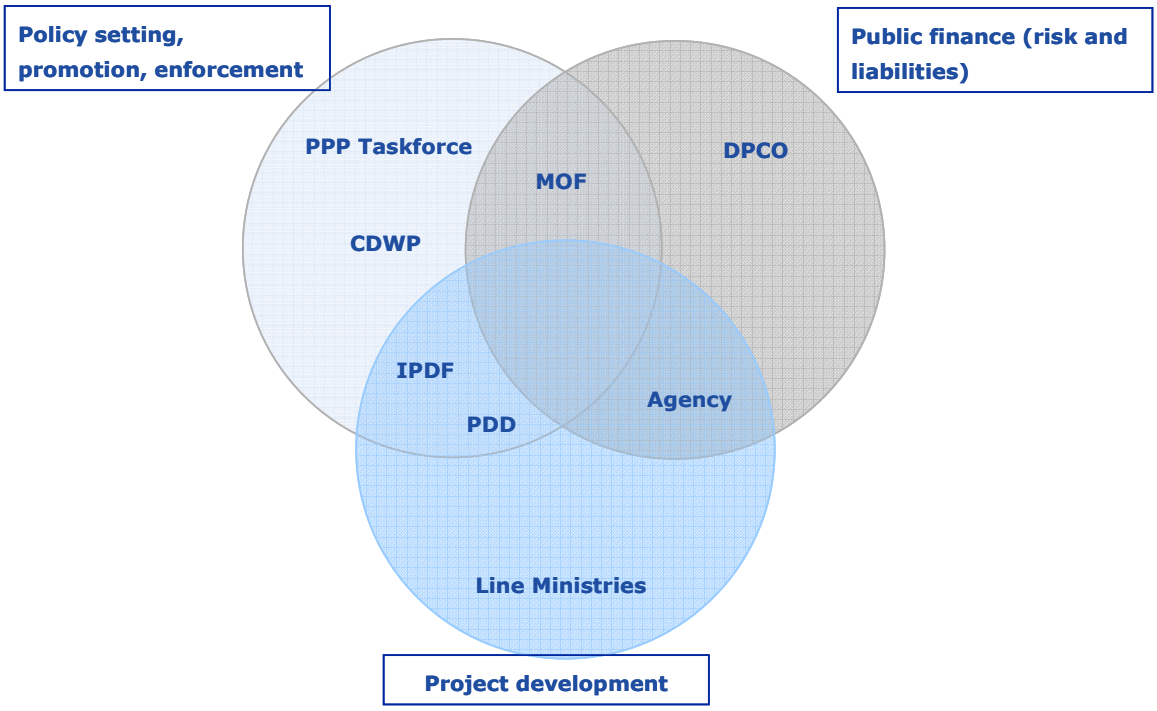
The PDD may also identify projects suitable for PPP on the basis of the documentation submitted by Line Ministries when these apply for the PSDP programme. The PDD works in coordination with IPDF, Line Ministries, and other contracting Authorities.

The **Line Ministries**, **federal bodies** and **provincial** and **local authorities** as well as **state-owned enterprises** are the contracting parties (or authorities), on behalf of the GOP, with private parties. According to the PPP policy, they are responsible for all the project development activities, from project origination to execution and to ex-post monitoring of PPP projects.

3.1.2. Appropriateness of existing institutional arrangements

When looking at the institutions involved in the PPP programme in Pakistan from the perspective of the three key functions, policy development and enforcement, financial management and project development support, a map of institutions by functions can be drawn. This is set out in Figure 4.2 below.

Figure 3.2 : Functions of existing institutions in Pakistan



Key comments on how the above three key functions are currently performed are set out below.

Policy development, dissemination, monitoring and enforcement

- **The importance of continuing to deepen political, high level support for the PPP approach**. Whilst the Government has made considerable steps in introducing the PPP programme, lessons elsewhere demonstrate how important continued support and sponsorship for a PPP programme is. Moreover, it may be that in certain instances, it will be necessary to set out PPP as being the only route through which Contracting Authorities might access government budgetary allocations for capital expenditures. It is essential that the private sector is not seen as an investor of last resort.

- **Consistency with international best practice.** The policy development function involves several institutions: the MOF is ultimately responsible for the PPP policy whilst agencies such as the TF and the IPDF have been established to support this function. Even though this approach is broadly consistent with international best practice, some issues arise from the overlapping and interactions with other functions.

- **Overlapping with other functions.** We would argue, that ideally the three functions of policy development and enforcement, financial management, and project development support are managed as distinct areas of the PPP framework. For example, at least in our view, the IPDF is currently performing the potentially conflicting roles of policy advocate and project sponsor / 'champion' (i.e. promoting specific projects along with line Ministries). Whilst the former of these roles is what

it is largely mandated to do, pressure to achieve results would appear to be pushing the IPDF into the individual project sponsorship role in a potentially conflicting manner, in which IPDF is both player (as project sponsor) and referee (through its enforcement role). An emerging consensus would suggest that ideally, IPDF should do either one or the other of the two functions.

- **Setting of PPP policy and PPP guidelines.** A consultation process has taken place to draft a PPP policy which was signed in May. The IPDF has been active in drafting these PPP guidelines. Whilst it is early days, it is unclear how much these guidelines are likely to be used by institutions other than the IPDF itself.
- **Limited PPP policy dissemination.** It is important that PPP policy implications are well understood, particularly but not only, at the Line Ministry level, as they are the contracting authorities for PPP arrangements. On the basis of the discussions with several stakeholders, it seems that the dissemination of the PPP policy and guidelines is not as effective as it should be to ensure a sufficient level of understanding of PPP arrangements across all the institutions involved. The lack of understanding of PPP is likely to be one of the factors explaining the limited activity in project origination from Line Ministries and other Contracting Authorities.
- **Limited PPP policy enforcement.** Lessons learnt from international best practice certainly recognize that some degree of PPP enforcement is necessary for the success of any PPP programme. Depending on the local and institutional context, there are different solutions. For example, as mentioned, in the UK, Treasury rules on capital expenditure encourage different Contracting Authorities to pursue PFI as a means of undertaking capital expenditure across a range of sectors. India is also recently enforcing policies and regulations to integrate identification of potential PPP projects at the planning and design stage itself, by the relevant national and sub-national line departments. We are not aware of any prescriptive guideline that institutions are bound to follow in Pakistan when dealing with PPP arrangements. Overall, it seems that the policy enforcement function is not fully defined and implemented. For example, some Line Ministries are not very proactive in originating PPP projects and one of the reasons is likely to be the lack of incentives to explore the PPP route rather than simply apply for government funding.

Project development support

- **Lack of project ownership at Line Ministry level.** As Contracting Authorities, Line Ministries are supposed to have the primary responsibility for all the stages of the project development cycle, from origination to project closing and to *ex post* monitoring. This does not seem to always be the case, while other institutions sometimes play roles at different stages of the project cycle, undermining the Line Ministries' ownership of projects. For example, IPDF, supported by the information provided by the Planning Commission, may deploy resources on project origination. Whilst IPDF's support may be requested to supplement/ develop capacities of the Line Ministry, from a best practice perspective, the latter needs to assume overall

responsibility and accountability for the development and execution of its PPP projects.

- **Project development support of IPDF.** IPDF aims to promote the development of PPP projects across sectors. In order to do so, it acts as a "facilitator" of PPP transactions. However, in undertaking this role, the more it is "hands on" in terms the development of a specific project, the greater the risk that it assumes the role of project sponsor or transaction adviser rather than that of a facilitator (in terms of bringing projects to the attention of the Line Ministries or other contracting authorities). In some cases, IPDF invests time and financial resources on pre-feasibility studies, financial modelling, and other project development activities without even having received a formal advisory mandate from the Line Ministries, which is arguably the function of a project developer.
- **Limited knowledge and experience in PPP arrangements.** The lack of experience in structuring and negotiating PPP arrangements, in part, contributes to the limited number of successful PPPs across sectors in Pakistan. In order to perform their functions, Line Ministries and other Contracting Authorities need both an in-depth understanding of the PPP framework as well as experience in PPP arrangements.

Some other aspects of the project development support function, mainly related to the PPP cycle and process, are discussed in the Section 3.2, where the current PPP project development process is set out and evaluated.

Financial management

- **Incomplete/ misleading assessment of project risks.** Our consultations in Pakistan indicate that project risks are often likely to be assessed without taking into account all the guarantees that the government might have issued or might be issuing in favour of the private party. Also, there seems to be limited effort to negotiate the amount of financial guarantee typically required by the private lender. For example, if IPDF receives a request for a guarantee on a project, this is submitted to the Internal Finance Wing (IFW) of the Risk Management Unit (RMU), which then provides a recommendation to the Economic Committee of the Cabinet (ECC). The lack of negotiation with the private sector is consistent with the overall preliminary assessment that the optimal allocation of project risks, including the risks that remain with the government, is not well understood and is likely to be underestimated.
- **Lack of management of contingent liabilities.** While the MoF is ultimately responsible for fiscal issues arising from the PPP programme, there is currently no holistic approach taken to evaluating and managing government guarantees for projects, such as loan guarantees or other contingent liabilities. There does not appear to be a formal assessment at any level of government of the fiscal risks created by contingent liabilities, that is, created by different forms of guarantees (explicit or implicit) that might be issued on specific PPP contracts. For example, in supporting IPP projects, the government has exposed the national budget to sizeable

contingent liabilities that are unlikely to be considered at the central level as such. The DPCO is a new body, however, which is expected to perform this task.

Summary assessment of institutional capabilities

A summary of the assessment of Pakistan's institutional capabilities is set out in the Table 3.1 below.

Table 3.1: Summary assessment of institutional capabilities

PPP policy development, dissemination and enforcement	**PPP project development support**	**Financial management**
• A taskforce is in place to oversee this function, with the IPDF as its Secretariat. • A new PPP policy was approved in May 2009. • There is some institutional overlap between this and other roles, particularly for IPDF. • There are few incentives for Line Ministries to follow the PPP route for capital spending, and overall enforcement of the PPP policy is weak. • There is limited PPP policy dissemination among line ministries and other stakeholders.	• There is awareness that Line Ministries should be the main sponsoring and implementing body for PPP projects. • However, Line Ministries have been reluctant to originate and take ownership of PPP projects. • The role of the IPDF is unclear and often goes beyond facilitation. • There is a limited knowledge base and understanding of PPP arrangements.	• The MoF has established the DPCO to oversee fiscal risk across sectors. • There is no holistic approach to the fiscal risk framework. • There is a lack of understanding or assessment of the risks generated by contingent liabilities. • Responsibility for issuing guarantees is fragmented.

3.2. Review of existing PPP processes

It is important that the roles and responsibilities of different institutions involved in the PPP process are clearly defined and that processes are standardised to limit confusion and improve efficiency. Overlapping roles or cross cutting responsibilities can unnecessarily 'bureaucratize' processes. In particular, the path for PPP project preparation and development must be distinct from the process for publicly procured projects, such that line ministries recognise and understand the differences involved.

The starting point for PPP processes is the PPP project cycle. As discussed in Section 3, the main stages of the project cycle are:

- Stage 1: Enabling environment;
- Stage 2: Project development;

- Stage 3: Transaction support;
- Stage 4: Financing; and
- Stage 5 Implementation support.

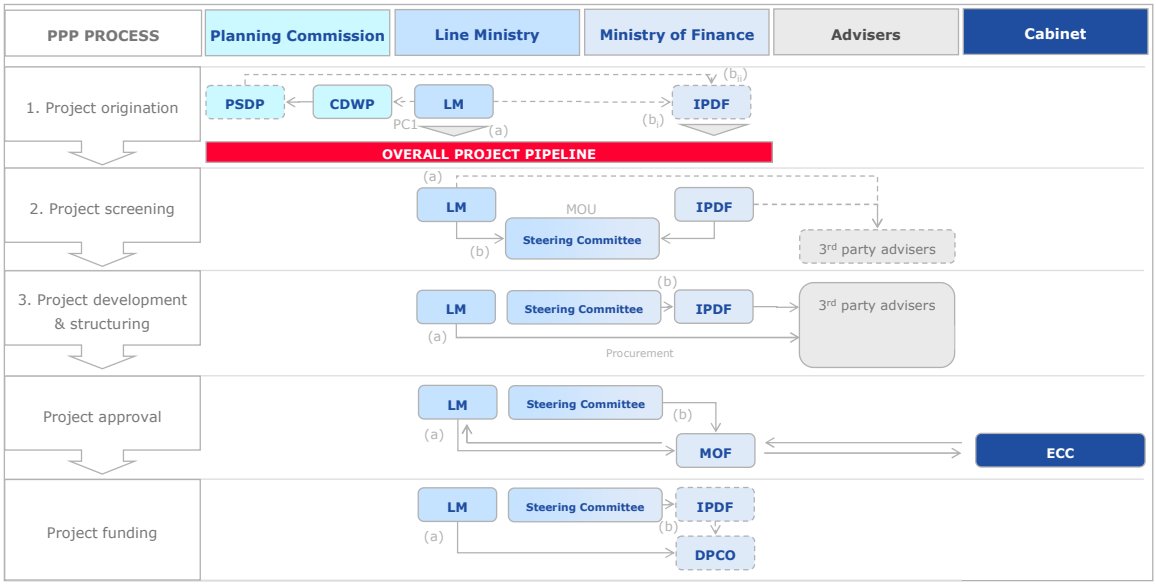
Some aspects of the PPP process in relation to "Stage 1: Enabling environment" have already been discussed in the previous section. This section focuses on the PPP process related to the other Stages of the project cycle. It summarizes the current PPP process from project origination to closing and comments on it, taking into account the international best practice.

3.2.1. Assessment of the existing PPP project development process

Summary of the PPP process

Figure 3.3 below sets out the existing PPP process in Pakistan at different stages of the project development cycle.

Figure 3.3: PPP project development cycle



As shown, the Line Ministry can (a) screen projects and procure advisers directly, or (b) develop a project with the facilitation and support of IPDF. At the origination stage, the latter can involve either (i) the Line Ministry directly approaching IPDF or (ii) IPDF sourcing a project from the PSDP. Currently, the latter is the only role for the Planning Commission. Should the Line Ministry sign an MOU with IPDF (option (b)), a Steering Committee is established to guide the development process. Advisers are involved in the screening and development phases. Approval of projects is made by the Board of Directors of the relevant department, Ministry of Finance, and the ECC. Requests for any contingent or funded guarantees or subsidies for the project are made to the DPCO. However, there are ambiguities in this process (indicated by the dashed lines), such as the relationship between IPDF and the Planning Commission at origination, the regularity of

hiring advisers to screen projects, and the process for applying for guarantees. Unsolicited approaches by the private sector are dealt with separately.

As indicated, the overall process for originating PPP projects is not well defined and is, in fact, overlapping with the application procedure of government funding for public projects. The latter is briefly summarized below.

Application process for public funding

The role of Line Ministries. Line Ministries apply for government funding through *Public Sector Development Programme (PSDP*), by submitting an application to the **Planning Commission (PDD)**[15]. A "Project Concept" document, "PC1", must be submitted along with the application[16]. The quality and the quantity of the information provided in the PC1 may vary significantly depending on the degree of in-depth analysis undertaken by the relevant Line Ministry. In general, the information provided in the PC1, being the document designed for public projects, is focused on evidence of public service delivery and social and environmental implications and total project cost estimate.

The role of the PDD. The PDD decides whether or not a project will be accepted for the PSDP. If the government funding for a specific project is not approved, then the PDD may ask IPDF to screen the project and to check whether it may become a PPP opportunity or not. As set out, this is not the way to go about developing a pipe-line of PPP opportunities as we will discuss presently.

PDD maintains that over 200 projects have been passed to IPDF for screening PPP projects opportunities and that IPDF has picked up some of them for development. There is, however, not a precise procedure for the coordination and interaction between IPDF and the PDD. Different situations may occur:

- PDD may provide a number of PC1 documents to IPDF, once it is decided that they are excluded from the PSDP.
- PDD then invites IPDF to attend the committee meeting at which the PC1 is screened and asks IPDF to pick up those projects that might be developed as PPP.
- PDD may assess by itself on the basis of the PC1, as to which projects might be developed on a PPP basis.

The role of IPDF. IPDF cannot compel Line Ministries to accept their sponsoring role, even where it is clear that the latter lack the capacity to prepare the project, even with external support. As such, they themselves, seek to originate PPP projects in different ways:

- IPDF may express interest in developing a PPP project that was suggested by the PDD and start working on it.

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[15] Planning and Development Division of the Planning Commission

16 For project whose cost estimate is higher than 300m r, Line Ministries have to provide a feasibility study (PC2) that is submitted before the PC1 is submitted.

- IPDF may be approached by any Line Ministry that is seeking technical support.
- IPDF may seek opportunities itself and generate some outside of the PDD list of projects.

Project development

The Line Ministries and the IPDF are currently the government entities mainly involved in the development and structuring phase of the PPP development process.

Line Ministries. On paper, the Line Ministries are the sole project sponsors for a project. Once it is decided that a project should be developed on a PPP basis, the Line Ministries may run a bidding process to procure advisory services for development activities. Line Ministries may also enter into a Memorandum of Understanding (MoU) with IPDF to receive support in the development and structuring of the PPP project. The IPDF support is not mandatory. In some cases, the PDD or the MoF encourages the Line Ministry to seek IPDF support, while some Line Ministries are more willing than others to receive IPDF support.

IPDF. Processes that IPDF follows for its intervention at this stage of the project cycle are:

- IPDF signs an MoU with the Line Ministries to act as PPP facilitator *and* advisor.
- Alternatively, IPDF and Line Ministries work together but on an informal basis.

In any case, IPDF seeks to coordinate with the Line Ministry, which is the sole formal sponsor of the project.

No fees are charged to the Line Ministries by IPDF. Should IPDF enter into an MoU with the Line Ministry, it implements the procurement process to hire a technical, legal and financial advisory team. IPDF negotiates and pays the related transaction advisory fees. In cases when the MoU is not signed, and where an external transaction adviser is hired, the procurement process is run by the Line Ministries which also bears the related costs. The intended role for the transaction adviser is:

- early stage project development activities such as the preparation of different feasibility studies, and
- transaction and project structuring activities, such as legal and financial advisory services.

IPDF typically appoints, through a competitive process, a consortium who can provide all the above technical, legal and financial support. Contract fees are typically 75% fixed fee and 25% success fee at financial closing.

Structuring

As mentioned above, the structuring phase is managed in conjunction with the early stage development phase. The transaction advisers hired at the early stage will assist up to financial close.

IPDF tends to classify projects to be in the "structuring" phase as soon as an MoU with Line Ministries is signed. In reality, some of these projects may not have sufficient analysis, covering technical, commercial and financial viability/ feasibility that support initializing the structuring phase.

During the structuring phase, IPDF will submit request for guarantees for a given project to the Internal Finance Wing (IFW) of the Risk Management Unit (RMU) at the MoF, if requested by the private sector party.

Key remarks on the PPP processes of the project development cycle

Our key comments are the following:

- **The process for originating PPP projects is not optimal.** As explained previously, the private sector should not be an investor of last resort and the challenge of bankability should not be underestimated. Public sector projects and private sector projects are inherently different – a point which many civil servants used to preparing public sector investment programs often fail to grasp. The starting point for PPPs is to identify types of project where optimal risk transfer is likely to be realised, which are bankable by the private sector. In doing this, there will be inevitable trade-offs with public sector policy objectives. *It is therefore important to have a view as which types of projects should be put into a PPP program, reflecting the ability to transfer types and magnitudes of risks and whether or not this reflects value for money – not to limit the programme to projects that are left over after all public resources have been allocated. Such an approach will be very unlikely to succeed.*
- **Overlapping of processes for PPPs and public funding of projects.** An associated issue is that there is a clear overlap between the process for PPP projects and that for publicly funded projects. As set out above, it appears to be this way because a formal process for PPPs has not been clearly identified, and as a result, it is currently informally structured on the basis of, and overlapping with, the already existing process for publicly funded projects. This solution is not optimal and it is not supported either by international best practice which instead suggests the identification of a clear and distinctive route for PPP projects.
- **Suitability of existing documents for screening PPP infrastructure projects.** The PC1 document is the only, or key, document currently prepared by Line Ministries for infrastructure projects. However, the PC1 is designed for public funding requirements. It is mainly focused on showing public service delivery requirements, social and environmental impacts. The suitability of PC1 documents as a basis for identifying PPP projects is a cause for concern. During the consultation process, it has been reported that the PC1 document does not provide sufficient information and analysis required to assess whether or not the proposed project is suitable for development on a PPP basis.
- **Unclear definition of roles.** It seems that the role of the PDD and the IPDF are not always clearly defined with respect to PPP project development. They both seem to undertake a similar role in screening projects on the basis of the PC1 documents,

and their analysis may sometimes overlap. Also, it is also unclear whether or not the projects included in the list that PDD passes to IPDF are deemed by the PDD as suitable projects for PPP arrangements or whether PDD relies on the IPDF's assessment of suitability. Lack of clarity in the process and in the definition of roles may have implications on the allocation of responsibilities and related accountability issues. Best practice encourages a more clear distinction and attribution of roles and responsibilities that is informed, among other factors, by the core competencies, the degree of ownership, and the level of independence of each institution involved in the PPP process.

- **Undefined role of IPDF in the project development activities.** There is no clear procedure setting out how the IPDF should co-operate with the Line Ministries. In some cases, IPDF signs an MoU that defines the terms and conditions of the co-operation, but in some other cases, IPDF works on projects based on an informal agreement with the project sponsor.

- **Unclear distinction between stages of the project development cycle.** There seems to be a little work done to assess the suitability for PPP before appointing a transaction adviser; a clearer distinction between early stage development phase and structuring phase might be more appropriate. A lack of proper assessment of PPP suitability may lead to the pursuit of opportunities which are not commercially viable and that will not generate enough appetite from the private sector. For example, in India, processes are being institutionalised to appraise the suitability of capital projects (for which high-level feasibility and financial plans have bee developed) to be undertaken on PPP basis, before such projects are actually tendered to the private sector. This also helps to derive maximum leverage of the available fiscal budget for infrastructure spending.

- **No universal guidelines for screening project opportunities.** IPDF has developed guidelines for origination and inception of PPP projects. However, it does not seem that these are universally applied by Line Ministries or whoever is involved with screening projects. In reality, there is a risk that some PPP opportunities are missed on the one hand, or on the other, there is a risk that scarce project development resources are utilised by PPP initiatives that are clearly not viable. In addition, uniform guidelines for screening PPP initiatives should reflect government priorities such as sector focus, type of PPP arrangement, and project size; as well as the available government budget for projects.

- **Need for guidelines for developing a project pipeline.** The PPP process does not identify prescriptive guidelines and criteria for developing an official and approved project pipeline for PPPs. On one hand, there seems to be a consensus that the PC1 document does not provide sufficient information for project screening; on the other, it seems that the PDD still uses these documents to develop a project pipeline. Even though some informal criteria are likely to be applied and IPDF has even developed an internal guide ("Inception Criteria for PPP Projects"), it would be best if prescriptive guidelines for screening projects, including specific criteria for assessment were developed, disseminated and applied thoughtfully by each institution

responsible for developing or contributing to the project pipeline. Additional information on criteria for developing a project pipeline is set out in Section 8.

3.3. The Infrastructure Project Development Facility (IPDF)

In Pakistan, the closest institution to a PPP Unit is the IPDF whose mandate is to promote PPP projects across infrastructure sectors. So far, IPDF has played an active role in this. A relatively detailed overview of its current role, responsibilities and capabilities is useful in the development of an optimal IPDF role in relation to the PDF and the VGF.

3.3.1. IPDF's role across PPP functions

A PPP Unit could potentially perform a range of activities. Should it do so, it is important that possible conflicts of interest or incompatibility are managed properly. On the basis of the consultation process, it has emerged that IPDF is engaged across key functions:

- **Developing policy versus its implementation (for instance, through a transaction capability).** As set out, from a best practice perspective, these are typically best kept at arm's length, due to the "referee/ player" issue and not least because the types of skills involved are quite different. As previously discussed, in the case of IPDF, these two functions are clearly overlapping.
- **Project design and development vs public funding/ financing**. This does not seem to be an issue, as IPDF is not involved in public funding decisions which are the competence of the MoF. Even in case of project guarantees, it is not IPDF's responsibility to approve them.

The specific activities across these functions are summarised in Table 3.2.

Table 3.2: Summary of IPDF's roles across key functions

PPP policy development, dissemination and enforcement	**PPP project development support**	**Financial management**
• Promote understanding of PPP concept • Drafting of PPP policies and guidelines • Support dissemination of PPP guidelines within the government	• Project origination independently from Line Ministry • Screening of projects suitable for PPP • Advisory role in project development phases to Line Ministries, with or without an MoU signed • Procurement agent in the selection of external transaction support	• Not involved in the approval of financial commitment for PPPs • Request for funding are submitted to IFW • Request for guarantees are submitted to the MoF.

3.3.2. Assessment of IPDF capabilities

In this sub-section, we provide an initial perspective on the issues and challenges faced by the IPDF, particularly as regards:

- the degree of authority and sponsorship with which they are provided, in terms of their perceived role as having responsibility for implementing Pakistan's PPP policy;
- their degree of independence in implementing policies and potential conflicts they face in doing so; and
- their ability to undertake potential roles given their existing technical capabilities.

At this stage, we would offer the following observations:

- **Independence and lack of authority of IPDF.** The IPDF was deliberately established with a corporate rather than governmental structure in order to establish a high degree of independence. As stand-alone company, however, it has been remarked to us, that this compounds the difficulty that it has in promoting and potentially enforcing government policy. So whilst it does not seem that IPDF is "captured" by any particular interest group, this perhaps may just reflect a view that it is not seen as being influential.
- **Need for compensating support.** There is therefore an argument, at least in the longer term, that IPDF's policy and enforcement function might better sit within government. As regards the current situation, however, it is important that MoF and even other ministries help compensate IPDF's lack of formal authority by helping to promote its activities within government, therefore "clearing a path" for it to undertake its objectives, particularly of promoting and disseminating PPP policy.
- **Risk of conflict of interest.** As set out, due to the involvement of IPDF in both policy development and project support activities, we believe that there is an inherent risk of conflict of interest. The specific issue as regards this latter role is that the more IPDF becomes involved in advising on specific projects, rather than merely procuring advisory support on behalf of Line Ministry sponsors, the more it is in conflict with its role of policy oversight and enforcement. At a minimum these activities should be separated through clear ring-fence and ideally be performed by separate institutions; however, as we will discuss, this may not be the most appropriate solution at this point in time in Pakistan.
- **Existing IPDF expertise.** IPDF has developed a good understanding of the PPP concept and processes, but its practical experience in dealing with PPP projects is limited. Given the lack of track record of PPP experience (as well as their own limited understanding of PPPs), Line Ministries seem reluctant to work with IPDF on PPP initiatives.

These points are summarised in Table 3.3 below.

Table 3.3: Assessment of authority, independence and technical capabilities of IPDF

Authority and sponsorship	Independence/ risk of conflict of interest	Technical capabilities
• No capability to enforce PPP processes • Limited sponsorship from MoF, although this seems to be improving	• IPDF are seemingly independent from political interests • Risk of conflict of interest arising from the overlapping of functions	• Developed good understanding of PPP concept and processes • Limited experience and in structuring/ negotiating PPP arrangements

3.4. Summary

A review of the roles, responsibilities and apparent competencies of those institutions involved with PPP processes in Pakistan would suggest a number of key issues. First and foremost, whilst GoP has set out its commitment to the PPP approach, over time it is important the policy is enforced such that, where appropriate, more projects follow the PPP route as preferred choice, rather than as a fall-back position. The second major problem, is that the PPP route is still seen a substitute for public sector funding rather than an alternative for projects meeting certain conditions. Treating the private sector as an investor of last resort at best will lead to sub-optimal projects, at worst it will lead to a lack of credibility for the PPP programme and ultimate failure.

At a more detailed level, following from the above, there are numerous institutions involved across the whole spectrum of the PPP project cycle. It is not always apparent which agency is responsible for each stage of approval or preparation for transactions through the project cycle, and there is no explicit institutional framework to cater for PPP transactions. Whilst there is a clear interest in PPPs, the capacity of public sector agencies in understanding PPP processes and the risk-sharing they entail is extremely limited. There is a narrow comprehension of the rationale for using PPP structures. Capacity building is needed across all levels of the public sector and hand-holding for PPP project development and transaction activities will be essential in the coming years, whilst this capacity is built up.

Table 4.4 provides an illustration of the institutional roles and responsibilities involved in the PPP process in Pakistan in comparison with the typical 'best practice' institutional set up. Areas of weakness are highlighted.

Table 3.4: PPP project cycle and processes in Pakistan

Project cycle activity	Roles and responsibilities			
	Line Ministry	**Ministry of Finance (MoF)**	**Planning Commission**	**IPDF (under the MOF)**
PPP policies	Not clear evidence of strong contribution to PPP policies	Responsible for the PPP Program, according to best practice	Involved in the PPP policies	Technical support in drafting and dissemination of PPP policies
Sector strategy development	Not evidence found of Line Ministry involvement in preparation of sector PPP strategy	Provides advice on potential for PPP (at least through IPDF)	Provides advice on potential for PPP Develops country national plan	Provides advice on potential for PPP
Identification / origination/ screening	Limited role in identification of projects suitable for a PPP approach	Provides advice through IPDF	Involved in the project origination from PSDP project list	Provide a facilitator role which may overlap with *de facto* sponsor role
Feasibility testing	In practice lack of ownership at Line Ministry level (not always)	Provides position on any financial support to be provided		As above
Legal & financial structuring (i.e. project "packaging")	Limited involvement of Line Ministry in development of appropriate option with which to go to market Heavy reliance on external advisory support	Provides in principle financial commitments (funded and contingent) Lack of monitoring of contingent liabilities		As above
Procurement (through to negotiation)	Manages procurement / transactions	Signs off on financial aspects affecting national interest		Act as procurement agent in some cases

4. RECOMMENDATIONS ON THE PPP ENABLING ENVIRONMENT

The preceding section sets out many of the problems currently being encountered by the PPP programme in Pakistan, particularly when compared to the best practice picture presented in Section 2.

Given this, we would argue that there are two realistic high-level options between which Pakistan needs to choose. Either to move now and to make quite considerable investment in establishing the framework as set out; or to adopt a more short term strategy, based largely on existing institutional arrangements, whilst moving to the best practice model over time. On balance, given the prevailing set of policy priorities in Pakistan and the status of PPP, we would argue for the latter option: that is short term arrangements designed to catalyse the PPP programme, whilst moving to a more robust best-practice model in the medium term.

Following a discussion of these high level options, we have therefore grouped our recommendations into two. The first considers immediate measures that we believe should be taken, the second, are longer term changes which we believe are required to develop a sustainable PPP programme. Following from our understanding and preliminary assessment of the Pakistan context, set out in Section 3, we have identified several areas for improvement which cut across these two sections, including the overall institutional framework for PPP, the management of contingent liabilities, understanding and capabilities amongst key PPP stakeholders, and developing the PPP process in general.

4.1. High level options

As introduced above, given the circumstances in Pakistan, where knowledge of PPP is limited and where IPDF is arguably the only institution focused on PPP issues, there are probably two options that might be considered.

The first of these would be look to develop the framework as set out in Section 2, which emphasises the need to develop the capabilities of Federal and Provincial Contracting Authorities to sponsor and deliver the PPP cycle. This would involve considerable investment in developing particularly line ministry capabilities.

The second would be to see this as an interim objective, perhaps three to five years in the future and as a short term measure to build on the existing capabilities and functions of IPDF, although as set out, we believe that from a best practice point of view, a number of the functions we propose involve a number of conflicts. Moreover, this option is not without its costs either, as it is important that IPDF has better access to both expensive in-house skills and experience – potentially through secondments from Pakistan's investment banks – and external PPP skills, with international experience in PPP transactions.

The principal criterion by which the two high level options might be evaluated is their respective potentials to break the impasse which is currently preventing PPP transactions from being undertaken. There are a number of specific challenges to be faced:

- the widespread general lack of understanding of PPP and what it entails;
- the understandable desire of line ministries and some other Contracting Authorities not to have project sponsorship and ownership taken away from them by IPDF; and
- the need to increase confidence in IPDF by ensuring that they themselves can staff up with people adequately – for instance, secondees from Pakistani investment banks and/ or UK PPP/ PFI-trained Pakistani diaspora – and by ensuring that they can provide experienced third party transaction advisors.

On balance, whilst we have concerns regarding a very centralised approach, we believe that the current situation in Pakistan warrants, at least temporarily, such an initiative, to "kick-start" the PPP programme and to develop capacity among line ministries over time. There is some precedence for a a similar approach from the UK's experience with the Treasury Task Force and PUK as set out in Box 4.1. The key lessons include the successful separation of policy and project development components; the remit of PUK to drive the programme forward and undertakes pathfinder deals (given the nascent market beforehand); and the development of capacities in other areas of the public sector, particularly line ministries, over time. However, as inferred by the Box 4.1, it is important to recognise that Pakistan faces considerable institutional challenges.

Box 4.1: UK Treasury Task Force / Partnerships UK.

Under the Labour Government, the role of a centralised "PPP unit" for the UK's private finance initiative (PFI) and other forms of PPP support can be considered in two phases. In the period 1997-2000 the Treasury Task Force which was established to promote pioneer PFI transactions, effectively sponsored PFI deals as well as developing policy on the programme. The Task Force comprised a number of secondees from City institutions such as accountants, consultants and investment bankers. In turn, the Task Force had significant resources to hire teams of advisors to work on specific transactions.

However, with the establishment of PUK from 1999 onwards, as a joint venture with the private sector, the policy mandate was retained within the Treasury, with PUK operating at arm's length as a transactions advisor and sometimes joint equity sponsor of PPP projects. In other words, PUK is either hired as an advisor, or else enters into a joint development agreement with the public sector sponsor. This latter period, clearly illustrates the point of separating policy from operations. The more strategic position adopted during the initial period, we would argue, was largely possible because of the specific nature of the UK's economic institutional arrangements in which historically the Treasury has had unprecedented powers over line ministries which is seldom found elsewhere, even in other British Commonwealth countries. This enabled the Treasury Task Force to take the lead in pursuing pathfinder PFI transactions.

It is also important to note that the UK private sector provides PFI transaction expertise, as well as PUK. Indeed, there are so many companies offering such advice that it has become relatively commoditised, with professional rates being much lower than they were previously. It is stipulated that PUK, like the International Finance Corporation (IFC), should not compete with the private sector.

In addition, line ministries and local bodies have developed PPP capabilities over time, such that the Prison Service and Highways Agency both have dedicated PFI teams. Such arrangements have evolved over time and are sector specific. For example, where authority within a sector is fragmented, such as in the National Health Service, a single dedicated PFI unit makes less sense.

It is worthy to notice though, that the suggested approach is not a replication of the UK model in Pakistan. The approach suggested in this Report is the result of the development of a preliminary approach which was discussed with stakeholders and revised during the assignment. Key reasons for recommending this final approach include:

- at early stage of the PPP programme, a centralised role of IPDF might be a catalyst for PPP initiatives, even if the long term goal is to increase the competence of each Contracting Authority;
- opportunity to fill a market gap in infrastructure project development; the revised approach suggests that TADS may be able to fill this gap in the future; and
- it seemed appropriate to suggest the use of an existing institution, IPDF, to host TADS rather than to establish a new one.

4.2. Immediate measures

Thus, an immediate measure is to clarify the different roles that IPDF may play within the overall PPP framework, as a central PPP unit. In addition, it is also important to consider other key aspects of the framework, such as the new proposed PDF and VGF and not least, the importance of an enhanced public financial management capability.

4.2.1. Location and use of PDF resources

As we will discuss in more detail in Section 5, we would argue that IPDF should have responsibility for managing the PDF. It should do so through a small team who will process applications, together with an independent Evaluation Committee that will review and approve applications for support. The rationale for this location is to avoid the need to create another institution, at least at this point in time.

The PDF will invite applications for funding either directly from Contracting Authorities, or else through the division of IPDF responsible for providing advisory and developer services (see below).

Some of PDF's resources will be required for facility management activities. Our proposed enhancing of IPDF will also require funding, with PDF being the most likely source. The rest would be used to procure third party advisors.

4.2.2. IPDF

Given our high level recommendation, we would suggest that this has a number of implications for IPDF, particularly in terms of its structure and governance.

Ring-fencing conflicting activities

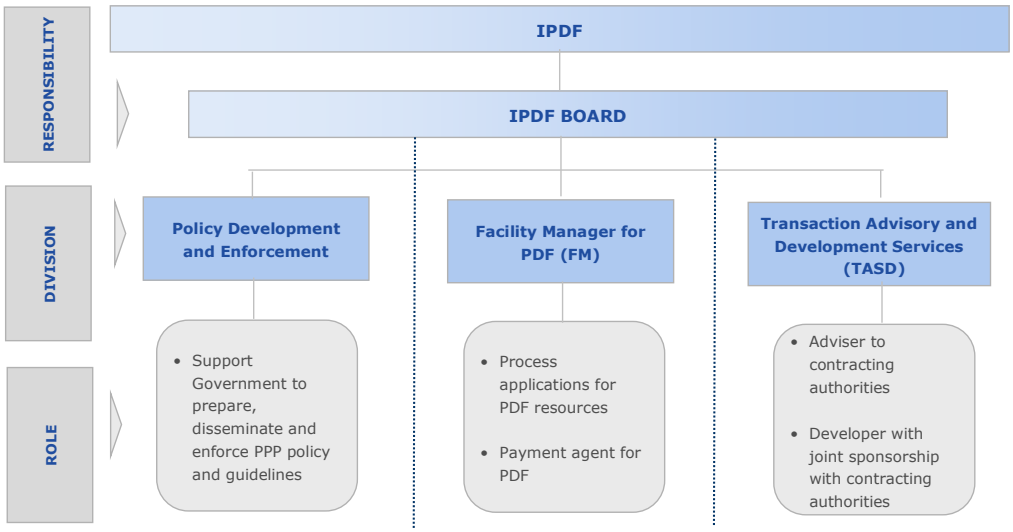
Under our recommendations, we would argue that IPDF is responsible for three core activities, which should be managed as separate activities:

- **Policy, dissemination and enforcement** – that is, ensuring that PPP policy develops along the right lines.

- **Transaction advisory and development services (TADS)** – that is, the provision of advisory services to contracting authorities and/ or the signing of joint development agreements (JDAs) with contracting authorities, in which IDPF and the contracting authority become joint sponsors of the project.
- **Facility management of the PDF** – involving the payment of and procurement of third party advisors.

Each of these activities should be undertaken by separate divisions reporting in to the overall IPDF Board. Each should be managed by a separate Director. Although junior staff may rotate between each division, more senior staff should stick to one division. These arrangements are illustrated in Figure 4.1:

Figure 4.1: Ring-fenced IPDF divisions



Policy development, dissemination and enforcement

The PPP policy has been approved by the MoF in May 2009 and it is awaiting approval from the Cabinet. This is positive step forward in the PPP programme. However the policy dissemination and the capability of the Government to enforce the PPP policy will play a key role for the future success of the PPP programme in Pakistan in the next coming years. Unless proper mechanisms aimed at incentivising and/ or enforcing the PPP format are in place, PPP guidelines that will follow the PPP policy are unlikely to be widely followed. It is important that IPDF is recognised as having the powers, where appropriate, to help government enforce policy, with the support of the guiding ministries.

TADS – Advisory/ Developer role

We would argue that TADS could both provide project development advisory services and undertaken a joint-developer/ sponsorship role[17], depending on the specific requirements and request by the Contracting Authority (indeed, a line ministry may elect

[17] We understand that this may require changes to IPDF's current Memorandum and Articles of Association.

not to utilise TADS' services at all). The provision of advisory services would involve TADS staff charging a fee for these services. However, the client Contracting Authority would retain ownership of the project. In contrast, the provision of developer services would involve IPDF acting as a joint principal, along with the Contracting Authority. IPDF's consideration would initially come in the form joint ownership of the project or development rights. The agreement with the Contracting Authority will involve a development fee at financial close, whereby TADS receives the multiple component of the fee (see Section 5). It might alternatively involve a carried interest or a share in an ongoing concession fee, depending upon the precise nature of the project.

TADS staff should comprise PPP transaction experts and possibly infrastructure developers, ideally with a successful track-record of project closing in PPP transactions. Given the current status of the PPP programme in Pakistan, it is obvious that IPDF has not yet had the opportunity to develop internally the required experience to act as transaction adviser and/ or as joint sponsors in PPP projects.

The Government's support to the internal and external development of IPDF capabilities within TADS will be crucial for its success. Putting together the right TADS team is likely to require at least contracting or seconding in resources from the private sector. There are experienced individuals in Pakistan, particularly the banking sector, and, while there is a risk that TADS might not be able to attract such skills, higher remuneration packages and secondment fees might be necessary. Experts may need to be recruited internationally, possibly UK based professional Pakistanis with expertise in PFI/PPP. This is likely to prove an expensive exercise – it is none-the-less essential. Such funding can be milestone based and contingent on the development of internal capacity over time (possibly including training programmes).

Managing the PDF

As a Facility Manager (FM) of the PDF, the PDF management division of IPDF would be responsible for processing applications for the use of PDF resources. Whilst there is an argument for a given proportion of it to be allocated to TADS, most of resources will be allocated on a merit basis – that is, which projects most deserve support[18]. As such, the FM will need to remain neutral between direct line ministry applications for support and those through TADS. From a governance perspective, it is important that the Evaluation Committee is separate from the IPDF. Whilst being responsible for managing the staff who operate the facility, the Board of IPDF should only be able to overturn a decision of the Evaluation Committee in very narrow circumstances (such as fraud etc.).

4.2.3. Institutional framework for PPP

Any institutional framework for PPP needs to be clear about how support is provided and about how and by whom decisions are made through the PPP project cycle. In line

[18] A possible approach might be to allocate a higher proportion of PDF resources to TADS in the early years and then for this to decline over time as a deeper advisory service market develops in Pakistan.

with best practice, institutional responsibilities within a PPP framework can be distinguished between three core functions, as set out: policy development, dissemination and enforcement; project development; and financial management.

Our recommendations as to how the existing institutional arrangements could be improved are set out below.

- **Continue to develop high level sponsorship for the PPP programme**. It is important for GoP to build on the activities taken to date in promoting the overall PPP approach. Projects where there is evidence to suggest that the PPP approach could work, should in most cases be forced to follow such a route, with few exceptions, with the MoF being prepared to cut off any other form of public financial support. This is not to say that all infrastructure provision should follow such a route, but policy makers need to be clear regarding where the potential for PPP lies and how value for money will be achieved in following such a route. Over time, it is anticipated that a number of PPP routes will be developed, thus increasing the applicability of the approach to more and more sectors.
- **Strengthen the ownership of individual projects in Line Ministries and other Contracting Authorities, through the establishment of PPP nodes.** Whilst our recommendations provide for an enhanced role for IPDF, the importance of project ownership by Contracting Authorities should not be overlooked. The ownership may be shared with IPDF where it acts as a joint-developer, or solely where external support either from IPDF or elsewhere, is advisory in nature. We would recommend that all phases of the project development cycle, from origination to post-contract monitoring, should involve the respective Contracting Authority. A way of implementing this over time, is to establish so-called PPP nodes within each Contracting Authority, who would be the contact point and day to day overseer of all PPP activities. Initially, this may be one individual, but in the medium term, teams or cells should develop, according to the level of PPP activity, dedicated to:
  - originating potential PPP projects;
  - screening and preparing for private sector potential;
  - procuring and monitoring transaction advisers;
  - developing, with the aid of advisers and the central policy-makers within the Ministry, PPP projects through the feasibility, structuring and negotiation stages;
  - on behalf of the Line Ministry, agreeing terms with the private partner such that the ministry can enter into a PPP contractual agreement; and
  - monitoring projects, post financial close.
- **Development of a distinct and clear route to PPPs.** It appears to be that a formal process for PPPs has not been clearly identified yet, and as a result, it is currently informally structured on the basis of, and overlapping with, the already existing process for publicly funded projects. We suggest the development of a route to PPP projects which is clearly distinct from the government funding process. This would

allow taking into account the features and complexity of PPPs which are different from those of publicly funded projects. At a strategic level, the PDD perhaps together with the MoF could establish an appropriate policy paradigm for Pakistan in terms of which projects might be expected to follow the PPP route.

4.2.4. Management of contingent and funded liabilities

The consultation process demonstrated the lack of management at centralized level of contingent liabilities, including those arising from government guarantees issued to private sector party on IPP projects and/ or to private sector lenders on publicly funded projects.

At the time of our field visit to Pakistan, there did not appear to be an evaluation process of the appropriateness of the requested guarantee and the assessment of the form and quantum of guarantee, although we understand that this is something that is now being investigated.

There is a limit of 2% of GDP for contingent liabilities in each fiscal year. At the MoF level, this limit is checked at the year end. It is uncertain, however, whether or not all contingent liabilities, including those arising from government guarantees are counted in. For example, the Private Power and Infrastructure Board (PPIB) has the authorization to issue some guarantees for power projects on behalf of the Government. When it comes to the overall assessment of the government exposure, there is a risk that these contingent liabilities are not accurately and systematically considered.

In PPP arrangements, it is not unusual for the private party to request a government guarantee. A few recommendations in this regard include the following:

- Government should have the capability to evaluate whether or not it is necessary to provide a form of guarantee, to decide which form is most appropriate, and to negotiate it with the private party.
- Once issued, the guarantee generates a contingent liability for the Government. Monitoring the impact of these liabilities on the total Government exposure should be an important task of the public finance function.
- According to the PPP policy, the DPCO will responsible for management of any funded or contingent financial obligation, including guarantees, arising from PPP arrangements. Evaluating and monitoring the risk of contingent liabilities requires strong financial skills and expertise. We would encourage GoP not to underestimate the complexity of these activities and the technical expertise required to undertake them.

In addition, as will be discussed more extensively in Section 7, there is a strong case to integrate the operations of the VGF with the DPCO, as both involve the quantification and management of government obligations, where funded or contingent.

As regards VGF, we would argue that funding must first by allocated to different projects on the basis of project on project competition, between public sector sponsors. Following this, the VGF rules should stipulate the subsidy should be used as efficiently

as possible by projects benefiting from it. This efficiency/ value for money, must be demonstrated in any competition for given opportunity.

As will be discussed more extensively, we are advocating two main approaches to the provision of subsidies. Where it is possible to target poorer households through the provision of capital grants to extend the reach of different infrastructure networks, we would suggest that the subsidy takes the form of a capital grant, provided on a least costs basis. Where greater levels of subsidy are required, it is anticipated that these would more usually take the form of concessional financing.

4.3. Longer term arrangements

Whilst a centralised approach may be necessary in the short term to "kick-start" the PPP programme there are clear risk in relying one institution – IPDF – to do everything. Our view of best practice is that at least in **the medium term, policy making and enforcement should b**e kept separate from individual project sponsorship – and that even ring-fencing may not offer full protection. Moreover, it is the Contracting Authorities who should take ownership of the PPP programme. Thus, over time, we would expect to see a strengthening of capabilities within the different contracting authorities – line ministries, departments and agencies – and a comm**e**nsurate transfer of responsibilities for sponsoring individual projects.

4.3.1. Improving the understanding and capabilities of PPP stakeholders

A starting point in developing a best practice regime in the longer term is to raise the understanding of and capabilities to undertake PPP projects, throughout government. An unquestionable observation from our consultations was the overwhelming lack of capacity of the public sector to undertake and implement PPP infrastructure projects. There is a limited understanding of the rationale for PPP and the involvement of the private sector in the delivery of infrastructure services, which were previously the preserve of the public sector. There is also a limited understanding of specific *risk-sharing* structures needed for PPP transactions, as the distinction among the different forms of PPP arrangements. Of course, in reality, PPP projects involve significant risk-sharing between government and private partners, with the principle that risk should be undertaken by the party best able to control such risk. There are ongoing contractual commitments on both sides throughout the concession period (including payments from the government in some instances), and generally greater long-term contingent liabilities for the government are involved.

There is currently limited capacity in the public sector to initiate, develop, prioritise, package, and manage PPP projects. Most agencies do not have a clear sense of how to identify which projects should be considered as PPP, or the various dynamics of preparing a PPP transaction and negotiating with a private sector developer or operator.

Thus, over time it is important to educate different government entities as regards PPP issues so that they are in a better position to understand, for themselves, the scope of

PPP and their roles within it. Over time the use of use of universal guidelines and standardized processes will help the PPP programme.

4.3.2. The future role of IPDF

We would see the multi-functional role of IPDF as set out above as being transitional for purposes of catalyzing the PPP programme. In the longer term many different things could happen to IPDF – in reality, the GoP will be less concerned about a given institution than the overall success of its programme. As with any institution, it is primarily a means to an end.

The TADS team should comprise PPP transaction experts and possibly infrastructure developers. At the moment, however, it is obvious that, given the current status of PPP programme in Pakistan, IPDF has not yet had the opportunity to develop the required experience to act as transaction adviser in PPP projects. As such, whilst TADS might be housed in the IPDF it will require a considerable infusion of new skills and expertise, to more than supplement what exists already.

IPDF could emerge as a successful government-side developer and advisor. In such circumstances, the policy function might then be subsumed back into the MoF. Indeed, several stakeholders pointed out the difficulties of an institution set up as a corporate entity, seeking to undertake policy functions, so this may be a more appropriate solution. In such a scenario, IPDF may be able to raise commercial capital and become less dependent on funding from sources such as the PDF.

Alternatively, it is possible that TADS is not a success in terms its proposed role, in which case it should be wound up after an appropriate probationary period.

It is important to point out that the choice of the IPDF as the host institution for the PDF is largely based on the fact that it already exists and is currently one of the most knowledgeable institutions when it comes to PPPs in Pakistan. We recognise, however, that it is not the only option and others may emerge as Pakistan develops its approach to PPPs.

5. IMPLEMENTING THE PDF

Whilst the previous section dealt with arrangements to support the overall enabling environment for PPPs in Pakistan, we now turn to the first of two specific initiatives aimed at providing project level support. In this section we consider the PDF, aimed at providing support to the project development process, whereas in the sections thereafter we consider the potential for subsidy support through the VGF. In considering PDF we look at its overall objectives and mandate, before turning to its structure and governance, role and operations and finally funding.

Draft operating Guidelines for the PDF can be found in Annex 5.

5.1. Objectives and mandate

Given our recommendations on the overall PPP framework and approach set out in the previous section we would suggest that PDF's resources be used to:

- ensure that TADS can afford to second or contract a small team of experienced transaction advisors and infrastructure developers; and
- provide resources for third party advisors for project development and transaction advisors, whether they be provided directly to the Contracting Authority or to TADS.

It is important to note that the first of these has not previously considered. If other sufficient resources are available these might be used to fund TADS; however, if they are not, the PDF would be the only other source of funding available. As argued previously, it is imperative that TADS is staffed appropriately.

In turn it is hoped that the deployment of these resources will:

- improve the quality of PPP structures so as to attract private investors and deliver value for money to the Government;
- increase the speed and the number of successful PPPs;
- reduce the impact on the budgets of Government institutions; and
- help GoP to meet certain potential other objectives, namely:
    - to improve good practice in developing PPP projects,
    - to support the project management and ownership of PPP projects by public sector institutions,
    - to ensure self-sustainability of the PDF, and
    - to develop the PPP projects' advisory services market.

Over and above paying for TADS professionals, PDF would typically be used for:

- developing pre-feasibility and feasibility studies (including technical and financial feasibility studies; legal and environment appraisals; assessment of project risks and identification of solutions to mitigate those risks);
- structuring the project, including the legal and contractual documents, to meet the aims of the PPP programme (e.g. bankability and value for money);
- structuring and supervising the competitive procurement process to select the best private offer; and
- supporting negotiations with the private provider until financial close.

5.2. Structure and governance

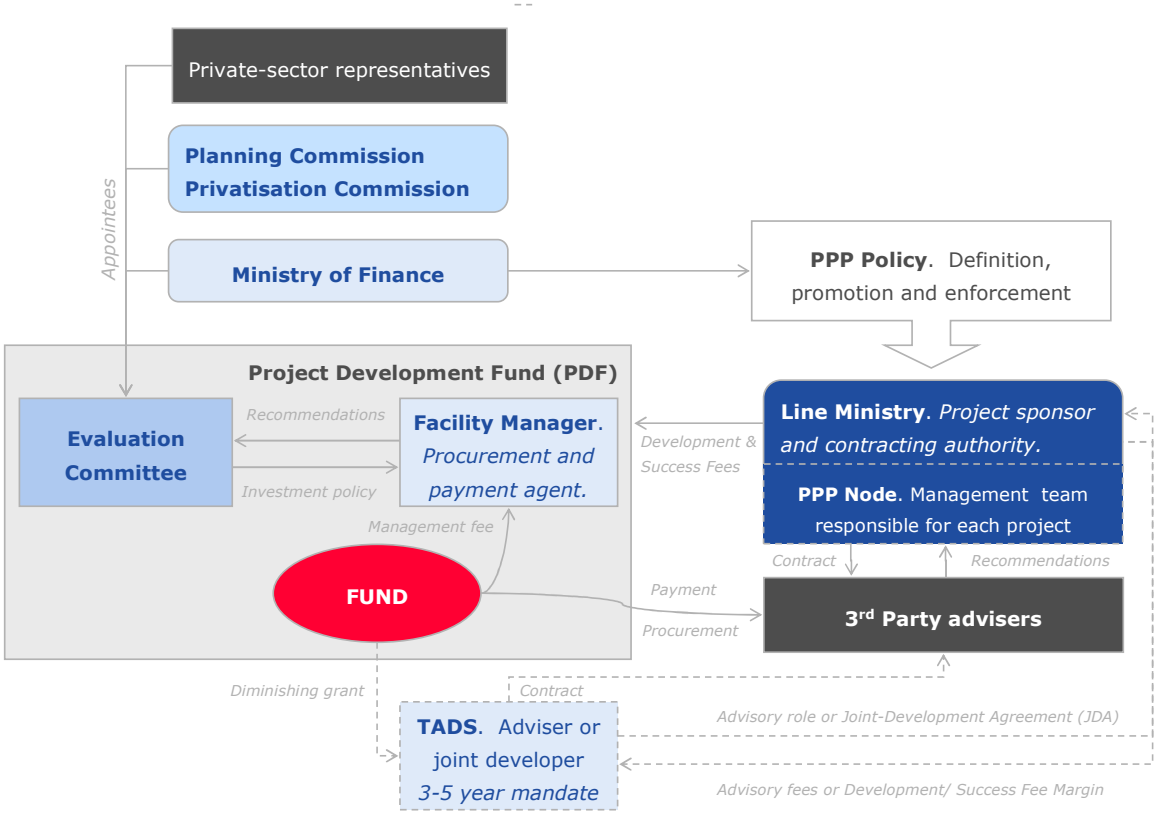
The overall responsibility for the PPP programme will lie with the MoF (with arguably possibly greater inputs by the PDD). The PPP Taskforce will formulate a policy that is conducive to creating a PPP market in Pakistan. It is proposed that the PDF provides funding to support different Contracting Authorities in developing, designing and transacting the PPP project, with the assistance of external advisers appointed competitively.

As set out, the PDF will be hosted as a separate, ring-fenced, division of the IPDF. It will comprise a Facility Manager and an Evaluation Committee, together with monies under management. The Chair of the Evaluation Committee will sit on the IPDF Board. The IPDF reports in to the MoF.

We would envisage the PDF working similarly to the way some of the larger Trust Funds housed at the World Bank, such as the Public-Private Infrastructure Advisory Facility (PPIAF) or Cities Alliance. IPDF would effectively be undertaking a trustee role of the PDF technical assistance facility. The small facility management team operating it will need to ensure that funding is deployed appropriately, whether to Contracting Authorities or to TADS. The staff playing this role should therefore not get involved in the delivery of any services. If IPDF were to provide such services it should be exclusively through TADS. Line Ministries or other Contracting Authorities (alone or in partnership with TADS), will be the ultimate contracting body for third-party advisers funded through PDF resources.

Figure 5.1 summarises how the PDF fits into the overall PPP framework in terms of other institutions, its own governance, and the role of the FM.

Figure 5.1: Schematic of PDF governance, management and overall PPP framework



5.2.1. PDF Evaluation Committee

The Taskforce will appoint a representative Evaluation Committee for the PDF with representation from the Planning Commission, the MoF, and the Privatisation Commission. The Committee's role will be (i) to approve disbursements of PDF resources following recommendations from the Facility Manager that a particular application meets PDF requirements; and (ii) to oversee the activities of the facility manager to ensure that it operates independently, consistent with its operational policies.

The Evaluation Committee should also include some private sector representation with a wide-ranging knowledge of preparing and transacting PPP projects across sectors.

5.2.2. Facility Manager

Staffing of the Facility Manager might comprise a mix of existing dedicated IPDF staff and possibly some external recruits. Their costs will be paid for by a management fee charged by IPDF for managing the PDF (see below).

5.3. PDF resources, role and activities

5.3.1. Allocation of PDF resources

We would argue that PDF resources be split three ways. First, as discussed, an allocation needs to be made to fund the TADS unit of IPDF. Second, there needs to be an allocation of funding for IPDF for its role in managing the facility. This might be in the

region of 10%. This is for processing applications – not typically for "task-managing" as this will be either undertaken by a combination of the Contracting Authority/ TADS and lead transaction advisor.

Third, there needs to be an allocation for the funding of third party advisors. This might include a minimum allocation to applications directly from Contracting Authorities, i.e. those not involving TADS. This allocation might increase over time if there is a desire to be less reliant on TADS and to develop more of an advisory market. The rest of the funding might be allocated on a first come first served basis.

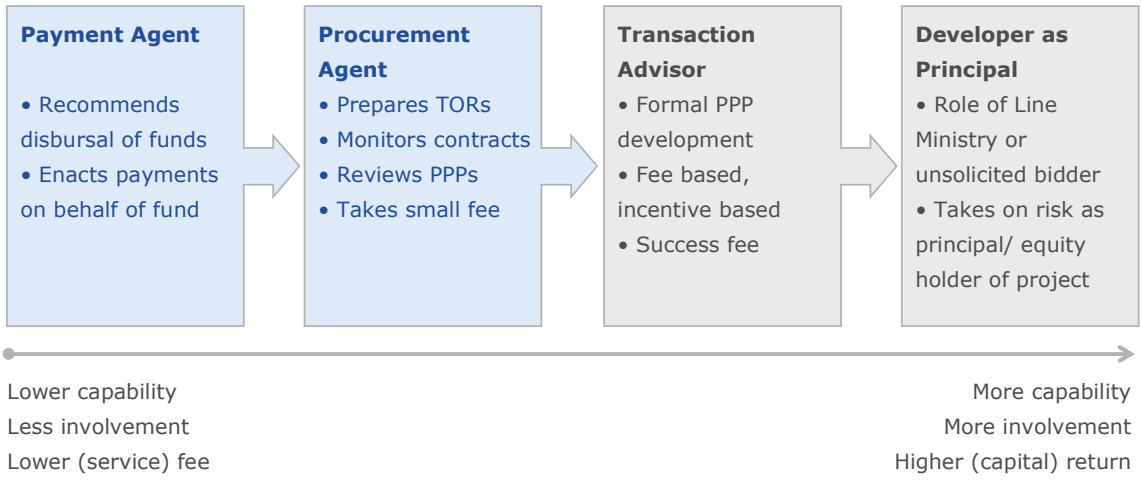
Over and above this, GoP through the PPP Taskforce may decide to allocate funding to particular sectors or types of projects. If so, this should be communicated to the Evaluation Committee. Likewise, minimum amounts might be set for given priorities, with the rest being kept open. Any such rules should be transparent and clear.

5.3.2. Role of Facility Manager

Once expenditure has been approved by the PDF's Evaluation Committee to support the development of a specific project, the FM will sign an MoU or contract with the sponsoring Contracting Authority which sets out their specific roles and responsibilities, with a steering committee formed with representatives from both institutions. The FM's role may be limited to that of payment agent, or extended to that of procurement agent if the capacity to effectively tender projects is lacking.

Figure 5.2 shows how these roles compare with the roles undertaken by TADS in supporting project development and transactions.

Figure 5.2: Spectrum of roles



As discussed, TADS will be performing the roles of advisor or principal. Along this spectrum of activities it is therefore sensible for the PDF to limit itself to the activities of payment and procurement. In the case of the former, the role of the FM would be to oversee the payment of third party contractors working for the different contracting authorities. In addition, as procurement agent, the FM's role might be to arrange the hiring of third party advisors, for instance in developing a terms of reference for a particular scope of support and running a competitive procurement process for them.

Payment agent

The PDF's role as a payment agent is limited to implementing rules and procedures for disbursements and payments to transaction advisers. It shall be the only role of the Facility Manager where a given Contracting Authority or TADS undertakes the procurement process itself. As the PDF's funds will be ring-fenced from those of the rest of government and limited role of the PDF, this should increase confidence of the third party advisors that they will be paid in a timely fashion.

In order to provide appropriate incentives for advisers, the disbursement of resources should be based on milestones and results. As discussed below, payments to private sector advisers should be separated between those hired (i) for the preparation and feasibility stage, and (ii) for the structuring, tendering and negotiation stage.

Procurement agent role

If the Contracting Authority determines that the Facility Manager should perform the procurement role, the Facility Manager will undertake, *inter alia*, the following tasks on behalf of it:

- **Pre-qualification** – A short-list of qualified firms (either through a pre-existing framework or a preliminary bidding process) will be notified of the intention to tender for the services. The PDF might wish to consider initiating a Framework Agreement for advisory services with several qualified private-sector firms.[19]
- **Terms of Reference (ToRs)** – A specific and detailed ToR will be drawn-up, detailing the core information on the project and specifying the scope of work of the transaction adviser. The PDF will be particularly involved in drafting the ToRs, with final approval by the contracting body.
- **Request for Proposals (RfP)** – The PDF should then issue the RfP through mass or business circulation on behalf of the Line Ministry. At this stage, there should be an emphasis on ensuring there is sufficient competitive interest in providing the services.
- **Evaluation** – The PDF should assist the Line Ministry in evaluating the bids received, with the final approval by the latter.
- **Contract signing** – The Line Ministry should sign the contract with the advisers, with the contract including an agreement to abide by PDF governance and best-practice principles, as well as provisions for reporting to the steering committee.
- **Service oversight** – The steering committee should continue to oversee the activities of the adviser in relation to pre-defined targets and milestones. The PDF can leverage broader experiences in hiring advisers, but any final dispute resolution or contract management issues should be decided by the Ministry.

[19] In India, the PPP programme through the MoF makes use of a Panel of pre-qualified transaction advisers (experienced in the commercial, legal and financial aspects of PPPs) in order to streamline the tendering process for the engagement of support to small and medium sized projects.

5.4. Products and processes

The PDF's main product offering shall be grants to Line Ministries to contract third-party advisers for project development activities and transaction support, as set out above. The Contracting Authorities or TADS and the Facility Manager will enter into an agreement detailing the terms and conditions of the financial support provided.

The PDF shall fund activities through the project development cycle through definition, feasibility and structuring/ transaction phases. While activities such as pre-feasibility and feasibility studies are relatively low cost, there are many more projects in the pipeline at this stage and as such they involve a high development risk component in terms of the probability of not progressing. Formal transaction advice for structuring, procuring and negotiating the PPP, including legal inputs, involve higher costs but are 'less risky', as their viability has already been screened and prepared with structuring options.

The PDF shall be a revolving fund and as such seek to recover costs where appropriate. While it should be prepared to write-off early stage costs for projects that do not progress, it can charge a multiple of development costs (i.e. the cost of transaction advisers) if and when a project reaches financial close. The sponsoring entity should be expected to contribute proportionately more towards the early stage costs from its own budget, and should also repay a proportion of development costs at financial close.

The relative costs of different activities, the attrition rate of projects between phases, and the recoverability of resources from successful projects will determine the funding need and sustainability of the fund. This is discussed further under 'Funding'.

5.4.1. Advisory roles of third party transaction advisers

The payment process for the PDF is separated between disbursements (i) related to project preparation stage, and (ii) related to detailed financial and legal structuring once feasibility has been validated, and then the process of procuring private bidders through the tendering process.

- **Preparation stage.** The third party advisers appointed for the preparation stage of the project will recommend to the Contracting Authority and PDF whether a project is capable of attracting private participation. While it is formally the role of the Line Ministries to screen projects for PPP suitability, to develop a project pipeline, and to apply for PDF funding, the PDF will base its decision to provide further resources for feasibility and structuring based on the recommendations of expert advisors. In practice, establishing feasibility should be broken down into different phases from project screening through pre-feasibility and feasibility. Therefore, the advisers will be responsible for carefully evaluating the PPP potential of the project and making recommendations. There will be a fixed amount of PDF resources allocated towards funding of project preparation, in order to limit costs, since the barriers to disbursement approval at this early stage are relatively low.

- **Project structuring, tendering and negotiation.** The PDF will decide whether funds should be disbursed for the second stage on the basis of the feasibility reports delivered by the third-party advisers and its own specified eligibility criteria. Formal limits on disbursements for these activities will be less important since this process is more milestone-based and there is a higher standard for disbursing funds than at the preparation stage. Transactions advisors will take the project to market and achieve maximum value for money for the project and Contracting Authority. They will also assist the Contracting Authority in final negotiations with a preferred bidder.

Since there is a potential conflict of interest for the advisers, there will be the option for separate procurement for both stage, and it may be that separate firms are used. Table 5.1 summarises the process and the possible milestones for delivery.

Table 5.1: Possible payment schedule for third-party advisers

Stage	Milestone	% fee
Preparation and feasibility	Contracting of adviser	10%
	Delivery of pre-feasibility report	20%
	Delivery of technical, legal and financial feasibility reports	30%
	Approval of studies	40%
Project structuring, tendering and negotiation	Contracting of adviser	10%
	Delivery of PPP structuring options	20%
	Marketing of opportunity	10%
	Bid evaluation and recommendations	10%
	Negotiation with preferred bidder and Financial Close	50%

The specific Guidelines for the PDF are set out in Annex 5.

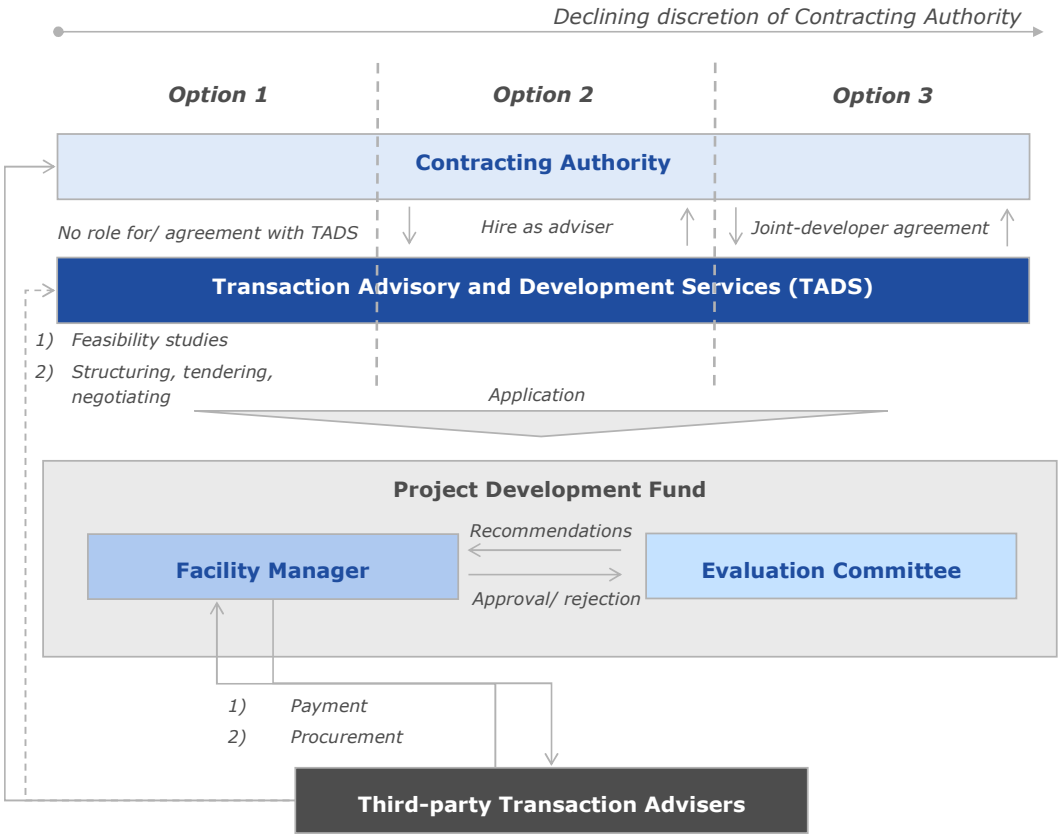
5.4.2. Application options

The Contracting Authority has three options in applying to the PDF to fund the cost of Transaction Advisers:

- The Contracting Authority applies directly to the PDF, and the Facility Manager pays and procures Transaction Advisers on their behalf.
- The Contracting Authority enlists TADS as a 'development adviser', paying them an advisory fee. The advisory agreement between the CA and TADS will specify the fees and the division of activities, for example which of them applies to PDF and which of them undertakes particular development activities.
- The Contracting Authority and TADS enter into a Joint-developer Agreement (JDA), which specifies the terms of remuneration and activities. TADS thus has a risk-taking stake in the project.

Although TADS will not act as formal Transaction Advisers funded by the PDF on a project by project basis, there will be instances where the scope of work for the Transaction Adviser is less because the Contracting Authority is working with TADS, either as a joint-developer or adviser. Issues such as the division of development activities shall be negotiated in the first instance between the Contracting Authority and TADS and is then specified in their application to the PDF. These options are summarised in Figure 5.3.

Figure 5.3: Contracting Authority options for applying to the PDF



5.4.3. TADS as an adviser or joint-developer

The role of a developer is different to that of an advisor. This is because the developer, acting as Principal, undertakes project development of a specific opportunity on its own account; that is, it bears project development risk in a way that an advisor does not.

Where TADS provides advisory services to Contracting Authorities throughout the project development cycle of one or more PPP initiatives, the latter will maintain the ownership of the PPP project and a fee will be paid to TADS for the advisory services.

If, however, TADS provides developer services, the IPDF, through TADS will act as joint developer with the Contracting Authority on a specific project. The relationship between TADS and the contracting authority will be set out in the JDA, and might involve a development fee at financial close, a carried interest or a share in an ongoing concession fee, depending upon the nature of the project.

An infrastructure developer operates largely in the same way as a developer in other sectors, such as property. A property developer, for instance, will identify a potential property development opportunity, seek the necessary development approvals/ permits from the responsible authorities, purchase and/ or lease the required land, construct the property and then, once complete, sell off part if not all of the development to third parties. An infrastructure developer functions in a similar way, although he may wish to maintain an ongoing interest in the development either passively, as an investor, or more actively as the operator of the infrastructure (a property developer may similarly maintain an active interest in a development through providing a facilities/ property management function).

Where appropriate, and if it is staffed with the right developer skills and financial resources, TADS could pursue such opportunities on its own account. As set out below, it would need to reimburse the PDF for use of its resources where projects were successful. However, this might be done at cost, rather than at a margin, with TADS capturing any project development margin.

5.5. Funding the PDF

This sub-section summarises the provisional plan for PDF capital funding, and the issues involved with recapitalising the fund.

5.5.1. Start up funding

It is envisaged that the PDF will be initially capitalised by GoP.

5.5.2. Repayment for services by Contracting Authorities

Successful projects – that is those reaching financial close, provide an opportunity for the PDF to recover costs. This will be in the form of a "development fee", which will be set as a multiple of third party early stage costs; and a "success fee", which will be a repayment of later stage third party costs. These arrangements are discussed below.

The costs incurred to cover activities at the early stage of the project cycle, i.e. in the preparation and inception phase, are relatively lower than the latter. However, projects are more numerous and at this stage will stand a lower chance of moving forward through the project cycle than those which have already been formally assessed and structured.

The PDF should aim to charge successful projects a *development fee*, defined as a multiple of external advisory development costs incurred at this early-stage of project development.

The proportion of projects not reaching financial close will impact the sustainability of the PDF, and will therefore determine that a proportion of the PDF's capital that will have to be renewed on an annual basis in order to maintain a "steady-state" of PPP projects under development.

The later stage of the PDF's support to the Contracting Authority's project is the hiring of advisers to conduct structuring of the project, procurement of private partners, and negotiation to financial close. It is assumed that the full cost of these services is recoverable at financial close, e.g. through a 'success fee', directly covering costs (i.e. no multiple, or small margin).

TADS

TADS will charge its government partner a different structure depending upon whether it is acting in an advisory capacity or as a developer. As an adviser, it will charge the Contracting Authority a fee, negotiated between them and potentially at large discounts initially (or for certain Ministries).

Where it enters a JDA with the Contracting Authority, they and TADS will have to balance proper developer incentives (i.e. the appropriate multiple in the development fee) with remunerating the PDF for successful projects. Therefore, in this case, TADS will capture the multiple element of the development fee, so that the PDF is repaid the cost element. Any profits made should then be put back into funding developer activities on its own account (potentially allowing the PDF to reduce its direct non-project subsidy to TADS to cushion the loss of development fee multiple).

5.5.3. Recapitalisation

Therefore, the 'burn-rate' for PDF resources will be determined by the rate of projects for which transaction advisory costs are incurred but do not subsequently reach financial close.

Whilst it is envisaged that the seed capital for the PDF will be provided by the Government of Pakistan, depending on the funding assumptions described above, the fund will need 'topping-up' in order to remain operational at a particular capacity. Otherwise, it will be wound down until resources are depleted.

5.5.4. Estimate of the PDF funding requirements

In this section, we estimate the funding requirements for PDF to support infrastructure projects according to the recommended approach set out above.

The purpose of this exercise is to provide a first estimate of the funding needed to support PDF activities for the first five years of project development operations. The funding needs are directly dependent upon the size and quality of the project pipeline and upon other variables, including the capabilities and the expertise of Contracting Authorities, TADS and other institutions, as these variables will impact the timing and effectiveness of the project development initiatives supported by PDF.

The analysis set out in this section, undertaken with the support of financial modelling, allows estimates of PDF funding requirements in different scenarios and assumptions for key variables, including the size of the project pipeline, the timing to develop and structure projects, and the success rate of project closing.

The project pipeline is uncertain and changes over time. On the basis of the above, the Base Case scenario developed in this analysis was developed in line with the project pipeline as of May 2009. However, we have also developed an Expanded Case to reflect different assumptions on the size and quality of the pipeline. For each scenario, sensitivity analyses were developed to estimate the impact of different value of key variables on the PDF funding need.

In conclusion, this analysis provides an estimate of the external funding requirements for PDF to support operations for the first five years, under different scenarios and assumptions. The results of the analysis suggest the following:

- In a Base Case which reflects the quality and level of the project pipeline as of May 2009, PDF is expected to support the development of 22 projects in five years, five of which are estimated to achieve financial closing by the end of Year 5. On these base assumptions, the external funding requirement over the first five years is almost US$7m.
- However, results from the sensitivity analysis suggest that the funding requirement could be higher than US$7m, since more conservative assumptions for the rate of attrition between phases of the project (i.e. PDF's performance), the development fee multiple (i.e. the commercial success of projects at financial close), and the length of the project development process (i.e. performance and additional barriers) suggest a need for external funding of approximately US$10m. Should only one project achieve financial close by the end of Year 5.the external funds required could be significantly higher, and increase up to US$ 15.5m.
- In an Expanded Scenario, i.e. where the project pipeline is developed more quickly than in the Base Case, PDF might have the opportunity to provide support to a larger number of projects in the first five year of operations. The ranges for external funds required and project closings based on the same sensitivities are between US$13m and US$18m for between 4 and 10 projects respectively.

The estimate of the PDF funds required for the first five years of operations is set out in detail in Annex 6.

6. THE NATURE OF THE VIABILITY GAP AND THE USE OF SUBSIDIES

Prior to turning to specific design issues related to the VGF, in this section we consider some of the causes of the viability gap and issues related to the form and nature of subsidy delivery. This is important because the VGF should be designed taking these into account, along with key aspects of the Pakistan context.

We begin by considering what factors, other than a lack of household affordability, drive the viability gap, setting out some of the different approaches that are commonly used in subsidizing infrastructure and the relative advantages and disadvantages of each.

6.1. Causes of the viability gap

As currently described, the viability gap is seen as being linked purely to a lack of affordability of consumers to purchase infrastructure services. In reality there can be a number of factors that drive project viability, not just household incomes. Many PPP projects in the developing world are subject to a "viability gap" which we would define as being the shortfall in revenues between tariff income and what is required to cover capex, opex and other financing requirements[20] necessary to make the project financially viable or financeable.

The scale of the viability gap will be dependent upon a range of revenue and cost factors:

- The level of the realisable customer tariff, which in turn will be determined by:
    - *Ability to pay* – any industrial off-take is likely to increase this; household customer bases will only be able to pay a proportion of their incomes for services.
    - *Willingness to pay* – even where there might not be an apparent affordability constraint, consumers are typically resistant to any increases in the politically sensitive tariff.
- The scale of the new investment required. Greenfield projects are particularly problematic where there are few initial customers with resulting limited economies of scale in production; that is, projects are way below their efficient scales.
- In the case of private finance or PPPs:
    - Private financing is typically more expensive than public and its tenor is also typically shorter, meaning that loans are more expensive and need to be paid back more quickly and over fewer years, increasing the required tariff.[21]

[20] Ensuring banking covenants such as debt equity ratios, debt service coverage ratios etc. meet financiers' specifications.

[21] In corporate finance theory, however, public and private finance should be priced similarly because the project risk – which determines the risk premium – is inherently the same.

- Risk aversity amongst private financiers. In the absence of any guarantee, lenders will look for a large amount of equity in a project structure, to cushion them against any unforeseen shocks (such as unfavourable exchange rate movements and in particular, market pricing and volume risks arising from slower than anticipated network roll-out, economic recessions etc.), which will have the impact of increasing the cost of capital and therefore the required tariff.
- In the case of some concessions, the length of the concession is much shorter than the economic life of the assets: if there is no award of a terminal value accruing to the concessionaire at the end of the concession, the resulting amortisation schedule will lead to a high annual depreciation charge and again a higher tariff if the project is to be profitable. If, for instance, a dividend is to be paid, accounting rules in most countries require that the project has both the cash and a level of profitability that enables this.

Thus, whilst the limited affordability of households is one contributing factor to the viability gap problem, other issues around inefficient project financial structures, the limited availability of particular financial instruments, and even risk aversity on the side of investors, can all create a project viability gap. From a practical financing perspective, it might be best to think about a lack of financeability rather than a lack of financial viability.

6.2. Subsidizing infrastructure provision

When considering issues of subsidy, it is useful to do so within a structured framework. In developing such a framework in the sub-sections below, we consider: (i) subsidy flows – who pays and who receives; (ii) the type or form of subsidy; and (iii) the scale of subsidy.

6.2.1. Subsidy flows

A good starting point for analysing subsidies is to establish:

- who *provides* the subsidy (i.e. is it from government, or is it a cross subsidy from other service users); and
- who *benefits* from the subsidy – customers or suppliers of the services/ equity holders.

In principle, subsidies can be drawn from three sources: governments and donors (termed *direct* subsidies), *cross* subsidies from other consumers of the service, or from the provider of the service, where the full costs of service provision are not recovered. The last of these is clearly not a sustainable source of subsidy, yet many publicly owned utilities in the developing world are forced to do this, rather than government providing direct support. As the private sector would be unwilling to enter such an arrangement in the long term, we do not consider this source of subsidy any further.

The principal aim of a subsidy in an infrastructure context is usually to keep an end tariff lower than its true costs of provision to given customers/ beneficiaries in order to establish a higher, desired level of consumption than would otherwise be the case. Thus, consumers or certain groups of consumers are typically the beneficiaries of infrastructure subsidy programmes.

However, poor subsidy programmes can involve the provider of the services benefiting from the subsidy rather than the consumer. This is a particular risk associated with the so-called "supply-side" subsidies common in infrastructure service provision. To avoid this, the service provider should only receive a market-based, risk adjusted rate of return.

6.2.2. Nature or form of typical infrastructure subsidies

The next step is to establish which form the subsidy takes. At the highest level, subsidies may be split into those relating to a project's *funding* – that is, its revenue stream; and those relating to its *financing*[22]. Funding subsidies might then be further split into (i) direct; and (ii) cross subsidies as described above. In turn, direct subsidies can be split between approaches targeted at capital and operational expenditures respectively. These latter types will typically only be provided by government or donors.

Likewise, financing subsidies will typically only be provided by government and/ or donors. In terms of classification, they can be further divided between those which involve "funded" subsidy commitments and those which are provided on a "contingent basis". The first of these include loans, equity provision etc., whereas the latter involves guarantees or other forms of contingent support, either related to general defaults or else specific events (e.g. damages created through war). The subsidy aspect of the provision of both types of support arises from:

- either not charging the full price for providing certain aspects of the product (for example, a lower interest rate, an extended grace period or non-risk reflective guarantee fee); and / or
- not charging for *subordinating*[23] the ranking of an instrument in a project structure as regards either / or
    - receiving revenue last; and/ or
    - paying out first[24].

Table 6.1 provides more detail on this taxonomy.

[22] One way of thinking about this, is to consider "above the line" subsidies and "below the line" subsidies.

[23] Arguably, this is another case of not fully charging for a product feature, although as regards project financing it is worth separating out as a separate approach.

[24] For instance, not charging a higher interest rate for providing a subordinated loan, or assuming a first loss position on a credit guarantee or insurance.

Table 6.1: Nature of the subsidy

Type	Description	Typical uses
FUNDING		
Direct subsidies		
Capital grant	Typically a one off, or sometimes multiple payment to buy down the costs of capital provision	Used in OBA programmes to reduce the cost of connecting poorer households to networks
Operating subsidies	A series of payments to support operating costs	Often used to fund public or merit goods where it is either difficult or inappropriate to charge users the full cost of service provision
Cross subsidies		
Universal service obligations	Tariffs do not take either partial or full account of the different geographically driven costs of providing the service	Typically applied to all kinds of infrastructure, but especially communications services
Rising block or sliding scale tariffs	Low level or poorer consumers are supported by higher level or richer ones	Used to support low levels of energy and water consumption (e.g. industry versus household users), or differential tariffs for economically weaker/ below poverty line population (e.g. in health services)
FINANCING		
Funded products	Financing costs for funded products which do not fully take into account risk and other costs involved	Concessional loans (eg interest rate subsidies, extended grace periods) Un-priced subordination
Contingent products	Financing costs relating to contingent support which do not fully take into account risk and other costs involved	Concessional guarantees, insurances etc

6.2.3. Measuring subsidies

Finally, it is important to measure the extent of the subsidy, or its degree of concessionality (a pure grant for instance, can be described as being pure subsidy or 100% concessional).

A simple way of measuring the extent of a subsidy is to discount net cash flows between payouts of subsidy and any future returns, and to discount this by a risk-adjusted

discount rate. The value of any subsidy can therefore be either expressed as an absolute in terms of a negative net present value (NPV) or as a percentage by expressing the difference between the required rate of return (the risk adjusted IRR) and the actual return (IRR) as a proportion of the required rate of return. The discount rate can be set on a "market" basis.

As shown in Table 6.2, any negative results in present value terms would represent the value of the subsidy allocation.

Table 6.2 Worked example of subsidy measure

$M	Year	1	2	3	4	5	6	7	8	9	10
Payouts		-30.0									
Returns								5.0	10.0	10.0	10.0
Net Cashflow		-30.0	0.0	0.0	0.0	0.0	0.0	5.0	10.0	10.0	10.0
Present Value of Net Cashflow @ 6%		-6.5									
Subsidy measure in absolute terms		-6.5									
Required IRR set equal to		5.50%									
Actual IRR		2.0%									
Subsidy measure as % of required IRR		63.25%									

6.2.4. Advantages and disadvantages of different subsidy approaches

Each of the different subsidy approaches discussed above has its respective advantages and disadvantages, depending upon its specific application, as described in Table 6.3.

Table 6.3: Advantages and disadvantages of different subsidy approaches

Type	Advantages	Disadvantages
	FUNDING	
Direct subsidies	• Explicit • Relatively easy to measure • Can be linked to specific outputs • Easy to compete out	• May require pre-funding[25], which can cause issues of poor bankability • Even with competition, potential for windfall gains significant
Cross subsidies	• Self-funding • Socially attractive, especially USO	• Can be opaque • Can lead to wrong investment decisions
	FINANCING	
Funded products	• Flexible, can be 'sculpted' to meet specific financeability requirements, in terms	• Extent of subsidy more difficult to measure, although not impossible • More difficult to make

[25] Pre-funding involves the private sector funding/ financing the infrastructure until it has been verified that it has been provided, whereupon the project is reimbursed by the subsidy provider.

Type	Advantages	Disadvantages
	of tenor, interest rate, amortisation schedule etc	performance based as finance committed upfront
Contingent products	• Can be an efficient means of addressing specific risks • Cover can be made conditional on performance	• Difficult to measure with contingent liabilities often ignored • Contingent products need to have a contingent financing of their own to maximise efficiency

To a greater or lesser degree, it is usual to come across all kinds of these subsidised approaches within infrastructure projects. Which one is most appropriate often depends upon the specific nature of the problem being addressed and the context in which it is taking place.

The question of whether a "funded" or a "financing" approach to subsidy is most appropriate is an interesting one. The "above the line" subsidies associated with the former address the viability gap by ensuring that there are sufficient resources to cover the financing obligations of a project. The latter "below the line" approach involves reducing these costs in some way and/ or altering the profile of the financing costs.

Above the line subsidies

In the UK, for instance, the PFI programme involves a series of performance-related, output-based grant payments to cover a service provider's opex, capex, profit and financing requirements, over sometimes a thirty year period, for a range of social and some economic infrastructure projects[26]. These payments enable a PFI supplier to raise the necessary long-term financing for the project. Banks are willing to lend to such projects because (i) they do not see a performance risk on the part of government paying for appropriately delivered contracted services, and (ii) the service provider is capable of managing the performance risks associated with such a contract. After refinancing, it is not uncommon for the debt financing share of such projects to reach 90% of the total.

In many ways, output based aid (OBA) approaches which are increasingly being used as a simplified version of the above to either build or maintain infrastructure. It is possible to see three uses of OBA:

- The building of infrastructure is based largely on the roll-out of new telecommunications, energy and water connections to disadvantaged groups. Thus, the rest of the network is financially viable and the poorer customers who

[26] This is amounts to a subsidy in an economic sense as the consumer is not paying. However, from the perspective of the PFI service provider the subsidy is classed as revenue from an accounting perspective. Capital grants, for instance, typically have a special accounting treatment to draw down the subsidy in line with depreciation of the asset.

are connected through the capital (OBA) grants are able to pay for the infrastructure service.

- The maintenance of roads through performance management contracts, part or wholly funded through opex (OBA) grants.
- Provision of social services to targeted groups – such as for maternal health – through the use of OBA subsidized services.

As set out above, the subsidy agreement between the subsidy provider and service provider can be used to set output specifications and thus make payments performance related and to target specific amounts to specific individuals. In some instances, different service providers can compete for subsidies.[27]

As projects become larger and more complex, however, it is not clear how far the OBA approach can be "stretched", particularly the extent to which performance risk can be transferred in difficult contexts. For instance:

- The subsidy component is likely to be greater and more material to the project. Private sector investors and lenders are likely to see greater risks in pre-funding aspects of a project, for instance:
    - the cost of bridging finance, if it is available, may undermine the project's economics, or result in a higher tariff as it is likely to be passed on to the customer;
    - payment risks arsing from government delaying or cancelling payments because of disputes or pure inefficiency, with the project being consequently forced to default on its own payment obligations; and
    - whether or not, in general, it is possible to raise finance on this basis.
- Larger projects are likely to involve longer contracts. Over time, the underlying service specifications may need to change with a consequent impact on subsidy provision. In some instances, larger subsidy might be required; in others, the subsidy requirement may be considerably less, particularly if the outturn is better than expected in terms of units sold and prices realised.

Moreover, larger projects are likely to involve more than OBA subsidies – from a policy perspective, there is a need to take a more holistic view on the quantum of public resources used to support a project.

Some of these issues, particularly as regards service specifications are a fundamental challenge for all PPPs, which typically needs to be addressed either through contract negotiation or else discretionary regulation. Other aspects – such as clawing back of subsidy where it is not needed – might be provided for contractually. As regards the ability to raise long term finance, however, this may be more difficult to address in certain contexts. This is where *financing* approaches to subsidy might be more helpful.

[27] So-called "competition in the market" is only practical where there is the potential for multiple services providers. Where there is a monopoly, it is more common to try and introduce "competition for the market" where the subsidy is part of the overall concession opportunity.

Below the line subsidies

In many instances, financing subsidies may be a more appropriate approach, especially for larger, long term projects. Financing subsidies involve the provision of a financial product at discount to the market, through bundling subsidy with the commercial-based funding. For instance, an IDA credit has been calculated as having a 67% grant element once the grace period, long tenor and low interest rate have been taken into account.

The main disadvantage of such "bundled" subsidies is that the subsidy is less transparent and, in itself, is more difficult to target at specific outputs. However, as regards the latter, output specification can be built into the overall concession contract (such that any performance failure is a default in the concession contract rather than the subsidy)[28].

A further problem is that subsidized finance can potentially crowd-out other private sector subsidy providers. This, however, is less of an issue where finance is scarce, or where the subsidized finance is tailored to "crowd in" other finance, through the provision of low interest, subordinated loans, for example.

The main advantage of working subsidies into the financing structure is the flexibility that can be brought to bear on the viability gap challenge. There are different ways in which financing can be "sculpted" to provide subsidy efficiently, as the project requires it, and to avoid over subsidy. In situations where the out-turn is better than anticipated, it is possible to build redeemability features into the subsidy through the provision of contractual "triggers", as discussed below.

From a financeability perspective, lenders are likely to prefer having the subsidy support at financial close – seeing the performance risk arising from failure to provide contracted output specifications as being the responsibility of the service provider, not themselves (that is, if failure prompts a default).

Such structured subsidies also provide the opportunity for financiers to use a degree of creativity in coming to a financing solution. This can also involve building in an upside for the subsidy provider if outturns are better than anticipated. This might take the form of say, convertibility options on subordinated debt, or the repayment of part or whole of the subsidies. These features can be triggered by different events such as achieving a particular project return or revenues reaching a certain level. Indeed, the triggers can be built around uncontrollable risks so as to incentivise good performance.

Guarantees and other contingent arrangements, as long as their true costs are known, can have additional advantages. They are a more efficient way of extending the tenor on loans – which is typically a more effective way of reducing annual financing costs than reducing the interest rate – and they can be targeted at specific risks (such as exchange rate risk), with such support being conditional on say, ongoing operational performance.

[28] Moreover, where OBA involves a one-off grant, ongoing performance requirements also need to be built into the PPP contract.

7. RECOMMENDATIONS ON VGF DESIGN

The VGF approach set out in this section has been revised in the light of comments received on the First and Second Interim Reports and after further thoughts on how it might operate most effectively.

As in the previous report, we have taken into account the VGF guidelines as currently drafted as our starting point. As previously noted, we do not believe that many, if any projects in Pakistan will qualify for VGF resources as per the current draft guidelines. Whilst capturing best practice in OBA design, the current approach does not allow for allocating subsidy between quite different types of infrastructure project. Thus, whilst the approach might potentially work for network expansion type schemes, we are convinced that the scheme does not take sufficiently into account the subsidy requirements of PPP infrastructure projects in Pakistan, where the requirement could quite well go beyond schemes such as this.

Based on this analysis, we present a revised approach to the VGF which we believe allows for the current approach but which then extends the VGF concept to a much wider range of infrastructure project which we believe also require access to subsidy funds.

Draft operating Guidelines for the VGF can be found in Annex 4.

7.1. Concerns regarding the current proposed VGF guidelines

As set out, we believe that the current VGF guidelines are based on OBA best practice[29], rather than necessarily reflecting the potential subsidy requirements of the potential PPP projects. OBA best practice involves the provision of explicit, performance based grants, provided on a least subsidy, competitive basis to privately owned and managed, infrastructure service providers, to support services to targeted, poorer household beneficiaries. Payment is typically made only when it has been physically verified that the infrastructure is built and operational. Our principal concern is that very few, if any, projects will be able to benefit from it given current rules.

Its design is very similar to the design of rural electrification and telecommunications schemes, in which different bidders compete for subsidy on a single metric, such as least subsidy or least subsidy per connection. As it is typical to bid for a concession or other rights on *either* a minimum subsidy *or* minimum tariff basis, it is normally the tariffs which are fixed in the competition. This raises a particular design challenge of how many differing projects, with very different characteristics can be compared on a like for like basis, on a single evaluation metric as envisaged in the approach.

Fundamentally, the draft guidelines do not separate the causes of poor project viability. An unviable PPP project is one, as explained in Section 6, where: customers have low ability/ willingness to pay; projects lack customers in initial years and are below efficient

[29] The envisaged scheme has much in common with rural telecommunications and electrification funds.

scale; projects cannot attract/ access tenor financing at affordable rates; financiers are risk averse and require equity cushions; and where the life of an asset exceeds the PPP contract leading to high depreciation charges. In this context, there are three types of unviable project that might require subsidy:

- An economically justified project can lack viability, for whatever reason, but might involve little direct targeting of the poor. A road project is a good example.
- Other projects might be viable on certain terms, but the resultant customer coverage or user fees/ tariffs might exclude the poor. These projects can be modified during the definition stage, e.g. through additional network extension or connectivity, in order to include marginalised groups, but, without subsidy, this will reduce the project's viability.
- There may be other projects specifically targeted at low-income groups with potentially high socio-economic pay-offs but with limited financial viability.

In addition to this high level issue, as currently drafted, we would suggest that there are other practical issues around some of the following stated policies:

- *Limiting subsidy to the poorest.* This may be fine for the types of OBA-type connection subsidies envisaged, but such supply side subsidies are difficult to limit to the poorest when it comes to a range of other infrastructure which might be funded by the VGF, namely roads, ports, airports, power stations, water treatment facilities, etc. There may be a distinction about ensuring that the poor benefit, or at least are not excluded from using a particular infrastructure service. Over and above this, certain entities may still be desirable from a wider economic perspective if a given piece of infrastructure has the ability to, say, "pump-prime" economic activity within a region (from which poorer workers should benefit, albeit perhaps indirectly).
- *The requirement for majority ownership by a grant recipient.* We would assume that the rationale for this is to promote the role of the private sector as opposed to public. That is fine as a policy objective; however, the practical constraint is that as most water and electricity distribution utilities responsible for connecting households are publicly owned, this would seem to limit the potential take-up of VGF grants to say, largely cellular telecommunications projects (especially combined with a need to target the poorest).
- *Minimum subsidy competition.* The evidence from India would suggest that everybody bids for the subsidy available when it is set at a maximum of 20% of project costs,[30] so it is hardly a differentiating factor in the overall competition. Setting an arbitrary limit such as this neither takes into account sector requirements, nor types of infrastructure. For instance, it might be expected that

[30] Although the VGF support from the Government of India is set at a maximum of 20%, another 20% VGF can be provided by the sponsoring entity. A detailed case study on India's VGF and PDF is set out in Annex 1 of this report.

water infrastructure will require a higher subsidy because of the desire to make the tariff as affordable as possible. In addition, green-field systems will require greater subsidy amounts than brown-field, where many assets already exist.

- *Not a holistic subsidy evaluation.* Moreover, the VGF is one form of subsidy that might be received by the project – it is quite possible that other forms of subsidy are also provided to the project, such as government-backed credit guarantees for which the project does not pay a fee or premium. From a policy perspective, in evaluating maximum subsidy requirements, it is appropriate to take a more holistic review of the amount of subsidy resources allocated to a given project.
- *Potential for redeemability of grants.* This is quite difficult to build into a simple competition. Designing redeemability features can be important to avoid the provision of windfall gains to providers when outcomes are better than anticipated. Ideally, some, or all, of the subsidy should be paid back in such circumstances.

As set out, we believe that the above features will severely limit the applicability of the VGF to few, if any, projects unless some of these stipulations are changed.

7.2. Our proposed approach to the VGF

We therefore believe that, in reality, the current VGF guidelines are over simplistic given the challenges faced, in particular the need to support projects with very different subsidy requirements. Whereas some projects will be able to benefit from the proposed approach we would argue that a greater flexibility needs to be introduced into the approach if it is to be successfully implemented.

In this section we therefore provide an overview of a more elaborate approach to the VGF, which we believe addresses the issues raised. Whilst incorporating many of the existing proposed features, it also provides for a greater range of subsidy requirements.

7.2.1. Key objectives of the suggested approach to VGF

As set out in the Terms of Reference:

"The goal of the VGF is to provide resources .... for those projects which are economically justified but not fully commercially viable; the proposed Viability Gap Fund would provide a flexible pool of resources to bridge this gap. It would be important that competitive bidding for the PPP transaction be used to minimize the amount of support required".

In developing a feasible approach to VGF, we have paid attention to this key objective as stated above, taking into account the Pakistan context. In our view, the VGF should focus on:

- addressing the "Viability Gap" of those infrastructure PPP projects which are economically justified but which are not bankable;
- ensuring an efficient use of VGF funds, by tailoring the form of subsidy provision to address the specific nature of a given project's viability gap;

- encouraging private sector participation by increasing the bankability of projects which otherwise would not be attractive for the private sector; and
- meeting GoP's priorities in terms or project or sector priorities – the establishment of the VGF is part of a wider PPP programme, consistency across individual initiatives of the PPP programme and compliance with GOP's priorities, is likely to increase the effectiveness of the use of public funds through the VGF.

7.3. Key features of the suggested VGF design

In developing our approach, we have incorporated a number of features which differ from the existing proposed approach, but which we believe would help meet the objectives set out above. Whilst we discuss these in greater detail in subsequent sub-sections, we highlight the main ones below; specifically:

- **Flexibility in the forms of subsidies provided**. Provision of different forms of funded subsidies to best address the needs of different types of projects. Such flexibility will allow a wider range of market needs to be addressed and to make a better use of public funds.
- **Two gateways to access subsidy**. The approach enables projects to bid for subsidies through two "gateways".
    - Gateway 1 is designed for projects where the aim is to increase network access for poorer households through the provision of connection subsidies, essentially capital grants. Although the subsidy element in these projects may be high as a proportion of total project costs, in absolute terms the projects would probably not be that large.
    - Gateway 2 is designed for projects which are likely to require greater amounts of subsidy in absolute terms and more complex financial structuring in its delivery. Gateway 2 subsidies might be seen as an investment class in their own right, albeit one that is deeply subordinated to all others (senior debt, mezzanine, equity, etc.).

  The eligibility criteria for Gateway 1 therefore focuses on pro-poor development impacts whereas Gateway 2 projects are have broader economic impacts.
- **The allocation of funds to projects prior to the tendering process**. A "first cut" allocation of funds amongst projects with very different characteristics based solely on a single metric such as minimum subsidy, is not a good way to assess such projects. Subsidy would be likely to flow to particular type of project with particular characteristics which are not necessarily the ones which GoP wants. For instance, cellular telephony projects could attract all the funding because they have lower subsidy requirements than, say, water and sanitation projects. We would argue that a high level subsidy allocation should be made on the basis of a broader based set of criteria reflecting GoP objectives. The VGF would assess projects submitted by different Contracting Authorities against these criteria in

allocating subsidies to particular projects – a form of "project-on-project" competition. Once this initial "target" allocation is made, the project is then tendered out, with an element of the bidding process being to minimise the amount of subsidy required and/ or ensuring that it is used efficiently.

- **The competitive process for selection of private party**. In the tender documents of projects which have qualified for a subsidy allocation, the maximum amount of the subsidy will be disclosed along with some information on the form of the subsidy potentially available and/or minimum requirements imposed by VGF for the disbursement of funds. Some of the other subsidy components will be determined by the competitive process itself. For instance, in some cases, bidders will be required to bid for the minimum amount of subsidy, in other cases they might be requested to show what the most efficient use of the subsidy would be.
- **Role of the VGF**. The exact role of the VGF through the different tender processes will depend on the nature and complexity of the subsidy requirement. For instance, following the initial allocation of subsidy to Gateway 1 projects, there will be limited need for continuing VGF involvement, other than to check that VGF rules have been followed. Gateway 2 financial subsidies are likely to be complex, with for instance, redeemability features built in to them. If they are treated as a form of investment, VGF should remain involved to financial close to ensure that the subsidies it provides through "Gateway 2" are being utilised appropriately.

Other features of the suggested approach refer to the incentives for an efficient use of subsidy and the institutional aspects of the VGF, including the role of the Board and its composition. Each of the above is elaborated further in the sub-sections below.

7.3.1. Form of subsidy

As set out, the form of subsidy is likely to differ according to whether a project is made an award through Gateway 1 or Gateway 2.

Capital grants

Gateway 1 projects, where the objective is to increase network access, where households can afford the infrastructure service provision, but not the connection costs, are likely to involve the provision of "one off" capital grant subsidies.

Structured financing subsidies

Unlike capital grants, structured financing subsidies are designed to address a project's financing gap such that the project meets financeability requirements for project financing structures (such as concessions, build-operate-transfer (BOT) etc.) [31]. The two main characteristics of such financing subsidies are that: (i) they are subordinated to other financing participants; and (ii) they are designed to have a degree of

[31] They are provided at financial close as part of a project's financing.

"redeemability" built-in to them which can be triggered when the project reaches certain thresholds of sustainability (such as a level of overall financial return). Box 7.1 illustrates how a VGF subsidy might operate.

Box 7.1: Illustrative example of how limited affordability could be addressed on a bulk water supply project

We provide an example in which a VGF subsidy is incorporated into a project loan from a commercial bank in a "deferred interest" structure, in order to improve the affordability of a bulk water supply project. A low interest loan would be provided by the bank, realised through a VGF interest rate subsidy. This could be combined with a "balloon payment" back to the VGF in the final years of the concession or contract when cash balances have been built within the project because all other loans have been in repaid.

The project is allocated a US$9m financing subsidy by the VGF. This is used to subsidize a proportion of interest rate payments required by a commercial bank providing a commercial loan to the project. This is a US$ senior loan of US$20m, priced at LIBOR + 500 bps (i.e. 5%) which amortizes over 15 years. The financing subsidy works by the commercial bank charging the water project borrower 200 bps (2%) with the remaining 300bps (3%) being provided by the VGF subsidy. Post the repayment of the loan principal to the commercial bank, cash will build up within the water business. At, say, the end of year 20, when sufficient cash has built up within the project, this "triggers" a balloon or bullet payment to the VGF of US$11.5m, as per a tripartite agreement between the VGF, the commercial bank and the project. This represents a VGF subsidy of roughly two-thirds (depending on the discount rate used to calculate it).

Whilst the example is illustrative, it shows how affordability can be increased by spreading out the project's repayments over a greater number of years. The VGF financing subsidy, allows the bank to be paid its interest whereas the cost to the project is much less. It is only when the project can afford to pay that this triggers a repayment to the VGF.

Redeemability might be triggered once:

- the project can afford to pay back the subsidy financing, for instance, after it has repaid all its other financings;
- the project has reached a certain level of return;
- the other financing participants receiving an appropriate risk weighted return;
- the project has achieved certain level of market (volume) demand.

In other words, structured financing subsidies should be tailored to address the mix of affordability and risk barriers that infrastructure projects typically face and which form part of a viability gap. They require a fair degree of tailoring to the projects, thus, their structuring is more complex than a pure capital grant.

For instance, where uncertainty over connection or unit volumes is the constraint to a project's viability, it is possible to provide a subsidy that addresses that particular risk. Such financing would be partly redeemable once a certain volume of sales was reached which triggered the commencement of repayment of part of the subsidy. If, however, it was a range of factors that was impeding investment, then the trigger for repayment might be the project's overall return, of the other participants realising reasonable returns.

The subsidy will be measured in present value of minimum net subsidy requirement which means that taking into account of any definite and contracted subsidy repayments, which will reduce the total subsidy requirement as soon as they are repaid (due to the discounting impact).

The application of such financing subsidies has the benefit of addressing a larger range of viability gap issues and, at the same time, encourages an efficient use of VGF funds.

7.3.2. Two gateways to subsidy access

The two forms of subsidy are designed to address viability gaps arising for different reasons. Recognising that the first form has much in common with the current envisaged VGF approach, we have developed a two gateway approach targeted on two policy priorities. .

Gateway 1: Access to capital grant subsidies

Gateway 1 is designed to support the extension of network connections to targeted groups of households, where the household affordability gap is clearly identified and quantified and the benefit of the subsidy can be demonstrated. All these aspects are to be clearly set out in the eligibility criteria for Gateway 1.

For these projects, capital grant subsidy are likely the most appropriate form of subsidy, and Gateway 1 will provide access to capital grants only.

Gateway 1 is a fast access to grant as, once the application for grant is approved by the VGF, the VGF funds essentially become committed and available for disbursement, post financial close and upon verification of the connections being made. Adjustments to the total amount of the subsidy may occur as a result of the competitive process for the selection of the private party, for instance where a minimum subsidy per household approach is adopted. This would be repaid to the VGF[32].

Eligibility criteria for Gateway 1 are set out in Table 7.1 below.

Table 7.1: Eligibility criteria for Gateway 1

Eligibility criteria	**Example**
Target a poorer group of households	Households inhabiting a peri-urban area
Clearly identified barrier to viability	Cost of the household connection (e.g. mains supply)
Demonstrable benefit to poorer households/ areas	Lighting, better hygiene etc
Maximum project size	Upper limit per project

Gateway 2: Access to structured financing subsidy

Gateway 2 is designed for infrastructure projects which do not meet requirements for Gateway 1 and where the viability gap is not strictly driven by just a lack of household

[32] Subsidy allocations should allow for small (say 10%) variances either way.

affordability; for instance, a high degree of market risk, especially when it comes to Greenfield projects may constitute a major obstacles to project bankability.

For these types of viability gaps, structured financing subsidies are most likely the most appropriate form of subsidy and Gateway 2 will provide access to them.

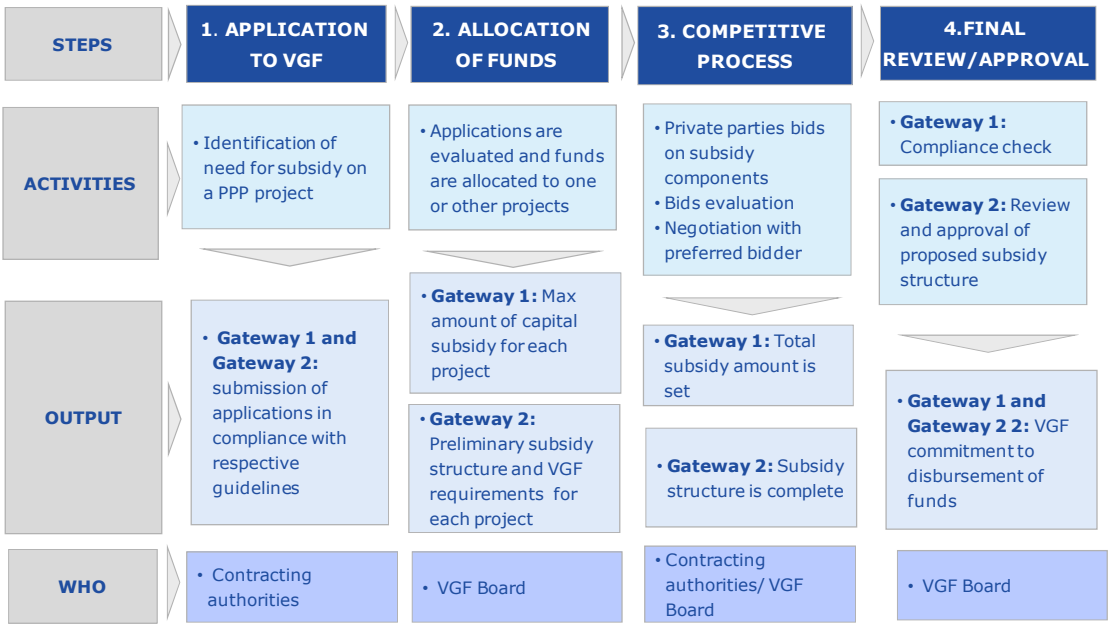
Gateway 2 is a more involved route to accessing subsidy. As "gate-keeper" to the subsidy, VGF may stipulate an appropriate subsidy or at least comment on one offered as part of a procurement process. A final approval from VGF, prior to financial close, is a crucial check that the subsidy structure delivers an efficient use of VGF funds, before any disbursement is made.

Except for the differences described, the key steps in the procedure for the application and disbursement of funds apply to both Gateway 1 and Gateway 2. In the next section we describe each step of the (i) application process and (ii) approvals process.

7.4. Application process for VGF funding

In our proposed approach, the VGF application process consists of a sequence of four key steps which are set out in the Figure 7.1 below and described in detail below.

Figure 7.1: Application process for VGF funding



As part of the project structuring process, Line Ministries (or other contracting authorities), may identify a subsidy requirement for given projects. These sponsors can request a subsidy by submitting an application to the VGF Board.

Applications are to be submitted in compliance with guidelines issued by the VGF. We suggest that the guidelines require at least the following information to be provided in each application:

- **Public sponsor:** information on the sponsoring agency who will tender the project.

- **Project description**: including size, sector, PPP design, stage of the project development cycle, expected time to closing.
- **Rationale for subsidy**: analysis of viability gap, reasons for subsidy requirement, how the subsidy will contribute to project bankability.
- **Subsidy**: estimate of the amount of the subsidy in present value terms and the portion of the subsidy in relation to total project costs, and selection of the subsidy and applicable Gateway.
- **Eligibility for capital/operating grant through Gateway 1 (if applicable):** should the contracting authority apply for Gateway 1, the application has to include proof for eligibility for the type of subsidy accessible through Gateway 1.

At an early stage of the PPP project development cycle, it is often too difficult to assess whether or not there is a need for a subsidy and in particular, it would be difficult to estimate the amount and the type of subsidy needed. While a pre-feasibility study can identify the prospective need and approximate ranges for subsidy, the determination of the specific subsidy value and structure can only be determined once a project has been developed to a certain point and there is a clearer idea of commercial interest. Hence, it makes more sense that the application for subsidy is submitted only once the project is close to the tendering phase of the PPP project development cycle, when feasibility studies have been finalised including a viability-gap analysis. For instance, VGF competition rules may provide a quarterly deadline for submission of applications and set the restriction that applications can be submitted only for projects in structuring phase.

During the structuring stage, Contracting Authorities are most likely assisted by transaction advisers; who may also provide support to the sponsoring agencies in the application to VGF for subsidies. Specifically in the analysis of the viability gap and in the identification of an appropriate structured financing subsidy, the support of financial advisers might be appropriate.

7.4.1. Allocation of funds to projects

The VGF Board is responsible for evaluating the merit of the VFG fund requests and allocation of the given "pot" of VGF fund available for that specific competition period, amongst projects.

The criteria for assessment will be explicitly set out in the operating guidelines of the VGF. For instance, the VGF Board might take into account the government priorities in infrastructure sectors, the government risks involved in each PPP projects, and the private sector appetite, amongst other factors.

We suggest criteria for allocation of funds take into account at least the following:

- **Government's priorities:** these can, for instance, be determined in terms of sector, type of PPP project or socio-economic benefit of the project.
- **Pre-allocation of funds to the two forms of subsidy:** the VGF operating policies and procedures may provide for a split of the total "pot" of VGF fund

available for that specific period between the two forms of subsidies which are offered.

- **Subsidy limits per projects:** depending upon the extent of the resources made available to VGF it would be appropriate to set a maximum subsidy amount that any project might obtain (this should include other forms of subsidy as well as VGF). There is an option of limiting the amount of subsidy as a proportion of overall project costs. However, such an approach creates difficulties in determining what constitutes the project, with projects differing considerably in terms of subsidy requirement according to their specific nature[33].
- **Risk of failure in achieving financial close:** the VGF aims to increase a given project's bankability and in so doing at contributing to the use of PPP approaches in infrastructure projects. In the allocation of fund to one or other project, the VGF will take into account the risk that projects fail to achieve financial close even though they received the subsidy (or in other word, for reasons other than the need for subsidy).
- **Risk of project failure after financial close:** for the same reasons mentioned above, the VGF will take into account also the risks that projects will not achieve self-sustainability and will end up not delivering the socio-economic benefits they were designed for.

In addition to the above, in case of allocation of fund for structured financing subsidy, the VGF will pay consideration to the "redeemability risk" in the estimate of the net present value (NPV) of the subsidy. In the first instance, the estimate of the amount of the subsidy, in net present value terms, will be determined by the VGF Board who will be advised by specialist VGF financial/ subsidy advisors. These estimates will be arrived at, in part, through the "market testing" of private sector appetite and of its required level of return to invest in the project.

In case of screening and assessment of application for capital/operating subsidy via Gateway 1, redeemability is not an issue, as it is not provided as a subsidy feature. In case of application for Gateway 1 instead, the VGF Board will check the project's eligibility for Gateway 1, the rationale for a capital grant.

The outputs of the allocation of funds will include:

- **Preliminary allocation of funds.** A list of projects to which available VGF funds are allocated. Transparency in the allocation of funds will encourage impartiality and application of objective criteria.
- **Subsidy information for projects eligible for Gateway 1**. The VGF will set the maximum amount of capital/operating subsidy available for each project. As mentioned later, the tender process for the selection of the private party,

[33] For instance, the expansion of a network to poorer households may involve a significant proportion of subsidy – say 50% - but in absolute terms may be quite small, say US$500k. Alternatively, a bulk water supply project may require a more modest percentage subsidy, say 10%, but this might amount to say US$3m.

contracting authorities may in some cases invite bidders to bid on the least subsidy basis in NPV terms.

- **Subsidy information for structured financing subsidy**. The VGF will set the maximum amount of the subsidy available and will identify some key requirements that will have to be respected in the structuring of the subsidy. As mentioned later on, in the tender process the contracting authorities will request bidders to include in their proposal a repayment mechanism for the portion of the total disbursable amount from VGF in such a way that the NPV of the subsidy required will be minimised.

In conclusion, as a result of this step, the Contracting Authorities will know whether their projects are eligible for a subsidy component at financial close and what potential scale this might be. The VGF may also stipulate the basis on which private parties bid for the allocated subsidy.

The Contracting Authorities will then undertake a tender process for the selection of the preferred bidder on each project. The allocation of funds to projects prior to the tender process will deliver some degree of certainty around the subsidy. This should increase the appetite of the private sector for the project, and in turn increase competition in the tender process and contribute to the achievement of value for money out of the procurement process. Some room will be left for there to be a slightly higher available amount of subsidy, should it be required.

The interactions between the VGF and procurement processes for the selection of the preferred private bidder are described in the next section.

7.4.2. Competitive process

The interaction between the approval process for VGF funds and the tendering process for the overall PPP opportunity is different depending upon the type of pre-approved subsidy. This is described below.

Gateway 1capital grant

Once a pure capital grant is pre-approved by the VGF Board the project is bid out on minimum subsidy basis. A subsidy "cap" either in total or per household may or may not be disclosed to bidders. The VGF rules may provide for a small increase over and above the initial subsidy allocation should this become necessary.

A stipulation of the approach, however, is that connections require physical verification before the subsidy is paid, as per OBA rules.

Gateway 2 financing subsidy

Gateway 2 provides for a potentially greater involvement of the VGF in the design of the subsidy structure, at a minimum through stipulation of aspects such as the need for redeemability triggers, during the drafting of the tender documents, the evaluation of bids and the negotiation with preferred bidders. That said, the Contracting Authorities

will always have primary responsibility for the selection of the preferred bidder, but financial support from the VGF will be conditional on its guidelines being adhered to.

Once a subsidy allocation is pre-approved by the VGF Board, it becomes a component of the structuring/design of the PPP project. The VGF will provide some basic requirements, which bidders will have to adhere to in their financial proposals, in terms of how their proposal will ensure the most efficient use of the subsidy.

7.4.3. Summary of differences between Gateway 1 and Gateway 2

As set out above, the application process, in terms of key steps, procedure, and stages of approval is largely the same for any type of subsidy. The differences between Gateway 1 and Gateway 2 involve the details of specific activities or of some outputs of the process. Table 7.2 below summarizes the differences between the two Gateways to subsidy.

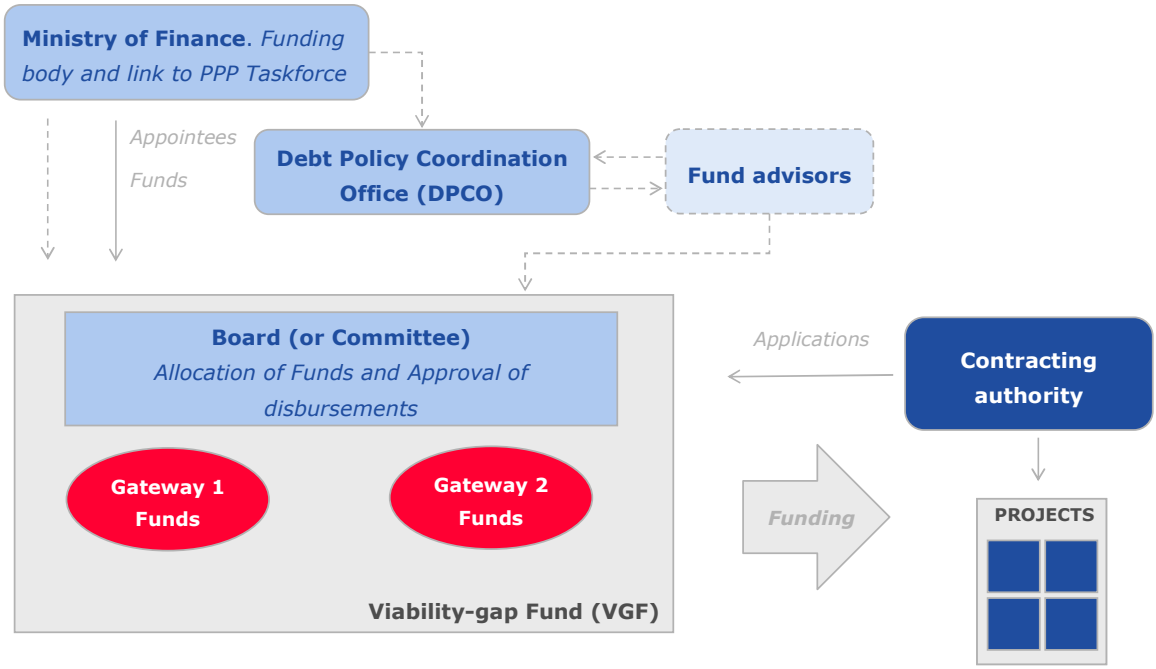
Table 7.2: Summary of difference between Gateway 1 and Gateway 2

Characteristic	Gateway1	Gateway 2
Eligibility	1. PPP infrastructure projects in eligible sectors 2. Infrastructure must directly benefit the poor. 3. Demonstrable social or economic impact 4. Identified barriers to affordability Majority privately owned and operated	1. PPP infrastructure projects in eligible sectors 2. Infrastructure must benefit the economy. The poor must not be worse off as a result of the infrastructure Must be run along commercial lines Must have a minimum private sector investment of 40% of total equity
Nature of subsidies	Capital grant	Structured financing subsidy
Performance regime	Payment of grants linked to verified implementation of asset	Performance criteria set by concession or other contract
Competitive process	Least subsidy amount	Competition to prove the efficient use of VGF funds based on a proposed subsidy structure conforming to VGF rules. Negotiation with preferred bidder may occur.
Final Approval	Check of compliance with procedure	Approval of final subsidy structure to ensure before commitment of funds
Involvement of VGF	Limited	Extensive
VGF skill requirement	Not too advanced finance skills required	Advanced finance skills required.

7.4.4. Roles and responsibilities

A proposed structure for the VGF is set out in Figure 7.2.

Figure 7.2: Structure of the VGF



We would argue that the VGF should be placed under the MoF, alongside or as part of the department dealing with contingent liabilities as they are linked together. An option would be for an expanded DPCO to operate the fund on a day to day basis with the support of a professional fund advisor, experienced in subsidy design and project financing issues. The Task Force, if possible, will appoint members to the VGF Committee, who have ultimate responsibility for approving subsidy commitments.

7.5. Estimate of required VGF funding

In this section we provide an estimate the VGF funding requirements to support infrastructure projects according to our recommended approach.

At this stage, given the limited data on projects that might be developed in the next years in Pakistan, it is not possible to estimate the precise need for VGF support which can only be assessed at a late stage of the project development cycle on a project by project basis.

The purpose of this exercise is to provide a first estimate of the VGF funding needs on the basis of preliminary assumptions which will have to be confirmed in the future. In interpreting the results of this analysis, we recommend to be mindful that some modelling assumptions, such as the amount and type (Gateway 1 and 2) of funding need on each project, are key determinants of the total VGF funding requirements estimated in this Report. Results are input driven and due to the limited information on the future projects, assumptions used in the model might not be realistic in the future.

In this analysis, we estimated the VGF funding needs in a scenario which incorporates data and information sources from the project pipeline analysis dated May 2009. This scenario mirrors the Base Case scenario we developed in Annex 6 for the purpose of estimating the PDF funding requirements.

In summary, the result of the analysis suggests the following:

- should eligible projects for VGF comprise mainly small/medium size projects where a limited amount of VGF support is provided in the form of capital grant (Gateway 1), the estimate of VGF disbursed amount, over five years, could be approximately US$60 m; and
- should VGF focus more on supporting large projects by providing structured financing subsidies, the estimate of VGF disbursed amount could increase to approximately US$100m.

It must be noted that depending upon the criteria set for VGF funding, the number, the size and the type of projects eligible for VGF funding might be different from those projected in this analysis, and in turn, the need for VGF funding might be different from the estimate provided in this section.

The estimate of VGF funds required to subsidy infrastructure projects is set out in detailed in Annex 7.

8. PROJECT PIPELINE ANALYSIS

This section develops and analyses the infrastructure PPP project pipeline in Pakistan in order to understand the scale and potential funding requirements of the PDF and VGF. It builds upon the analysis of the 2007 project pipeline in the Inception Report based in turn on the consultations undertaken in Islamabad in May 2009. At this stage, our approach has been to focus on assessing the quality of the project pipeline on the basis of the stage of the project cycle for each project and other relevant information, including project sponsorship, project cost, and type of PPP arrangement.

Currently, there is no definitive project pipeline system tracking the progress and details of all PPP projects (either at IPDF or the Planning Commission). Projects identified to date form more of a catalogue of possible projects. In this sense, it is important for one or more bodies to have a full and well appraised understanding of how to build a project pipeline.

Hence, this section first sets out key criteria and guidelines for developing a PPP pipeline and then describes our approach to review the existing pipeline for PPPs in Pakistan. Drawing on this, it finally sets out the key outcomes of the analysis and the implications for the design of the PDF and the VGF.

8.1. Guidelines for developing a PPP pipeline

The purpose of screening projects must be to determine whether or not a project can be delivered as a PPP. While this might initially involve identifying the need for the service to be provided by the private sector, there are three key issues that determine whether the scope and requirements of a project are compatible with what the private sector can affordably deliver. Firstly, there is the question of viability and affordability, i.e. who will pay for the project and how, and to what extent can these payment recover costs? Secondly, the question of risk allocation; that is, what are the inherent risks in the project, and who should bear these? Thirdly, the question of bankability; that is, is there a strong prospect that the project will be able to raise the required debt financing such that the project reaches financial close?

These issues and the information required to screen the project are summarised in Table 8.1.

Table 8.1: Key issues in screening PPPs

PPP key issue	Information required for screening
Affordability • Revenue requirements relative to the ability to pay of the public sector or users. • Development of project financial model. • Assessment of government's appetite for subsidy/ support.	• Expected capital, operating and maintenance costs and revenues, i.e. to determine the cash flow required to repay loans and provide a return to equity. • Estimates of cost escalation, assumed financing/ capital structure, the proposed term of the contract, potential subsidy requirements (in terms of fiscal liabilities and incentive effects), etc. • Concession based contracts: Capacity and ability of users to pay for services, and any risk generated by reforming tariff levels. • Public authority payment contracts: The long term payment capability of the government will drive affordability and the scope of services.
Risk allocation • Identification, allocation, mitigation and monitoring of risks.	• Identification of all relevant risks that are a part of the project in each phase. • Identification of risk appetite among different parties (users, investors, tax payers, government, private sector), the issues that the sponsor needs to resolve, and the contingencies when risks are realised. • Identification of any changes to the project scope and structure that can mitigate identified risks. • Identification of the approach to monitor existing risks and identify new risks as the project develops.
Bankability • Limited recourse, long-term debt finance making up between 70-90% of total funding requirements. • Cash flows, through terms and conditions and legal effectiveness, provide security for lenders. • Project lender plays a role in reviewing the bankability of the project and ensuring its delivery.	• Sponsor/ screener needs to develop a clear understanding of how potential lenders perceive the risks of the project. • Identification of the project's cash flow, currency, and the debt service cash flow, and the resulting risk profile and allocation. • Identification of the appropriate debt tenor and lending rates among banks etc., as well as the required rate of return among equity investors. These will be specific to project, sector, activity, etc. • Possible government or donor lending guarantees must be assessed in terms of the fiscal liabilities created and the incentive effect on lenders. • Identification of covenants, contingencies and arrangements with lenders that might reduce the cost of debt.

The sponsor, through its advisors, will need a constructive ongoing dialogue with the private sector in order to assess and generate interest in bidding among a number of potential investors, lenders and/ or sub-contractors. This may be a part of or prior to a formal 'market sounding' exercise, but the important point is that there must be an understanding of private sector requirements, such that the public sector can minimise the resources it dedicates to screening unfeasible projects.

In parallel with determining whether a project *can* be executed as a PPP, it is up to the government to determine whether it should be; that is, does it deliver value for money for the government relative to the alternative options? Is government funding a realistic alternative? Any government resources employed to improve bankability or affordability for the poor have an opportunity cost which must be accounted for. Importantly, contingent liabilities assumed by the government in a PPP, such as guaranteed volume of service use, must be considered alongside direct lending or tariff guarantees. In this sense, the costs of the PPP option must be adjusted for the risks involved in contingent liabilities, assuming public financing is available. Value for money comparisons, if they can be computed, will also examine transaction costs, risk transfer benefits, the level of competition for the PPP, and any ongoing policy benefits into account.

The IPDF have developed a set of criteria for screening projects to determine their suitability for PPP. These cover most of the issues discussed above, and need to be more specific, e.g. market appetite and required rate of return by sector, as experience is built.

Box 8.1: IPDF inception criteria for screening PPP projects

IPDF have developed a set of inception criteria for screening projects in terms of their suitability for PPPs. The guideline is that they work with the private sector to determine whether a project has the following characteristics:

- **Compatible objectives**. The achievable objectives of the Line Ministry (LM) in undertaking a particular project must be compatible with its overall strategy and mission statement, as well as government policy.
- **Institutional capacity**. The LM must have the ability and capacity to prepare the project and procure advisory services themselves.
- **Value for money**. The project must have a strong probability of offering cash-flows that enable public and private parties to achieve value for money.
- **Output specification**. Project outputs must be clear and calculable in order to enable a payment mechanism.
- **Feasible user-charges**. The project is able to charge end-users (i.e. tariffs are affordable), which, along with other identified revenue streams, make the project financially viable.
- **Risk identification and transfer**. Risks must be identified, and there must be opportunity for transferring a number of these to the private-sector in order to drive value for money.
- **Priority sectors**. The project must fall into one of the priority sectors set out in IPDF's own policy.
- **Economic benefits**. The project must deliver positive net economic benefits, i.e. taking into account costs and benefits borne by stakeholders who are not party to the PPP contract. These could be in terms of cost savings, job creation or environmental impact.
- **Market appetite**. The returns available from the project must be sufficient to generate market interest such that the project is bankable.

8.2. Current PPP projects

This sub-section describes our approach for building the project pipeline and the details of the projects as of now.

8.2.1. Scope of work and approach

The project pipeline analysis will allow us to assess the prospective demand for PDF and VGF funding. We have taken projects from the following sources:

- **IPDF**. Our approach was to begin with projects whose development is currently being overseen by IPDF, as well as others they have identified as PPPs for which they could provide support to line ministries. IPDF have prepared a list of the projects in the PSDP that they regard as potentially suitable for PPP.
- **Planning Commission**. The PDD wrote a letter to IPDF with a list of projects from the PSDP they believe could be suitable for PPP. Projects included in this list were discussed with IPDF and added to the project pipeline, as appropriate.
- **PPIB**. The PPIB informed us of a number of projects on which they and/ or the Privatisation Commission are working in the power sector.

The approach in analysing these projects was to determine at which stage of development the project currently is, in the context of the Pakistan PPP framework. This has included whether or not the IPDF is providing ongoing advice to, or has an MoU with, the relevant Line Ministry; the project's origination; whether a Transaction Adviser has been hired; whether the formal feasibility study has been carried-out; whether there is ongoing negotiation with the private partner; and expected time until financial close. We also have recorded significant other information, such as the project sponsor, project cost, the type of PPP, and whether any subsidy will be required.

8.2.2. Current pipeline

Figure 8.2 summarises the projects identified from these sources[34] in terms of their stage of development. As stated above, this is less a well-defined pipeline and more a catalogue of potential projects.

[34] IPDF sources include both projects directly originated by IPDF and projects in the Planning Commission's list and discussed with IPDF during the field visit.

Figure 8.2a: Progress of projects in development from IPDF and PPIB (ICB and unsolicited)

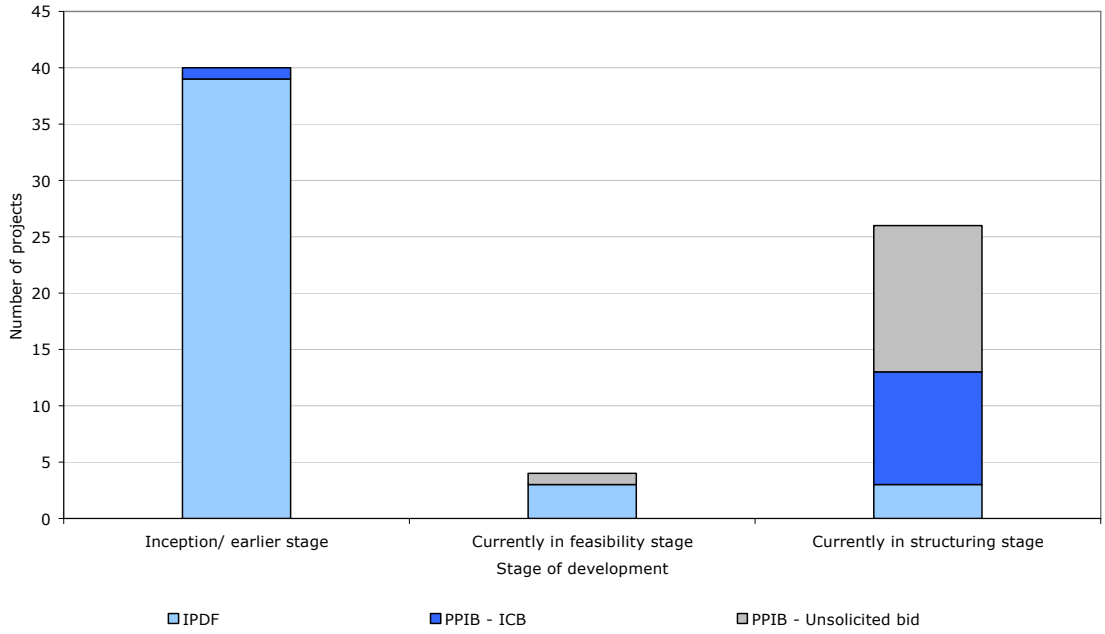
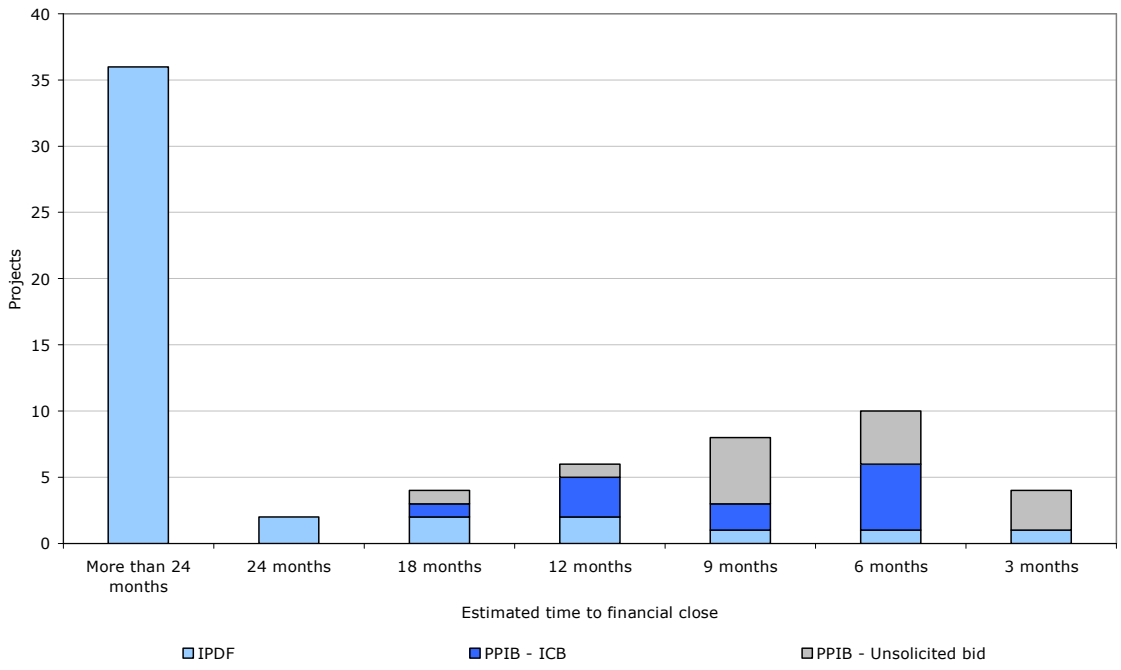


Figure 8.2b: Estimated time to financial close for projects from IPDF and PPIB (ICB and unsolicited)



IPDF – Projects in feasibility or structuring phase

In May 2009, IPDF was advising line ministries on 17 projects, six of which were in the feasibility or structuring stages. The total estimated project cost of these six projects is US$896m, covering three tourism/ commerce projects, a port project, a bus project, and an agribusiness-supporting infrastructure project. Three of these projects (CNG Buses, Cold Chain System National Trade Corridor and PSEB IT Park) appeared to be more advanced than the others, with transaction advisers hired, formal feasibility studies

conducted, and structuring activities commenced. Although these are in the 'structuring' phase, it is not clear how far along the tendering and negotiation process each project is. Nevertheless, there was an expectation that these projects will achieve financial close in less than one year. Three other projects are in the feasibility stage, and are expected to close in 12-24 months. To date, the cost of hiring advisers has been less than one percent of project costs, which is very low by international standards.

The sponsors of these projects are a diverse range of government agencies from regional governments as well as national bodies such as the Ports Authority, the Railway Authority and the Ministry of Commerce. In some cases, as IPDF have pointed out, the Line Ministry has attempted to structure a PPP project and appoint transaction advisers themselves but has failed to achieve financial close due to a lack of experience and capacity on the part of the sponsor. In some cases, delays have arisen in procuring the private bidder because of the worsening security situation.

IPDF - Projects in early stage of the project cycle

Of the 11 additional projects on which IPDF is providing advice, all are at an inception phase. The total estimated cost of these is US$2.9bn: the Port Qasim and Gwadar Shipyards project will cost US$1bn alone. In addition, IPDF have a further 28 potential PPP projects in their pipeline at the inception phase (but for which they are not providing advice). These projects amount to US$10.5bn, and include health, hydropower and highway sectors. These are at too early a stage to judge their marketability and prospects, with limited commercial feasibility analysis undertaken and limited resources employed towards their ongoing development. They are largely concentrated in the roads sector under the auspices of the National Highway Authority, with whom IPDF has as yet been unable to sign an MOU, but also include a few projects in power and water sectors. Three of these additional projects are expected to reach financial close in less than two years.

PPIB projects

The PPIB provided details of 25 projects currently in development, of which 14 projects are unsolicited IPPs and nine projects are PPPs being tendered under 'International Competitive Bidding (ICB)'. The total cost of all the PPIB projects is US$8.9bn. Six of the projects are hydropower, with the rest thermal.

In terms of stage of the project development cycle, the majority of these projects are currently being structured for private investment. The process is that once the feasibility study is approved, a Letter of Support (LoS) is provided by the PPIB, and a private bidder is competitively sought and selected. Following this, the EPC price is determined, and the private party applies to NEPRA (the power utility) for a particular tariff. Once this tariff is approved, the formal binding package of measures is finalised before financial close. This structuring process lasts between nine and 12 months, and the 25 projects in PPIB's pipeline were at the following stage of development:

- One project was still in the inception phase, with one other in the feasibility stage.

- Four projects were waiting to receive their LoS from PPIB and were expected to close in 12 months.
- Seven projects were ready to apply, or were in the process of applying for a tariff from NEPRA and were expected to close in nine months.
- Nine projects had already received their tariff and were expected to close in six months.
- Three projects were expected to close in the subsequent few months.

Barriers to project development

In addition to poor project bankability, security concerns and general local-interest concerns that can arise, the barrier to these projects reaching financial close is the lack of a widely understood, definitive and sector-specific PPP policy framework.

The full project pipeline is set out in Annex 2 of this report.

8.3. Conclusions and implications for the design of PDF and VGF

The central and most useful lesson from the PPP project pipeline is the nascent state of the programme and the need for stakeholders (Line Ministries, IPDF, PPIB, etc.) to build experience and capacity with several successfully closed projects. Building such capacity will allow more systematic and extensive preparation of projects such that a greater proportion can hire transaction advisers and reach financial close.

The PDF will provide resources to develop projects at the early stage of the cycle through the development process. Therefore the PDF pipeline should draw upon projects at the inception phase. As shown in Figures 7.1 and 7.2, most of the projects currently in the IPDF and PPIB pipelines are at this stage. The other projects are summarised as follows:

- The most developed projects tend to be in the power sector, in part because the PPIB has relatively more experience in project development. However, it had not yet closed an ICB project, i.e. a conventional competitively bid PPP.
- The 14 unsolicited IPP projects in the PPIB pipeline were being developed by private parties and so would not require PDF resources. They were virtually all in the structuring stage of development and will not be likely to apply for VGF funding (although they may well be subject to some other government guarantees).
- There were 10 ICB projects in the structuring phase of development and three IPDF projects at the equivalent stage (CNG Buses, Cool Chain System National Trade Corridor and PSEB IT Park) – these could potentially consider drawing on PDF support.

Table 8.2 summarises the total value of all PPP projects that might close in the period 2009-12, excluding IPPs.[35] They are separated by stage of development. The total cost for many projects is estimated.[36]

Table 8.2: Projects estimated to achieve closing within the next three years

Stage	Pipeline	Total cost estimate
Structuring (later stage – closed in around six months)	IPDF	US0.28bn
	PPIB ICB	US$1.5bn
Structuring (early stage – closed in around 12 months)	IPDF	US$0.26bn
	PPIB ICB	US$4.8bn
Feasibility (closed in around 12-24 months)	IPDF	US$0.24bn
	PPIB ICB	US$2.3bn
Inception (closed in more than 24 months)	IPDF	US$13.6bn
	PPIB ICB	-
Total (excluding IPPs)		**US$20.7bn**

On the basis of the indicative estimates provided by IPDF and PPIB, the project pipeline for 2009-12 shows a total value of US$20.7bn. It has to be reiterated that the 2009 pipeline of projects was more a catalogue of potential projects (with little screening having taken place, and is very optimistic in terms of expected progress and financial close, particularly outside the power sector).

International experience suggests that project development costs are 3-5% of total project costs. For the purposes of the PDF, projects reaching financial close will use all development funds allocated to it, but will be able to repay a portion of this money at financial close (potentially at a small margin). Some projects will not reach financial close, and the resources they consume will depend upon the stage of the cycle they reach. Earlier stage project development activities are less expensive than later stage, but there is a higher risk that a project will not reach financial close. Therefore, when calculating the total annual demand for PDF resources (as well as initial capital requirement), we assume an 'attrition rate' between phases of the development cycle (inception, feasibility, early structuring, and later structuring – e.g. negotiation, etc.). For example, while 40 projects a year might be screened at the inception phase, only eight might be considered worthwhile for a feasibility study, and of those, only four might enter a structuring and tender phase. In this way, the PDF will ensure that resources are focused on projects with the greatest potential.

The estimated funding need for project development activities, along with other factors, are taken into account to estimate the PDF funding requirements. However, it should be remembered that other variables must be considered when estimating the size of the

[35] This is based on our consultations in Islamabad and market assumptions.

[36] It is assumed that the cost of a thermal project is $1.1m per megawatt, while for hydro it is assumed to be $1.3m per megawatt for small (<50MW) projects and $1.0m for larger projects.

PDF, including the capability of the government to increase its project pipeline and bring it closer to the estimate of gap in funding need across infrastructure sectors.

9. CONCLUSIONS

This section presents our revised recommendation on PPP enabling environment, following feedback on the previous Reports. These changes have been carried through to our proposed design for the PDF. We have also refined our thinking as regards the design of the VGF. We have no further information on the project pipeline. Finally, we set out the estimate of PDF and VGF funding requirements.

9.1. The overall PPP framework

In the Interim Reports we set out our concerns regarding a number of aspects of the enabling environment for PPPs in Pakistan, many of which are reiterated in this report. A specific concern was the role of IPDF and particularly the fact that it appeared to be undertaking a number of potentially conflicting activities. However, we recognise that whilst IPDF still faces many challenges, it does represent a relative concentration of existing PPP skills within Pakistan. In our Final Report, we have therefore proposed that its functions be split into three distinct and ring-fenced activities, with appropriate Chinese Walls between them, one of which is the management of the PDF, their continued PPP promotion and enforcement role and finally, an enhanced advisory and project development role. This latter role goes beyond what they were doing before which did not seem very well defined. In order to perform this role effectively it is essentially that they are resourced to be able to access the right skills.

We would emphasis, however, that these recommendations are for an initial transitional period, whilst initiatives are taken to implement the broader based, best practice approach to PPP, set out in the early sections of this report.

In this Final Report, we confirm the conclusions and recommendations set out in the Second Interim Report on the overall PPP framework.

The primary focuses of our terms of reference, however, are the PDF and VGF and it is to these that we now turn.

9.2. Design of the PDF

Key features of our suggested approach are:

- Housing of the PDF within the IPDF as a separate, ring-fenced division, under the ultimate auspices of the MOF.
- A proportion of PDF funds to support the TADS unit of IPDF.
- Establishment of an Board 'Evaluation Committee' for PPP projects, including representatives with strong private sector experience and knowledge in preparing and transacting PPP projects across sectors.
- Establishment of a Facility Manager, which will act procurement and payment agent for the Fund. We have identified IPDF as a suitable candidate for this role.

- Clear separation between the different roles Facility Manager and TADS – the specialist Advisory and Developer unit of IPDF.
- Development of a fairly mechanistic approach to evaluate the application for funding that encourages transparency and independence.

9.3. Design of the VGF

In developing the design for the VGF, we have tried to work with the existing guidelines. Ultimately we have developed an approach for smaller projects, very much in the spirit of the existing draft guidelines, whilst we have also provide for a more sophisticated approach for more difficult challenges.

Gateway 1 of our suggested approach is focused on the provision of capital grants for the expansion of networks to targeted poorer households in order to produce direct and favourable economic and social impacts.

Gateway 2 provides for more complex financial subsidies for PPP projects with more widely spread direct and indirect economic benefits, where the viability gap is driven by additional factors to a lack of household affordability.

9.4. Project pipeline analysis

Currently, there is no definitive project pipeline tracking the progress and details of all PPP projects (either at IPDF or the Planning Commission). In this sense, it is important for one or more bodies to have a full and well appraised understanding of how to build a project pipeline. Key criteria and guidelines for developing a PPP pipeline are set out in Section 8.

The analysis of the current pipeline suggests that the following:

- Project origination is one of the key challenges for the success of the PPP programme. As pointed out in Section 3, the process for determining whether a project will be publicly procured or a PPP has, in the past, lacked procedural and institutional clarity.
- Projects identified to date form more a catalogue of possible projects than a substantiated assessment of the project opportunities for PPP arrangements.
- A majority of the potential pipeline projects are at inception/ early stages, and some, particularly in the power sector, are in the structuring phase.
- Key criteria for screening projects are to be set out and enforced at the Line Ministry level.

The central and most useful lesson from the PPP project pipeline is the nascent state of the programme and the need for stakeholders (Line Ministries, IPDF, PPIB, etc.) to build experience and capacity with several successfully closed projects. Building such capacity will allow more systematic and extensive preparation of projects.

ANNEX 1: INDIA CASE STUDY

This section sets out the experience in India on the viability gap and project development funds, describes how these funds operate, and draws out some relevant lessons for Pakistan. The information presented below has been obtained through a combination of desk-based research and in-person meetings with the PPP Cell in the Department of Economic Affairs - Government of India (GoI), a state-level PPP nodal agency/ applicant to the fund, and some of the large infrastructure project financing/ advisory entities in India.

Viability Gap Fund (VGF)

The Scheme for support to PPPs in infrastructure (Viability Gap Funding Scheme) was announced by the GoI in 2004, and the modalities to operationalise it were ready by 2005. The Scheme aims to ensure widespread access to infrastructure provided through the PPP framework by subsidising the capital cost of their access. The VGF was operational in January 2006, with the objective of meeting the funding gap to make economically essential projects commercially viable, in order to allow private sector participation in the projects. This is intended to facilitate private sector efficiencies in infrastructure development and reduce the 'infrastructure deficit' in the country.[37]

Size of VGF and its products

An initial corpus of INR 2 bn (US$40m)[38] was set aside by the GoI for VGF. However, since infrastructure is a priority area, the GoI was in principle willing to commit a much higher amount from its budget for VGF, should there be demand.[39] The VGF assistance to a project works as follows:

- The GoI can commit up to 20% of the project capital costs as VGF support – which is a pure capital grant provided during the construction phase of the project. Proposals for any other form of assistance may be considered on a case by case basis. The view of the Indian VGF officials was that bids from the private sector would be over-priced if they sought to have the VGF amount repayable by the private concessionaire.
- In addition to GoI's support, the sponsoring government authority (at central, state or municipal level) may, if it so decides, commit a further VGF support of 20% of the project costs out of its own budget. The sponsor's contribution can be used to finance capital costs and/ or operation and maintenance costs.

In case of an unexpected upside on the project, the concessionaire gains. However, the concession agreement is drafted to prevent any windfall or large gains to the

[37] Source: www.pppinindia.com

[38] Current exchange rate of $1:INR 50 has been used in all calculations in this section.

[39] 15 projects have so far obtained VGF approval for a VGF support of INR 34.22 bn ($684m)

concessionaire – for example, the concession period can be reduced if there is a windfall gain.

Eligibility criteria

The project seeking VGF must belong to one of the following sectors:

- Roads, railways, seaports, airports, inland waterways;
- Power;
- Urban transport, water supply, sewerage, solid waste management, and other physical infrastructure in urban areas; and
- International convention centres and other tourism infrastructure projects.

Any other sector project can be provided VGF support only on recommendation of the Empowered Committee (as described below) and on approval of the Finance Minister.

Only PPP infrastructure projects, which are based on a contract or concession agreement between a Government/ statutory entity and a private sector company for delivering an infrastructure service on payment of user charges, are eligible for VGF. Other eligibility criteria include:

- The contract/ concession should be awarded in favour of a private sector company, in which 51% or more of the subscribed and paid up equity is owned and controlled by a private entity.
- The private sector company should be selected on the basis of open competitive bidding and should be responsible for financing, construction, maintenance and operation of the project during the concession period.
- The project should provide a service against payment of a pre-determined tariff or user charge.
- The project should be commercially unviable and the VGF support required should be a bid variable.
- The concerned sponsoring authority, which owns the underlying assets (henceforth referred to as 'SA') should certify, with reasons that:
    - the tariff/ user charge cannot be increased to eliminate or reduce the viability gap of the PPP;
    - the project term cannot be increased for reducing the viability gap; and
    - the capital costs are reasonable and based on the standards and specifications normally applicable to such projects and that the capital costs cannot be further restricted for reducing the viability gap.

Estimation of viability gap on a project

The SA finances a detailed feasibility study and technical costing of the project. The projected capital costs (including financing costs, interest during construction period, contingencies etc., but excluding the cost of land) form the basis of estimating the maximum viability gap funding required for the project. Up to 20% of the estimated project costs can be committed by the GoI as VGF, and another 20% by the SA. Therefore, the maximum VGF on any project is 40% of its estimated project costs.

The project is then bid out on a competitive basis to the private sector, where the VGF required is the 'bid variable'.[40] The quantum of financial support (VGF) to be provided is equivalent to the lowest bid for capital subsidy, but subject to the estimated maximum of 20% of the total project cost.

Even if the private bidder determined project costs are higher than that estimated by the SA, the VGF commitment can be no higher than the originally calculated 40%. In case the least bid VGF amounts only to 35% of the project cost, the GoI still commits 20%, thereby providing the 5% benefit to the SA. If no bid is obtained from the private sector, the project needs to be re-designed and costed by the SA.

Once the concession agreement is signed and financial close is achieved, the VGF commitment is finalised (with no changes henceforth). This discourages cost and time over-runs during the construction period.

Institutional structure and approval process

The VGF is housed in the Department of Economic Affairs, Ministry of Finance, GoI and is not a distinct legal entity as such.

VGF proposals need to be submitted by the SA to the PPP cell in the DEA, prior to bidding out the contract. The proposal should include copies of all draft project agreements (such as concession agreement, state support agreement, escrow agreement, O&M agreement and shareholders' agreement, as applicable) and the project report (feasibility study and costing).[41]

An Empowered Institution and Committee, comprising of senior officials from the Department of Economic Affairs (DEA), Planning Commission, Department of Expenditure, and the concerned Line Ministry (e.g. Roads, urban development, tourism etc.), are responsible for appraising VGF proposals and deciding those that can be awarded financial support.[42] Figure 1 below sets out the approval process for VGF grants:

[40] Alternatively, if the project is viable and the private operator can actually share some revenue proceeds with the SA (rather than require VGF), then the bid variable is the 'revenue premium' which will be paid on a periodic basis to the SA. In that case, the highest premium gets the highest financial score.

[41] Detailed proposal requirements and processes are set out at www.pppinindia.com.

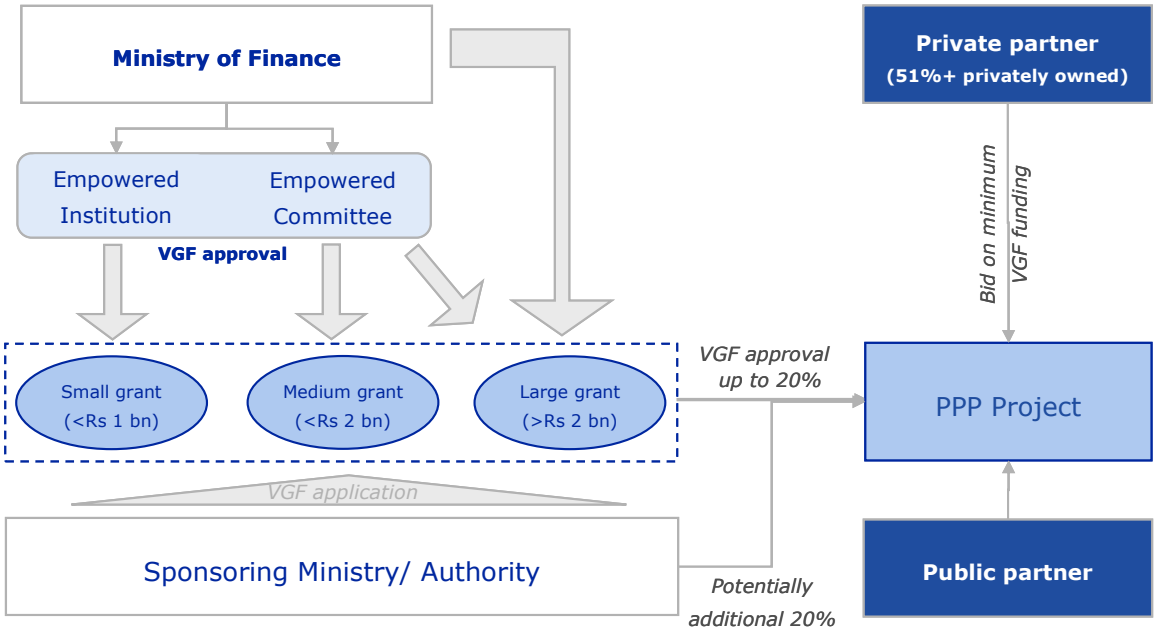
[42] Each of these four departments check that the proposal conforms with the mandatory requirements of the VGF scheme, and that the proposed financial estimates and risk allocation are broadly in order.

- For proposals up to INR 1 bn (US$20m), the Empowered Institution (EI) approves the grant.
- For those sized between INR 1-2 bn (US$20-40m), the Empowered Committee (EC) approves.
- Large grants above INR 2 bn (US$40m) can be sanctioned by the EC, with the approval of the Finance Minister.

The EI will either approve the proposal in principle (with or without modifications), or advise the concerned SA to provide additional clarifications/ information or to make necessary changes for further consideration.

Once the EI approves the VGF in principle, the project is bid out to the private sector. Within three months from the date of award (or an extended period, as permitted), the Lead Financial Institution presents its project appraisal for consideration and approval of the Empowered Institution.

Figure A1.1: VGF institutional approval structure



Disbursement of VGF and proposals so far

The approved VGF will be disbursed only after the private sector concessionaire has subscribed to and expended the equity contribution required for the project and will be released in proportion to debt disbursements once the debt payment is provided by the banks/ Lead Financial Institution. The SA is required to submit a Bank certification letter to the GoI that the loan is disbursed, after which the GoI releases the VGF proportionate to the loan value disbursed. Therefore, the VGF funds are released in instalments, mirroring the debt payment schedule over the construction phase of the project. The EI will release the VGF to the Lead Financial Institution as and when due, and obtain reimbursement thereof from the Finance Ministry.

The EI, the Lead Financial Institution, and the private concessionaire will enter into a Tripartite Agreement for the purposes of this Scheme.

A total of 15 projects have so far obtained VGF approval and completed the bidding process. Of a total project cost of INR 164.7 bn (US$3.29 bn), VGF approved is INR 32.29 bn (US$646m) and actually disbursed is INR 610m (US$12.2m).[43] Contrary to initial estimates, the annual VGF disbursement demands are quite low and also involve considerable time lag. Typically, the bidding process takes a year or so, following which another 3-4 months are required to reach financial closure (now almost 6-8 months as a result of the global credit crunch). Even after financial close, the VGF is disbursed only after the equity investment and the commensurate debt payment.

In addition to the 15 projects above, another 31 projects have obtained 'in principle' approval for VGF (i.e. prior to private sector procurement) – these total a VGF commitment of INR 34.22 bn (US$684m) against project costs of INR 175.56 bn (US$3.51 bn). VGF proposals have been received from various states of India[44] for highways, power, ports, water, and solid waste management projects. However, all proposals approved so far have been in the highways/ roads or metro rail sectors.

About 16 proposals have been declined in their current form - the total project cost of these proposals is INR 172.19 bn (US$3.44 bn), of which VGF requested is INR 28.13 bn (US$563m). The deficiencies noted in these proposals include:

- Incomplete information is enclosed.
- Sponsoring authority is not a State entity.
- The tariff is not pre-determined.
- No viability gap has been projected or VGF requirement is very high.
- Project is already under implementation.
- VGF is not the bidding parameter.
- Selection of private entity is not through competitive process.

Monitoring

The Lead Financial Institution is responsible for regular monitoring and periodic evaluation of project compliance with agreed milestones and performance levels, particularly for the purposes of disbursing the VGF. It will also send regular progress report to the EI, which will make a consolidated progress report once every quarter for review by the EC.

[43] A full list of approved VGF projects and proposals being considered are set out at http://pppinindia.com/projects-next.asp.

[44] These states are Gujarat, Maharashtra, Madhya Pradesh, Rajasthan, Delhi, Tripura, Punjab, Bihar, Andhra Pradesh, West Bengal, Delhi, Mizoram, Kerala and Karnataka.

Other points

One of the larger states of India is planning to set up a state-level VGF and PDF this year, to support urban infrastructure projects that are of smaller scale and value. Unlike the pure grants provided by the GoI, the state VGF is conceptualised to be a sustainable 'revolving fund'. The state government will extend VGF funding on a 'soft loan' basis to the eligible local sponsor (for example, a local government or municipal entity), who would then be responsible for paying back the VGF funds provided. The state VGF is intended to allow the state government to expand the infrastructure sectors (and size of projects) currently supported by the national VGF scheme, as well as to channel the additional 20% VGF funding that can be provided by the state sponsoring authority.

Lessons learnt from the Indian VGF

- The biggest lesson learnt is with respect to the annual allocation of government budget for VGF spend. Initially, it was decided that in the first two years of operation, projects meeting the eligibility criteria will be funded on a first come, first served basis. In later years, if need arises, it was decided that funding may be provided based on an appropriate formula (to be determined by the EC) which balances needs across sectors and avoid pre-empting of funds by a few large projects. However, given the time involved to reach technical and financial close of projects, as well as the lagged disbursement of VGF support in line with the debt disbursements, the annual outlay from the VGF has been quite small, with a total disbursement in the last three years being INR 610m (US$12.2m). Therefore, it may not be necessary to 'over-engineer' the VGF in terms of creating sector sub-accounts etc.
- All of the approved VGF proposals so far are in the highways/ roads sector or for urban rapid transit ('metro rail') projects. Power and ports projects are generally viable, and applications in water and other urban infrastructure sectors have either been poorly structured or not involved a concession contract.
- It is critical for the project to be bid out in a competitive and transparent manner, so as to determine the least capital subsidy requirement. This also reduces political interference. Further, the selected private sector sponsor should first invest their equity as well as identify the debt financiers/ lead financial institution before being eligible for any VGF support.
- The bid criteria on projects with approved VGF support is the 'least subsidy required' within the defined 20% maximum GoI support, i.e. private bidders are expected to bid on the VGF support they actually require for the project. This assumes that the SA has sufficient capacity to provide other financial assumptions regarding tariff etc. in the bid documents, and also that there is a good pipeline of PPP projects that have been developed and structured on a 'bankable basis' to let out to the private sector.

- Structuring the VGF payments to be in proportion to the debt disbursements is considered to be working well, since the VGF can benefit from the Lead Financial Institution's due diligence of the transaction as well as regular monitoring of progress.
- The Indian VGF support is provided as a pure capital grant, as it is thought that any element of repayment would increase the financial bid submitted by the concessionaires. However, one of the larger states of India is planning to establish a state-level VGF as a revolving fund.
- The SA retains ownership of the project at all times. Irrespective of whether they contribute an additional 20% VGF or not, they are accountable to the GoI for the smooth progress of the project. Therefore, the SAs should have adequate capacity and resources to be able to carry out/ supervise feasibility studies of the project, and submit the required documentation for the VGF proposal.
- The Indian VGF is housed in a department in the Ministry of Finance. However, 'political capture' is sought to be avoided by having two levels of institutional approval (by defined delegated authority) – the Empowered Institution and Committee – which are staffed by senior government officials from four different departments that each protect the fiduciary and fiscal interest of the government.

India Infrastructure Project Development Fund (IIPDF)

The IIPDF was set up in December 2007, with the objective of supporting SAs in structuring and developing bankable projects that can then be offered to the private sector on a PPP basis. It would fund the PPP project development expenses including costs of engaging consultants and transaction advisers, thus increasing the quality and quantity of successful PPPs and allowing informed decision making by the Government based on good quality feasibility reports.

IIPDF size and products

IIPDF has been established with an initial GoI contribution of INR 1 bn (US$20m). Its guidelines permit future bilateral and multilateral donor funding support, subject to a minimum contribution of INR 150m (US$3m) and terms and conditions of the Department of Economic Affairs (DEA).

The IIPDF would pay up to 75% of the project development expenses, by ordinarily providing an interest free loan. 25% of the project development expenditure is to be provided by the SA, which is expected to fund initial feasibility studies/ concept development etc. The IIPDF support is generally disbursed only once the SA has committed its 25% share.

IIPDF may fund expenses incurred by the SA with respect to feasibility studies, environment impact studies, financial structuring, legal reviews and development of project documentation, including concession agreement, commercial assessment studies (including traffic studies, demand assessment, capacity to pay assessment), risk

assessment/ identification studies, grading of projects, out of pocket expenses for procurement process/ documentation such as advertising, marketing road shows/ investor meetings etc. – essentially all activities that are required for achieving technical close[45] of such projects, but would not include expenses incurred by the SA on its own staff.

The IIPDF is envisaged to be a revolving fund that would get replenished by the reimbursement of 'investment' through success fee earned from successfully bid projects. However, should there be a need, the IIPDF can be supplemented in subsequent years through budget support. In case of failure of the bid, the IIPDF assistance cannot be recovered. On the other hand, the SA is liable to refund the amount of assistance received, in case it does not conclude the bidding process for some reason or does not contract out the project after the bid process has been completed.

In designing the IIPDF, a non-recovery rate of 25% of the funds disbursed has been assumed. This allows it to also fund projects that are innovative either in terms of sector or service provided at national, state or local level.

Eligibility criteria

IIPDF support can be provided for any form of PPP project – including management and O&M contracts (unlike the VGF support that can only be provided for concession contracts). The SA is required to submit a Memorandum for Consideration (MFC) to the PPP cell, which sets out the high-level technical, financial, legal, and environmental/ social aspects of the project, including its estimated project development costs (by category), the duration over which it can be recovered, projected IRR etc.

The IIPDF eligibility requirements are:[46]

- The funding is to be used on a single project, which is approved by the EI.
- Funding is required for the payment of transaction advisers appointed by the SA, usually in a two-phase appointment: the first phase is the preparation of the pre-feasibility study and its subsequent approval by the EI, and the second phase is the competitive and transparent procurement of the PPP operator. IIPDF funding is to be used for phase two funding, i.e. after EI's approval of the MFC, based on the pre-feasibility study that is paid for by the SA.
- Generally, three types of projects can be funded under the IIPDF:
    - *Revenue generating commercial projects* (concession/ BOOT or its variants/ lease contracts): A project FIRR of 20% or more on the private sector investment should be demonstrated. If the FIRR is below 20% even with VGF of up to 40% (maximum of 20% from VGF Scheme of GoI

[45] As opposed to financial close, technical close refers to the award of the PPP contract to the successful private sector bidder.

[46] Source: http://pppinindia.com/pdf/scheme_Guidelines_India_Infrastructure_Project_Development_Fund-English.pdf

and 20% from the SA),[47] then the project will not qualify for IIPDF support.

- *Efficiency enhancement/ cost savings projects* (management or service contracts or EPC based O&M contracts): Where there is no or low private sector investment, the financial savings/ enhanced revenues should ordinarily be able to recover payouts by government within 8-10 years of completion of the project. Annuity based project would also be covered under this category.
- *Non-revenue generating projects with high economic returns* (e.g. sewerage system): In case of project undertaken in PPP formats based on economic returns considerations, the project eligibility will be based on sector preferences to be established by the EI and would be based on annuity payments by the SA.

Institutional structure

The IIPDF is also housed in the Department of Economic Affairs, Ministry of Finance, GoI. However, given that it is expected to be a largely self-sustaining revolving fund, the GoI may in the future spin it off as an autonomous legal entity.

However, for the present, in the interest of savings costs and ensuring cohesive functioning, the same institutional structure as for the VGF – the PPP cell and the Empowered Institution – process the applications for approval of IIPDF assistance.

Approval, disbursement and monitoring processes

The EI will approve the IIPDF proposals based on stringent screening procedures including whether the SA, project, and the expected cash flows of the project meet the eligibility criteria. An important criterion is whether the SA has available funds (on budget and/ or from donor sources) for use in project procurement.

Disbursements by the IIPDF will be made in instalments based on milestones achieved, as approved by the EI.

The SA is responsible for regular monitoring of project development and compliance with milestones as approved by the EI.

Projects approved so far

Table 1 below presents a summary of the 26 projects that have obtained approval for IIPDF assistance so far. The key points to note are:

- Water and sanitation, urban infrastructure (excluding urban transport), and tourism are the top three sectors (in terms of number of projects and estimated project development costs) that have obtained IIPDF assistance approval.

[47] A project is eligible for both VGF and IIPDF support, provided it meets their respective requirements.

- The IIPDF support approved across projects is about 75% of the total estimated project development costs, in line with the guidelines.
- Only 9% of the IIPDF support approved has been disbursed so far – c. INR 14m (US$280,000).

Table A1.1: IIPDF support approved projects

Sector	No. of projects	Estimated project development costs (INR million)	IIPDF support approved (INR million)	IIPDF support disbursed (INR million)
Water and sanitation	4*	75.00	56.25	4.50
Urban infrastructure (excl. transport)	5	59.48	47.67	3.67
Tourism	4	30.53	22.90	N/A
Education	2	23.50	17.43	3.53
Health	2	12.42	9.32	1.53
Roads	3	9.20	6.90	N/A
Urban transport	3	7.76	5.82	N/A
Civil aviation	1	1.40	1.05	1.05
Total	**26***	**219.29**	**167.34**	**14.28**

** Two water and sanitation projects approved do not have estimated cost/ IIPDF support details.*

Source: http://pppinindia.com/iipdf_projects.asp

In addition to the above, three urban/ semi-urban infrastructure proposals are under review for IIPDF assistance. Four projects were rejected funding, as the EI decided that they did not meet the eligibility criteria or required restructuring/ clarification by the SA.

Lessons learnt from IIPDF

- It is essential that the SA co-contributes some percentage of the project development expenses, and ideally before receiving the PDF support. This would help retain ownership and accountability of the project, as well as help develop a project concept/ idea to a worked-up proposal that can be submitted for consideration of PDF assistance.
- PDF assistance can be used to pay for developing/ structuring the PPP project, right up to reaching technical close. It is expected that the SA would undertake the pre-feasibility analysis to develop the preliminary technical and economic fundamentals of the project.
- The PDF support is to be returned by the SA on successful technical closure of the project or in the event that the SA, due to its own reasons, fails to conclude the bidding process and/ or award contracts. Therefore, the PDF is expected to be self-sustainable and operate like a 'revolving fund' that can recover a large

percentage, if not all, of its payments through success fees paid by a successful bidder.

- The IIPDF currently uses the same institutional structure within the Ministry of Finance as the VGF, although the guidelines provide for it to become a legally separate entity over time. There are clearly some synergies between operating a VGF and PDF (e.g. proposal review, pipeline development) and these can be leveraged in its recommended institutional structure.
- A wider range of sectors have obtained IIPDF approval, compared to only highways, roads and metro-rail projects in the VGF. Water and sanitation and urban infrastructure sectors have received a majority of the IIPDF support so far.
- Like the VGF, the amount of IIPDF assistance actually disbursed to date, is quite small and only 9% of the total support approved. Therefore, it is not necessary to set aside a large part of the government budget upfront – rather, the budget can be drawn down in line with the disbursement demands.
- Similar to the VGF, the GoI has defined eligibility criteria, funding application/ documentation requirements, approval process etc. for PDF. This ensures that the various SAs are clear about their obligations with respect to project development, letting out the contract to the private sector etc.

Conclusions

Overall, the Indian VGF and PDF are regarded as useful interventions to promote PPP projects, as demonstrated by the variety of States that have applied for assistance. However, given the extensive documentation requirements in submitting a proposal and the strict proposal review/ approval conditions, there has not been as much of a 'gold rush' as originally envisaged for the schemes. Also, the actual disbursement of funds is quite staggered, reducing the annual budgetary commitment of the government.

Key to operationalising the VGF and PDF is the capacity of the private sector – both in terms of developers and financiers of infrastructure projects as well as consultants who provide transaction advice until closing a PPP project. These skills are relatively strong in the Indian context. Also, the government sponsoring agencies have the capacity and budget to appoint external advisers to help them prepare a PPP project to be ready for bidding out to the private sector. Last but not the least, the PPP enabling environment with respect to supportive legislation, institutions and regulations for PPP projects is also in place in India, with the benefit of many years of successful PPP experience.

ANNEX 2: PROJECT PIPELINE

#	Project	Line Ministry	Pipeline	Origination	Development stage	Timing for close	Project cost (PKRm)
1	Karachi Circular Railway (KCR)	Karachi Urban Transport Corporation (KUTC)/ Railways Authority	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	123,000
2	CNG Buses	Karachi Mass Transit Cell (KMTC)/ City District Government of Karachi	IPDF pipeline	PDD & PC 1/2/3	Structuring	6 months	16,000
3	Cool Chain System National Trade Corridor	Pakistan Horticulutre Development and Export Board (PHDEB)/ Ministry of Commerce	IPDF pipeline	PDD & PC 1/2/3	Structuring	9 months	12,000
4	PSEB IT Park	Pakistan Export Promotion Board (PEPB)/ Ministry of IT	IPDF pipeline	LM direct	Structuring	3 months	9,700
5	Port Qasim and Gwadar Shipyards	Karachi Shipyard & Engineering Works (KSEW)/ Ports Authority	IPDF pipeline	LM direct	Inception	24 months	80,000
6	Islamabad Tourist Village	Pakistan Tourism Development Corporation (PDTC)/ Ministry of Commerce	IPDF pipeline	LM direct	Inception	12 months	5,600
7	PTDC Corporate Complex	Pakistan Tourism Development Corporation (PDTC)/ Ministry of Commerce	IPDF pipeline	LM direct	Inception	18 months	2,400
8	Faisalabad Solid Waste Management Plant	City District Government of Faisalabad/ Government of Punjab	IPDF pipeline	PDD & PC 1/2/3	Feasibility	12 months	3,200
9	Faisalabad WASA billing	Urban Unit	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	800
10	Karachi-Hyderbad Motorway M9 toll	National Highway Authority/ Ministry of Communications	IPDF pipeline	LM direct	Feasibility	18 months	8,000
11	Rawalpindi flyover N5	National Highway Authority/ Ministry of Communications	IPDF pipeline	LM direct	Feasibility	24 months	22,800
12	Karachi Northern By-pass M10	National Highway Authority/ Ministry of Communications	IPDF pipeline	LM direct	Inception	More than two years	4,000
13	Muzzaffargarh - DG Khan N70 Highway	National Highway Authority/ Ministry of Communications	IPDF pipeline	LM direct	Inception	More than two years	4,960
14	Cardiac Surgery Facility at PIMS	Ministry of Health	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	1,260
15	Institute of Dentistry at PIMS Islamabad	Ministry of Health	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	331
16	Third, Fourth Lanes Kashmir-Peshawar Highway	Local government/ Cabinet Division	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	2,192
17	Solid-waste, energy and fertilizer project Faisalabad	Local government/ Ministry of Environment	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	4,800
18	121 MW Allai Khawar hydro-power project	Local government/ Ministry of Water and Power	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	8,800
19	72 MW Khan-Khawar hydro-power project	Local government/ Ministry of Water and Power	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	5,600
20	Indus Highway project Phase III N55	National Highway Authority/ Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	6,556
21	N5 Rehabilitation project	National Highway Authority/ Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	15,108
22	Peshawar Northern bypass and land acquisition	National Highway Authority/ Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	3,078
23	Indus Highway - additional N55 carriageway	National Highway Authority/ Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	12,342

#	Project	Line Ministry	Pipeline	Origination	Development stage	Timing for close	Project cost (PKRm)
24	Flyover on N5 Khairpur	National Highway Authority/ Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	270
25	Benazir Medical College Gujranwala	Finance Division/ Ministry of Finance	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	5
26	In-land water transport Karachi-Kalabagh plus electricity	Department of Transport	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	320,000
27	Lahore light rail transit	Railways Authority	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	200,000
28	Karachi Mass Transit	Railways Authority	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	72,000
29	Lodhran-Sukkur Expressway	National Highway Authority/ Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	40,000
30	Gujranwala-Sukkur Expressway	National Highway Authority/ Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	9,600
31	Thar coal development and electricity generation	Local government/ Ministry of Water and Power	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	80,000
32	Lahore Grid station construction	Local government/ Ministry of Water and Power	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	16,000
33	Solid-waste, energy and fertilizer project Lahore	Local government/ Ministry of Environment	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	10,000
34	Solid-waste, energy and fertilizer project Karachi	Local government/ Ministry of Environment	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	16,000
35	Shaheed Benazir Bhutto A&E Centre etc. at Civil Hospital, Karachi	Local government/ Ministry of Health	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	2,536
36	Establishment of HDIP Mega CNG Station	Local government/ Ministry of petroleum & natural resources	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	151
37	Improvement, Rehab & Industrial Estates (Peshawar)	Local Government/ Ministry of Industries & Production	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	499
38	Establishment of National Training Centre	Privatisation Commission	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	494
39	Khan Khawar HydroPower Project (1st Revision)	Ministry of Water and Power	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	7,652
40	Duber Khawar Hydropower Project (130 MW) (1st Revision	Ministry of Water and Power	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	14,217
41	GSM Expansion for Northern Areas	Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	436
42	GSM Expansion for Azad Jammu & Kashmir	Ministry of Communications	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	499
43	Pakistan Institute of Training & Devlopment	Federal Government/ Ministry of Commerce	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	411
44	Water supply to Layari	Local government/ Karachi Water & Sewerage Borard	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	370
45	Water Supply to Hub Industrial Sector	n/a	IPDF pipeline	PDD & PC 1/2/3	Inception	More than two years	817
46	100 MW Sukinali hydro project	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	12 months	8,000
47	100 MW Imported coal Karachi	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Inception	18 months	8,800

#	Project	Line Ministry	Pipeline	Origination	Development stage	Timing for close	Project cost (PKRm)
48	900 MW Guddu Thermal Generation	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	12 months	72,000
49	1054 MW Jamshoro power	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	12 months	92,752
50	220 MW Reshma Power Generation	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	6 months	19,360
51	220 MW Ruba Energy Paksitan	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	6 months	19,360
52	200 MW Associated Technologies project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	9 months	17,600
53	101 MW Japan Power-Capacity Expansion	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	9 months	8,888
54	205 MW Green Power project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	12 months	18,040
55	166 MW Reshma Power Generation	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	6 months	14,608
56	134 MW Star Power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	3 months	11,792
57	84 MW New Bong Hydropower project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	3 months	6,720
58	200 MW Gujranwala (Gulistan) Power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	3 months	17,600
59	450 MW UCH-II Power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	6 months	39,600
60	200 MW Shahkot (Leading) Power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	9 months	17,600
61	627 MW Engro Power Generation	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	6 months	55,176
62	171 MW Saba Generation	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	6 months	15,048
63	100 MW Kotli Hydel project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	6 months	8,800
64	100 MW Gulpur Hydro Power projects	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	6 months	8,000
65	132 MW Rajdhan Hydro Power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	9 months	10,560
66	150 MW Shahpur Power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	9 months	13,200
67	101 MW Gabral-Kalam Hydro-power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Feasibility	18 months	8,080
68	150 MW Patrind Hydro-power Project	Ministry of Water and Power/ PPIB	PPIB pipeline	Unsolicited project	Structuring	6 months	12,000
69	1200 MW AES Imported Coal Project	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	9 months	105,600
70	1200 MW Mitsui Imported Coal Project	Ministry of Water and Power/ PPIB	PPIB pipeline	PPIB ICB	Structuring	9 months	105,600

ANNEX 3: LIST OF CONSULTEES

Infrastructure Project Development Facility (IPDF)

Adil Anwar, CEO and Head of Legal Affairs

Shahnawaz Mahmood, Head of Projects

Ali Rahman, Senior Advisor, Projects

Amjad Ali Awan, Advisor, Projects (Power-sector specialist)

Aisha Fariel Salahuddin, Advisor, Projects

Shabir Anwar Kazi, Advisor, Projects

Ministry of Finance (MoF)

a. Rana Assad Amin, Additional Secretary

b. Shabbir Ahmed, Joint Secretary

c. Muhammad Sarwar, Corporate Finance Wing, Joint Secretary

d. Muhammad Khalid Khan – Economic Affairs Division, Deputy Secretary

Arif Azim – Economic Affairs Division, Additional Secretary

National Highway Authority

Altaf Ahmad Chaudhry, Chairman

Planning Commission

Akram Malik, Member (Infrastructure) , Planning Commission

Private Power & Infrastructure Board (PPIB)

Shah Jahan Mirza –Director Finance & Policy

Fayyaz Elahi – Managing Director

Privatisation Commission

Ahmed Jawad, Secretary, Privatization Commission

World Bank

Mihaly Kopanyi, Senior Infrastructure Specialist

Raghuveer Sharma, Lead Financial Analyst

ANNEX 4: DRAFT VGF GUIDELINES

DRAFT
Guidelines on Viability Gap Funds for PPP Project

Revised in August 2009

Ministry of Finance

Guidelines on Viability Gap Funds for PPP Project

Whereas:

The Government of Pakistan recognises the importance of improving and expanding infrastructure services for sustaining economic and social development. To help finance growing infrastructure needs, the Government has developed a Public Private Partnership (PPP) programme 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 targeted subsidies for PPP projects.

Therefore:

In accordance with its policy objectives, the Government of Pakistan has decided to subsidise economically viable PPP projects that will not be otherwise financeable by the private sector. The government will make such PPP projects financeable by dedicating a portion of its budget to fund the viability gap which can arise for a number of reasons, not only a lack of household affordability. This dedicated budget shall be known as the Viability Gap Fund.

These Guidelines set the criteria for eligibility to receive funding from the Viability Gap Fund, the procedures for applying for, approving, disbursing and monitoring the Fund, and the arrangements for managing, controlling and governing the Fund.

ARTICLE I

General Provisions

Section 1. Objectives: These Guidelines set the criteria and procedures that should be followed to apply for, approve, disburse, and monitor Viability Gap Funds for PPP Projects.

Section 2. Definitions of Terms: Unless otherwise stated, the terms used in these Guidelines shall have the following meaning:

"Competitive Selection Process" or **"CSP"** 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.

"Cost-recovery Revenue" means the revenue that is equal to or greater than, in present value terms (at an approved discount rate of private party), the True Cost of the PPP Project.

"Economic Benefit" means the positive contribution to gross national product (or other measure of value) from an economic activity or project.

"Economic Feasibility" includes the determination by reference to Government and IFI Economic Evaluation guidelines [48]

"Contracting authority" means:

1) Federal, Provincial and Local governments at all levels,
2) All and different hierarchical authorities falling within the domain of (i) above performing functions pursuant to any law in connection with the affairs of the Government, or
3) All State owned enterprises (companies or otherwise) whose ownership or control is vested in the Government.

"Measurable Outputs" mean and include pre-defined and achieved level of services, completed, quantifiable constructed project works either in whole or in part inclusive of any completed contract milestone;

"Net Economic Benefit" means the present value of economic benefits minus the economic costs of the PPP project. 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:

1) performs an Institutional function on behalf of the Institution; and/or
2) assumes the use of public property for its own commercial purposes**;**
3) assumes substantial financial, technical and operational risks in connection with the performance of the Institutional function or use of the public property; and
4) receives a benefit for performing the Institutional function or from utilising the public property, either by way of:

   i. consideration to be paid by the Institution from its budget or revenue; or
   ii. charges or fees to be collected by the Private Party from users or customers of a service provided to them; or
   iii. a combination of such consideration and such charges or fees.

"Socio-economic Characteristics" means quantitative factors that provide a director indirect measure of the social and economic status of a group of people.

"Socio-economically Disadvantaged" means a group of people that is below average in terms of several Socio-economic Characteristics, compared to the general population of Pakistan or to the relevant regional sub-population.

"Tariffs" means a Rupee amount charged to service users or consumers per unit of service provided (for example, Rs/m_3, Rs/kWh, Rs/trip).

[48] A project is deemed " economically feasible" if (i) the net discounted future stream of economic costs and economic benefits of a project (the Net Present Value) is positive and/or (ii) the (internal) rate of return of a project, based on the future steam of net economic costs and economic benefits is higher than the Government's hurdle rate of return on public investment.

"Total Capital Cost" means the full and reasonable cost of making a PPP project operational, including project design, authorization and field development costs, material costs, construction costs, and equipment costs.

"True Cost" means the full efficient cost of a PPP Project, and which includes all fair and reasonable costs including Total Capital Cost and Operating Costs, and a reasonable return on investment, that must be recovered in order to enable the Private Party to operate the PPP Project in a financially viable manner.

"Unitary Payment" means the payment made by the Institution to the private party in respect of the services provided by the private party.

"Viability Gap Fund" is as defined in Article VI Section 1.

"Viability Gap Funds" means the funds that the VGF will transfer to an Institution, or to a Private Party on behalf of the Institution, to cover part or all of the assessed viability gap.

"Viability Gap Funds – Capital" means the Viability Gap Funds which are transferred during the development (including design, development, construction prior to the commencement of operations) phase of the PPP Project.

"Viability Gap Funds - Operating" means the Viability Gap Funds which are transferred on a periodic basis (i.e. monthly, quarterly, half yearly, yearly etc) during the period wherein the private party provides services under the PPP Project after the commencement of operations.

"VGF Board" means the Board that will be constituted for the purpose of managing VGF Funds;

"Preferred Bidder" means the Private Party that is 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 best financial bid in the Competitive Selection Process for a given PPP.

ARTICLE II

Eligibility Provisions

Section 1. Eligibility Criteria for Gateway 1. To be eligible to apply for Viability Gap Funds, through Gateway 1, a PPP Project shall meet the following criteria:

1) **Economically Viable**: The Net Economic Benefit of the PPP project shall be equal to or greater than zero.

2) **Unaffordable:** Most users of the services provided by the PPP project are unable to pay the full costs of an electrical, water, sanitation or other connection.

4) **Targeted:** where it is practical to segregate groups of users in accordance to Socio-Economic Characteristics.

5) **Competitively Procured**: The private or jointly public-private party that will undertake the PPP Project is selected through a Competitive Selection Process.

6) **Output-Based:** The disbursement of Viability Gap Funds is linked to the private party having verifiably met Measurable Outputs.

Section 2. Eligibility Criteria for Gateway 2. To be eligible to apply for Viability Gap Funds, through Gateway 2, a PPP Project shall meet the following criteria:

1) **Strongly Economically Viable**: The Net Economic Benefit of the PPP project shall be substantially greater than zero;

2) **Unfinanceable**: The project will not be able reach financial close without the introduction of a subsidy.

3) **Competitively Procured**: The private party that will undertake the PPP Project will be selected through a Competitive Selection Process.

4) **Selected Sectors**: The PPP project belongs to one of the sectors listed below.

Transport and logistics including roads, rail, seaports, airports, fishing harbours as well as warehousing, wholesale markets and cold storage; or

ii) **Mass Urban Public Transport** including buses, and intra and inter-city rail; or

iii) **Municipal Services** including water supply and sanitation; solid waste management; low cost housing, and health/education facilities; or

iv) **Energy Projects;** or

v) **Any other infrastructure** sectors that the Federal Government may define.

ARTICLE III

Request and Allocation of VGF funds to projects

Section 1. Request for Pre-approval: Prior to launching the Competitive Selection Process, the Institution will submit to the VGF Board a request for pre-approval of the Viability Gap Funds for a specific PPP project. The request shall include the evidence needed to demonstrate compliance with the eligibility criteria listed in Section 1, Article II and categorise such request as either an application for Gateway 1 or for Gateway 2.

The VGF Board shall develop detailed instructions that applications should follow to demonstrate compliance with eligibility criteria.

Requests from Institutions shall be reviewed by VGF Board on a quarterly basis.

Section 2. Gateway 1 /Allocation of VGF capital grants to projects: After screening each application for Gateway 1, VGF shall reach a decision on the allocation of VGF funds among projects sponsored by each Contracting authority. If the information or evidence included in the requests for pre-approval are insufficiently detailed or verified, the VGF might require additional information to the Contracting authority.

The decision of the VGF shall take into account whether:

1) The PPP Project is eligible, in accordance to the criteria listed in Article II section 1, to receive Viability Gap Funds;

2) The assumptions made on Net Economic Benefits, True Cost, Cost recovery Revenues, Economic feasibility. affordable Tariffs, Unitary Payment and Targetting are fair and reasonable, or whether adjustments in the Viability Gap Funds should be made to reflect the VGF Board's assessment of these assumptions; and

3) The Viability Gap Fund has sufficient uncommitted funds to honor the Viability Gap Funds disbursements in the dates required by the PPP Project.

The VGF Board's decision shall be communicated to the Institution and shall include the following:

1) the maximum amount of the Viability Gap Funds allocated to the PPP Project;

2) the request that the least subsidy amount is included as one of the criteria for selecting the Preferred Bidder in the CSP as a condition for final approval of the VGF Funds; and

3) any additional relevant information for the CSP and for the final approval of VGF Funds, according to Gateway 1.

Section 3. Gateway 2 Allocation of VGF structured financing subsidy to projects: After screening each application for Gateway 2, VGF shall reach a decision on the allocation of VGF funds among projects sponsored by each Contracting authority. If the information or evidence included in the requests for pre-approval are insufficiently detailed or verified, the VGF might require additional information to the Contracting authority.

The decision of the VGF Board shall take into account whether:

1) The PPP Project is eligible, in accordance to the criteria listed in Article II Section 2, to receive Viability Gap Funds;

2) The assumptions made on Economic feasibility, Net Economic Benefits, True Cost, Cost recovery Revenues, are fair and reasonable, or whether adjustments in the Viability Gap Funds should be made to reflect the VGF Board's assessment of these assumptions; and

3) The analysis of the Viability Gap, including the assumptions used and the data provided, are fair and reasonable, or whether adjustments in the Viability Gap Funds should be made to reflect the VGF Board's assessment of the Viability Gap.

4) The Viability Gap Fund has sufficient uncommitted funds to honor the Viability Gap Funds disbursements in the dates required by the PPP Project; and

The VGF Board's decision shall be communicated to the Institution and shall include the following:

1) The maximum amount of Viability Gap Funds allocated to the PPP Project;

2) The requirements for the subsidy structure which shall be proposed by Bidders, during the CSP, in addition to the maximum amount of the subsidy; and

3) The criteria VGF recommends to apply to evaluate bids on the subsidy structure.

The VGF Board shall develop detailed information on the requirements from VGF to approve access to VGF funds through Gateway 2.

ARTICLE IV

Competitive Selection Process-

Section 1: **Preparation of Tender documents.** In relation to VGF Funds, Institutions shall typically include in Tender documents the following.

1) The form of subsidy which the VGF Board has pre/approved to disburse to the project.
2) The maximum amount of the VGF funding allocated to the project (the maximum amount of the subsidy might not be disclosed to Bidders in some cases).
3) How the Viability Gap has been estimated.
4) In the case of Gateway 1, instructions to Bidders on how to bid on a least subsidy basis.
5) In the case of Gateway 2, instructions to Bidders as to how to structure the financial subsidy and how this will be evaluated.

In relation to Gateway 2 allocations, ths subsidy aspects of the final Tender documents will need to be agreed by the VGF Board, whose advisors will have the right to be involved in all subsequent discussions with bidders over the use of the subsidy.

Section 2. Review of winning subsidy structure and negotiation with Preferred Bidder Gateway 2. Institutions shall submit to the VGF Board the Preferred Bidder's proposed use of the subsidy, specifically the structure and / or form which it will take, prior to negotiations with Preferred Bidder being closed. The VGF Board's advisers shall take part in all discussions regarding the use of the subsidy.

ARTICLE V

Request for Final Approval and Final Approval

Section 1. Request for Final Approval: After completing the Competitive Selection Process, the Institution shall submit to the VGF Board, a request for final approval of the Viability Gap Funds for the pre-approved PPP project. The request shall include:

1) Evidence that the Competitive Selection Process was carried out, as well as a report summarising its results.

2) An initialled draft of the PPP agreement between the Private Party and the Institution.

3) The cash value and the net present value of the funding requested from the Viability Gap Fund requested by the Preferred Bidder.

4) In case of structured financing subsidies (Gateway 2), the subsidy structure proposed by and negotiated with the Preferred Bidder.

The VGF Board shall prepare instructions that Institutions should follow when preparing their request for final approval. Separate instructions shall be provided for Gateway1 and for Gateway 2.

Section 2 Approval for Gateway 1.The VGF Board's final approval shall be based on its satisfaction that the selection of the Preferred Bidder followed a Competitive Selection Process, and that the draft PPP agreement is consistent with terms included in the request for preapproval.

Section 3 Approval for Gateway 2 The VGF Board's final approval shall be based on its satisfaction that the selected Preferred Bidder provides an efficient use of VGF funds and that the draft PPP agreement is consistent with terms included in the request for preapproval.

Section 4. Tripartite Agreement: the Institution, Preferred Bidder, and the VGF Board shall enter into a Viability Gap Funds Agreement which will be based on the model agreement prepared to that effect by the VGF Board.

Funds shall not be available until financial close is achieved.

Disbursement and Monitoring
Section 1. Disbursement- Gateway 1: Upon completion of agreed, measurable outputs defined in the Viability Gap Funds Agreement, the Private Party shall submit an invoice to the Institution, and the Institution shall verify that the outputs have been delivered. The Institution shall submit the approved invoice to the VGF Board for payment. The VGF Board shall have the right to directly, or through a third party, conduct at its own discretion audits to directly verify that outputs have been delivered.

Section 2. Disbursement- Gateway 2: Funds shall be disbursed as agreed in the VGF agreement signed by the Parties.

ARTICLE VI

Management and Control of Viability Gap Fund

Section 1. To manage and control the Viability Gap Funds, the Ministry of Finance will create an arrangement with all of the following features:

- **Establishment:** The Gap Fund shall be established as a department under the Ministry of Finance, alongside or as part of the Debt Policy Coordination Office

- **Funding:** The budget of the VGF shall come from transfers made by the Ministry of Finance following requests by the VGF Board.

- **Governance:** The VGF will be governed by a Board. The Board shall have the power to, inter alia:

1) Approve Viability Gap Funds for eligible PPP projects. The Board may delegate to the Chair the power to approve PPP Projects that have a total capital cost equal to or less than a defined threshold. The value of the Viability Gap Funds approved by the VGF Board or Chair shall not exceed the uncommitted budget of the VGF when the approval was granted.

2) Approve the procedures to be followed for submission, appraisal and approval of VGF allocations.

3) Approve model Viability Gap Funds Agreements.

4) Approve a business plan (including budget) prepared by the Chair.

5) Request additional budget allocations from the Ministry of Finance.

Management: The VGF Board may appoint a Chair whose power and functions shall include:

1) Overseeing the preparation of annual business plans and seeking their approval by
the Board.

2) Managing a small permanent staff to provide a secretariat to the Board.

3) Engaging professional advisers to assist in the evaluation of VGF requests and disbursements as required.

4) Analysing requests for Viability Gap Funds pre-approval and approval submitted by Institutions, make recommendations to the VGF Board on whether it should approve these requests, or make decisions on requests for those PPP Projects where the Board has delegated its authority.

5) Entering into Viability Gap Fund Agreements for approved PPP Projects.

6) Making VGF payments to Institutions or Private Parties in accordance with Viability Gap Funds Agreements.

7) Monitoring the effectiveness of use of Viability Gap Funds by Institutions or Private Parties, in accordance with Viability Gap Funds Agreements.

8) Representing the VGF in disputes or any other type of legal case.

9) Overseeing the preparation of quarterly operational and financial performance reports to the Board.

ANNEX 5: DRAFT PDF GUIDELINES

DRAFT
Guidelines on Project Development Funds for PPP Project

August 2009

Ministry of Finance

Guidelines on Project Development Funds for PPP Project

The Government of Pakistan recognises the importance of improving and expanding infrastructure services for sustaining economic and social development. To help finance growing infrastructure needs, the Government has developed a Public Private Partnership (PPP) programme 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 targeted subsidies for PPP projects.

Therefore:
In accordance with its policy objectives, the Government of Pakistan has decided to support the development of PPP projects by providing resources to for the hiring of Transaction Advisers on behalf of public sector project sponsors, including the Transaction Advisory and Development Services division of the IPDF. This dedicated budget shall be known as the Project Development Fund (hereafter, "PDF").

These Guidelines set the criteria for eligibility to receive funding from the PDF, the procedures for applying for, approving, disbursing and monitoring the Fund, and the arrangements for managing, controlling and governing the Fund.

ARTICLE I

General Provisions

Section 1. Objectives: These Guidelines set the criteria and procedures that should be followed to apply for, approve, disburse, and monitor PDF resources for PPP Projects.

Section 2. Definitions of Terms: Unless otherwise stated, the terms used in these Guidelines shall have the following meaning:

"Contracting authority" means the public-sector body who will be the public party entering into a PPP agreement with the private party.

"Development fee" means the remuneration fee charged to projects reaching financial close by the PDF to cover early-stage project development costs, defined as a multiple of external advisory costs for early stage project development. The exact multiple shall be determined by the PDF operational policies.

“Feasibility study” means the analysis undertaken to determine whether a project is technically, legally, environmentally, financially and economically feasible.

"Institution" means:

i) Government,
ii) person 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 party 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;

“Payment agent” means actioning financial disbursements from the PDF.

“Procurement agent” means undertaking the specific tasks involved are preparation of tendering documents and a Terms of Reference (TOR), disseminating the opportunity to the relevant market, conducting a competitive bidding process, assessing the bids received according to specified value for money criteria, drafting the contract for the Transaction Advisers, and monitoring/ managing their activities, including deliverables.

“Project development” means the activities involved with bringing a project to financial close, and involves originating and screening projects for PPP suitability; conducting pre-feasibility and feasibility studies; structuring the project according to the objectives and constraints, commercial and otherwise, of the developer, investors and other stakeholders; formally procuring private partners; and negotiating with selected parties up to financial close. These can be separated into:

> “early-stage” activities, up to and including the feasibility studies for a project, and
> “later-stage” activities, from project structuring up to financial close.

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

a. performs an Institutional function on behalf of the Institution; and/or
b. assumes the use of public property for its own commercial purposes**;**
c. assumes substantial financial, technical and operational risks in connection with the performance of the Institutional function or use of the public property; and
d. receives a benefit for performing the Institutional function or from utilising the public property, either by way of:

> i. consideration to be paid by the Institution from its budget or revenue; or
> ii. charges or fees to be collected by the Private Party from users or customers of a service provided to them; or
> iii. a combination of such consideration and such charges or fees;

“Success fee” means the remuneration fee charged by the PDF to projects at financial close to directly cover the costs of later stage project development activities.

"Total Capital Cost" means the full and reasonable cost of making a PPP project operational, including project design, authorization and field development costs, material costs, construction costs, and equipment costs;

"Transaction Advisers" means the third-party consultants hired by or on behalf of contracting authorities to provide clearly defined inputs for project development. These inputs can involve all technical, legal, environmental, financial and economic elements as necessary.

"Transaction Advisory and Development Services" means the specialist division of IPDF dedicated towards providing advisory services and/ or acting as a joint developer vis-à-vis the Contracting Authority.

"True Cost" means the full efficient cost of a PPP Project, and which includes all fair and reasonable costs including Total Capital Cost and Operating Costs, and a reasonable return on investment, that must be recovered in order to enable the Private Party to operate the PPP Project in a financially viable manner;

"Value for money" means that the PPP route offers the most efficient use of public resources relative to pure public funding.

ARTICLE II

Mandate, role and scope of activities

1) Mandate: The PDF shall support the development of well-structured PPP projects in Pakistan through two mechanisms:

i. providing resources to hire Transaction Advisers for applicant projects, and
ii. providing direct resources for IPDF's TADS division.

2) Role of PDF: It is hoped that the deployment of these resources will do the following:

i. improve the quality of PPP structures so as to attract private investors and deliver value for money to the Government;
ii. increase the speed and the number of successful PPPs;
iii. reduce the impact on the budgets of Government institutions; and
iv. help GoP to meet certain potential other objectives, namely:
    a) to improve good practice in developing PPP projects;
    b) to support the project management and ownership of PPP projects by public sector institutions;
    c) to ensure self-sustainability of the PDF; and
    d) to develop the PPP projects' advisory services market.

3) Funding Transaction Advisers: The PDF shall act as either as payment agent or procurement agent funding and procuring Transaction Advisers for projects being developed by Contracting Authorities.

i. Payment agent: The PDF shall release funds to contracted Transaction Advisers according to the agreed schedule of payments and milestones.
ii. Procurement agent. Transaction Advisers are contracted to the Contracting Authority, who has the option of allowing the PDF Facility Manager to assist them in procuring the advisers. Advisers are hired for the (i) Preparation and feasibility stage, and (ii) Project structuring tendering and negotiation stage. Transaction Advisers can be reappointed for the subsequent stage with agreement of the PDF Facility Manager, Evaluation Committee and the Contracting Authority.

4) Fund the activities of TADS: The PDF shall meet certain specific costs, from within a specified budget, incurred by TADS. These costs shall include any expenditures pre-approved by the Evaluation Committee in its annual budget, such as secondments of experienced staff from the private sector, capacity building programmes at TADS and government ministries, and general operational expenditures of TADS.

ARTICLE III

Eligibility criteria

Section 1. Eligibility of applicant. To be eligible to apply for PDF resources, applicants must be one of the following:

1) Contracting Authority: The PPP project's contracting authority, i.e. the 'public' body entering into agreement with a private entity or entities as part of a PPP project, can include Federal Government Ministries and State Governments. The Contracting Authority will have to specify the proportion of the costs of Transaction Advisers that it will itself pay.

2) TADS: The Contracting Authority, on the other hand, can appoint IPDF's TADS division as an adviser or enter into a Joint Developer Agreement (JDA), specifying *ex ante* the relative division of resources. In this case TADS would then apply to the PDF on the Contracting Authority's behalf in order to fund the costs of Transaction Advisers. Where TADS enters into an advisory relationship with a Contracting Authority, the latter should pay TADS a fee for those services from its own budget.

Section 2. Eligibility Sectors. To be eligible to apply for PDF resources, a PPP Project shall be from one of the following sectors:

1) Transport and logistics including roads, rail, seaports, airports, fishing harbours as well as warehousing, wholesale markets and cold storage; or

2) Mass Urban Public Transport including buses, and intra and inter-city rail,or

3) Municipal Services including water supply and sanitation; solid waste management; low cost housing, and health / education facilities; or

4) Energy Projects; or

5) Any other infrastructure sectors that the Federal Government may define.

ARTICLE IV

Application and approval process for PDF resources

Section 1. Application. Applications for PDF resources can be made directly by Contracting Authorities, by TADS as an adviser to the Contracting Authority, or by TADS and a Contracting Authority as joint-developers. Applications are made to the PDF in order to fund the cost of third-party Transaction Advisers. The application can be for advisers at any of the following two stages:

1) Preparation and feasibility stage. The PDF will fund further preparation and early-development by hiring Transaction Advisers to conduct pre-feasibility and feasibility

studies, such that the project is properly appraised and defined. The Contracting Authority or TADS will apply to the PDF, providing the following details:

i. The proposed resources and development activities to be committed by the applicant, including the proportion of the costs of Transaction Advisers, and the required funding required for Transaction Advisers.
ii. Any initial project preparation or pre-feasibility analysis undertaken by the sponsor(s).
iii. A summary project description, including some preliminary financial information (revenues, capital costs, operating costs) and potential risks.
iv. A proposed timeline of activities.

2) Project structuring, tendering and negotiation. The PDF will fund Transaction Advisers for the structuring and further stages up to financial close. The Contracting Authority or TADS will apply to the PDF, providing the following details:

i. The proposed resources and development activities to be committed by the applicant, including the proportion of the costs of Transaction Advisers, and the required funding required for Transaction Advisers.
ii. The feasibility studies arising from the early stage project development.
iii. A proposed timeline up to financial close.

Section 2. Assessment. Applications for PDF resources to appoint Transaction Advisers shall be assessed by the PDF Facility Manager, according to a formulaic set of criteria for each stage of project development. The Facility Manager will then make a recommendation to the Evaluation Committee on whether or not the project should receive PDF resources.

1) Preparation and feasibility stage. The key criteria for assessing applications at the Preparation and pre-feasibility stage shall include:

i. All relevant documentation and information is provided.
ii. The resources requested are accounted-for by clearly defined activities by the Transaction Advisers.
iii. Some reasonable preliminary indication that the project can be structured as a PPP, such as prospective revenues versus costs.

2) Project structuring, tendering and negotiation. The key criteria for assessing applications at the structuring, tendering and negotiation stage shall include:

i. The feasibility studies have been completed and all relevant documentation provided as part of the application
ii. The resources requested are accounted-for by clearly defined activities by the Transaction Advisers.
iii. The feasibility study indicates that the projects is both viable as a PPP, represents value for money for the public-sector and thus it is recommended that structuring options are explored as the next phase of the project development cycle.

3) Innovative projects. In addition to these criteria, the PDF Evaluation Committee will have in its power the ability to approve a number of early-stage project development activities for innovative or ground-breaking projects for which it is difficult to determine the initial prospects for viability, or which represent higher risk to the PDF. These should be specified by the Constitution of the Executive Committee by sector and characteristics.

Section 3. Approval. The PDF Facility Manager will make a recommendation to the Evaluation Committee, who will approve the release of funds for projects should the Facility Manager demonstrate that the project is consistent with the operational properties

of the PDF, and that no conflict of interest has arisen with the relationship of the Facility Manager and TADS. The Board of IPDF can overturn the decision of the Evaluation Committee only in very narrow circumstances, such as crime and corruption.

ARTICLE V

Products and funding

1) Use of resources. The PDF, in its role to support the development of well-structured PPP projects, shall provide resources for:

i. funding Transaction Advisers, on behalf of applicants,
ii. funding the activities of TADS, according to a pre-approved annual budget, and
iii. covering the cost of its own management.

2) Allocation. Funds will be allocated between early-stage project development activities and later stage activities in a proportion to be determined by the Facility Manager and approved by the Evaluation Committee.

3) Products: The PDF shall provide grants to Contracting Authorities or TADS to hire Transaction Advisers. It shall also provide an ongoing grant to IPDF to meet the costs set out in Article II relating to the activities of TADS. The Transaction Adviser will be remunerated according to a schedule of payments and milestones agreed with the PDF and the Contracting Authority or TADS. Transaction Advisers hired for later-stage project development shall receive the majority of payment at financial close in an appropriately structured form.

4) Remuneration: The PDF shall be remunerated by means of a Development Fee to cover early-stage Transaction Adviser costs, and a Success Fee to cover later-stage Transaction Advisor costs. This shall work as follows:

i. Where the Contracting Authority applies directly to the PDF to fund the costs of Transaction Advisers, the PDF receive the full Development Fee and Success Fee.

ii. Where TADS enters into a JDA with a Contracting Authority and becomes a joint sponsor of the project, and applies to the PDF to fund the costs of Transaction Advisers, the PDF shall receive only the cost components of the Development Fee and Success Fee, i.e. those that exactly cover the costs of the Transaction Advisers hired, while TADS shall receive the multiple or potential margin element of the Development Fee and Success Fee respectively. For projects to which TADS is an advisor or joint-developer, the PDF will be remunerated less than for other projects. This additional 'cost' may be facilitated by pre-determined reductions in the direct grant provided to TADS by IPDF.

6) Disbursement and Monitoring: The Evaluation Committee shall monitor all disbursements made by the PDF, and shall have the authority to stop funding for the Transaction Adviser should any of the terms of agreement be broken.

ARTICLE VI

Management and Governance of PDF

Section 1. Governance. To manage and control the PDF, the Ministry of Finance will create an arrangement with all of the following features:

1) Establishment: The PDF shall be incorporated as a Division of IPDF, under appropriate constitutional arrangements and checks and balances.

2) Funding: The budget of the PDF Company shall come from transfers made by the Ministry of Finance following requests by the Evaluation Committee of the PDF.

3) Evaluation Committee: The PDF shall be governed by an Evaluation Committee, which is independent of IPDF, whose members are appointed by the Ministry of Finance, Privatisation Committee and the Planning Commission in the Federal Government. The Evaluation Committee shall also include representatives from the private sector. The Evaluation Committee shall have the power to, amongst others:

i. Remove the MD of the Facility Manager in cases of negligence or failure to perform the agreed duties of the Fund Manager.
ii. Approve disbursements for Transaction Advisers.
iii. Approve ongoing grants made to TADS.
iv. Approve remuneration of the Facility Manager according to the agreed fees.

Section 2. Management: The PDF will be managed by the IPDF's Facility Manager Division, and be staffed with no more than five individuals.

1) Managing Director. This Division shall include a Managing Director (MD) who will be responsible for the following:

i. Preparing annual business plans and seeking their approval by the Evaluation Committee
ii. Hiring and dismissing the staff of the PDF Facility Manager
iii. Overseeing the general management and administration of the PDF, in terms of its role as Payment Agent and Procurement Agent
iv. Analysing applications for PDF resources, pre-approving projects, and making recommendations to the Evaluation Committee on the basis of this analysis.
v. Entering into Agreements with Contracting Authorities and/ or TADS for approved PPP Projects, and subsequently with Transaction Advisers
vi. Making payments to Transaction Advisers in accordance with Agreements
vii. Monitoring the disbursements made by the PDF, in particular with regard to the delivery of Transaction Advisers and the agreed milestones.
viii. Representing the PDF in disputes or any other type of legal case
ix. Preparing quarterly operational and financial performance reports to the Evaluation Committee.

2) IPDF. The three divisions of IPDF, i.e. Policy Enforcement and Development, TADS and the Facility Manager, must be properly ring-fenced to avoid a conflict of interest.

Section 3. Accounts and Audits: The accounts of the PDF shall be prepared by the Facility Manager. The accounts shall be maintained in accordance with the provisions of the Companies Ordinance 1984 and shall be audited annually in accordance with the provisions of the said ordinance, and shall be subject to audit by the Auditor General.

ANNEX 6: ESTIMATE OF PDF FUNDING REQUIREMENTS

In this annex, we estimate the funding requirements for PDF to support infrastructure projects according to the approach set out in Section 5

The purpose of this exercise is to provide a first estimate of the funding needed to support PDF activities for the first five years of project development operations. The funding needs are directly dependent upon the size and quality of the project pipeline and upon other variables, including the capabilities and the expertise of Contracting Authorities, TADS and other institutions, as these variables will impact the timing and effectiveness of the project development initiatives supported by PDF.

Approach and summary

The analysis set out in this section, undertaken with the support of financial modelling, allows estimates of PDF funding requirements in different scenarios and assumptions for key variables, including the size of the project pipeline, the timing to develop and structure projects, and the success rate of project closing.

The project pipeline is uncertain and changes over time. On the basis of the above, the Base Case scenario developed in this analysis was developed in line with the project pipeline as of May 2009. However, we have also developed an Expanded Case to reflect different assumptions on the size and quality of the pipeline. For each scenario, sensitivity analyses were developed to estimate the impact of different value of key variables on the PDF funding need.

In conclusion, this analysis provides an estimate of the external funding requirements for PDF to support operations for the first five years, under different scenarios and assumptions. The results of the analysis suggest the following:

- In a Base Case, which reflect the quality and level of the project pipeline as of May 2009, PDF is expected to support the development of 22 projects in five years, five of which are estimated to achieve financial closing by the end of Year 5. On these base assumptions, the external funding requirement over the first five years is almost US$ 7m.
- However, results from the sensitivity analysis suggest that the funding requirement could be higher than US $7m, since more conservative assumptions for the rate of attrition between phases of the project (i.e. PDF's performance), the development fee multiple (i.e. the commercial success of projects at financial close), and the length of the project development process (i.e. performance and additional barriers) suggest a need for external funding of approximately US$10m. Should only one project achieve financial close by the end of Year 5.the external funds required could be significantly higher, and increase up to US$ 15.5m.
- In an Expanded scenario, i.e. where the project pipeline is developed more quickly than in the Base Case, PDF might have the opportunity to provide

support to a larger number of projects in the first five year of operations. The ranges for external funds required and project closings based on the same sensitivities are between US$13m and US$19m for between 4 and 10 projects respectively.

We now turn to (i) the structure of our model, (ii) describe the Base Case assumptions for key input variables, and (iii) present the estimate of funding requirements. We then develop the same analysis for and expanded scenario, and then provide our sensitivity analysis on key input variables in each scenario. Due to the high degree of uncertainty over key inputs, including how the project pipeline will develop once the PDF funds are in place, we recommend that, to properly interpret these estimates, full consideration is given to both scenarios and to the results of each sensitivity analysis.

Model structure

Our approach was to assume that the PDF is demand driven, that is we first estimate the use of PDF funds before looking at the source of funds to determine the net funding requirement.

Use of funds

As set out in Section 5, PDF funds will be used to support the following:

- third Party Advisory Costs;
- the staff of the PDF Facility Management Team and related overheads; and
- the staff of the TADS and their related overheads.

Third party advisory costs

The core role of the PDF is to allocate funding to public sector project sponsors to pay for third party advisors. The available resources will be split between projects being developed by TADS and those being developed directly or solely by the Contracting Authority, depending on the projects with which TADS is involved. The allocation to TADS could be higher in earlier years and then lower in later years if there is a desire to be less reliant on TADS and to develop an advisory market. The remainder of the funding might be allocated on a 'first-come, first-served' basis.

Despite this, whether advisors are procured through TADS or directly Contracting Authorities, does not affect the scale of funding requirements for external advisory costs. This is driven instead by the size and quality of the project pipeline.

The Facility Management team and related overheads

The Facility Management team have a role as procurement and payment agent, as set out in Section 5. Staffing of the Facility Manager will comprise a mix of existing dedicated IPDF staff and possibly some external recruits. Their costs will be paid for by a management fee charged by IPDF for managing the PDF.

Other overheads will include a remuneration and expenses fee to members of the Evaluation Committee who ideally will be a mix of Government and private sector representatives.

TADS funding

An allocation will be made to fund the TADS unit of IPDF. TADS should be staffed with experienced and skilled project developers, preferably either hired directly or seconded from the private sector with significant transactional experience. The size of TADS will be consistent with the project pipeline and the potential for infrastructure sector in Pakistan, as well as the expected uptake among Contracting Authorities to enlist TADS services.

Sources of funds

PDF will rely on both internal and external sources of funds, namely:

- Developments Fee charged to the private sector at project closing.
- "Late stage" third party advisory fees recovered at project closing.
- External funding needed to fund upfront cash requirements and to cover any overall loss on project development activity (essentially, the balancing item).

Internal sources

The PDF shall be a revolving fund and as such seek to recover costs where appropriate and possible. While it should be prepared to write-off early stage costs for projects that do not progress, it should be able to charge a multiple of third party development costs (i.e. the cost of transaction advisers) if and when a project reaches financial close. The sponsoring government entity might be required to contribute proportionately more towards the early stage costs from its own budget.

At project closing, the PDF will charge a Development Fee to the successful private sector or joint venture bidder. The Development Fee will be a multiple of the "early stage" third party advisory costs funded by PDF. The multiple estimate has to take into account what the private sector would be willing to pay at project closing.

At project closing, PDF will also recover from the private sector any "late stage" advisory costs paid to third party advisers during the structuring and negotiating phase of the project development cycle, at cost.

External sources

For the purpose of our analysis, PDF's funding requirements from external sources over its first five years of operations is estimated as the difference between the total use of funds, listed above, and the internal sources of funds flowing to PDF at project closings.[49]

[49] It is assumed that new projects are taken on by PDF for five years. To properly account for these projects, we consider the costs incurred (e.g. structuring costs and smaller overheads) and the realisation of funds (e.g. the Development Fee) in subsequent years. The duration of project development activities will

Given this structure, in subsequent sections we set out the assumptions used in each scenario and the related estimate of PDF need for external funding.

Base Case Scenario – key assumptions

Project pipeline

The Base Case scenario is determined by the information and data on the project pipeline as gathered in May 2009 and included in our Interim Reports. A summary of the project pipeline as of May 2009 is provided in Annex 2.

We have grouped the projects into four 'clusters'. Projects in the same cluster have similar characteristics in terms of size and third party advisory costs. Table A6.1 sets out the project clusters identified for the modelling purposes. The Base Case scenario assumes an allocation of projects by year and project development stage across the four project clusters. The assumed time-lapse for projects is one year for "early-stage" and one year for "later-stage". This assumption takes into account that all projects will have been screened by TADS or the Contracting Authority prior to the feasibility stage.

Table A6.1: Project clusters

Key assumption	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Total
Project size (US$m)	20	50	75	150	
New projects in early-stage: By Year 3 (cumulative) By Year 5 (cumulative)	 4 7	 3 6	 3 5	 2 4	 12 22
Projects reaching later-stage: By Year 5 (cumulative)	3	3	3	2	11
Projects reaching financial close: By Year 5 (cumulative)	2	1	0	2	5

PDF activities are projected for five years on a going concern basis, meaning that it is assumed that PDF will invest in development effort for new projects in year 4 and 5. Given that the project development cycle is expected to be longer than one year, there is a time mismatch between the development costs and the financial closing of each project. Therefore, those successful projects which are projected to be in "early stage" or in " late stage " in years 4 and 5, will achieve financial close only after year 5. This means that the estimate of funding requirements for the first five years of operations does not take into account the cash benefit to PDF of supporting successful projects in year 4 and 5 which will only occur in later years.

Table A6.2 below sets out the number of projects projected in "early stage", in "late stage" and those expected to achieve financial closing in each year of projections.

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determine the time-lag for funds used and realised. We do not necessarily assume that no new projects are undertaken beyond Year 5; the approach is designed to determine the value of projects before this point.

Table A6.23: Base Case – Projects in early stage, late stage and number of project closings

	Total	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Early stage	**22**	3	4	5	5	5
Attrition rate	*27%*					
Late stage	**11**	-	1	3	4	3
Attrition rate	*19%*					
Project closing	**5**			1	2	2
Overall success rate	*59%*					

"Early stage" projects

As of May 2009, 25 projects in the IPDF pipeline were in the Inception Phase, in addition to three in the "early stage" and a further three in "structuring" phase of the project development cycle. In the Base Case, the cumulative number of new projects taken-on by Year 3 is 12, such that it is assumed that roughly half of the projects at the Inception phase in the current IPDF pipeline reach the feasibility stage. The additional 10 taken-on by Year 5 represent an estimate of the additional projects emerging by that time. Therefore, a total of 22 projects are supported by PDF over five years.[50]

"Late stage" projects

A total of 11 projects make it to "later-stage" project development in the Base Case, such that just over a quarter are not taken beyond "early-stage" feasibility. This attrition rate varies slightly by project cluster. Once projects are in "late stage", they should stand a relatively good prospect of reaching financial close, although there is still a degree of uncertainty.

Project closing

In the Base Case, 5 projects reach financial close, representing an attrition rate of just under a fifth from the "later-stage" structuring. As described below, given the importance of successful project structuring and the uncertainties there-in, this later attrition rate is the subject of sensitivity testing. In the Base Case, the overall probability of a given project reaching financial close is 59%.

External Advisory Costs

External advisory services will be procured to support project development activities. These are lower at the "early-stage" than at the "later-stage" and will typically be a fixed fee paid to third parties to provide consultancy advice, such as technical and environmental feasibility studies. "Later-stage" external support is engaged for the provision of technical, legal and financial support to structure the PPP transaction, to

[50] This implies that a larger number of projects will be screened by Contracting Authorities and TADS at the inception phase (and screened by the Facility Manager if an application to the PDF is made) at no external advisory cost to PDF (i.e. it is covered by the overhead). As mentioned, it is indirectly assumed that around half of projects at the Inception Phase will make it to the "early-stage" feasibility.

manage the procurement process and to negotiate the deal with financial institutions. External advisory costs typically comprise two components: (i) an upfront retainer, and (ii) a success fee which is paid only at project closing. This transfers a proportion of risk and performance incentive to the advisors. Base Case external advisory cost assumptions for each project cluster are set out in Table A6.3.

Table A6.3: Base Case external Advisory cost assumptions

Third-party costs	**Cluster 1**		**Cluster 2**		**Cluster 3**		**Cluster 4**	
Project size	**US$ 20 m**		**US$ 50 m**		**US$ 75 m**		**US$ 150 m**	
	US$	%	US$	%	US$	%	US$	%
Early-stage (fixed component)	100,000	0.5	250,000	0.5	375,000	0.5	525,000	0.35
Later-stage (fixed component)	300,000	1.5	500,000	1.0	600,000	0.8	1,200,000	0.8
Later stage (Success fee)	100,000	0.5	250,000	0.5	375,000	0.5	600,000	0.4
Total (inc. success)	**500,000**	**2.5**	**1,000,000**	**2.0**	**1,350,000**	**1.38**	**2,325,000**	**1.55**

The assumptions set out in Table A6.3 above are based on the expectation that external advisory costs will increase in absolute terms, as the project size increases, even though, as percentage of total project cost, they will tend to decrease, as the project size increases.

We understand that IPDF is currently procuring these services in the local market. On the basis of our understanding, we have assumed that that external advisory services will be provided by local firms whose fees are adjusted to local market. Were transaction advisory services provided by international firms, the funding required to support those external activities would be significantly higher than the amount set out in the table above.

Development fees and recovery of late stage fee

The Base Case assumes that at project closing, PDF will charge to project sponsors a multiple of the "early stage" external advisory costs funded during the project development phase of the project. At project closing, PDF will also recover the "later-stage" external advisory costs. Table A6.4 sets out the Development Fee, the recoverable "later-stage" development costs and the related proceedings to PDF as estimated in the Base Case scenario.

Table A6.4: Base Case recoverable development costs and related revenue to PDF

Realised funding	**Cluster 1**	**Cluster 2**	**Cluster 3**	**Cluster 4**
Project size	**US$ 20m**	**US$ 50m**	**US$ 75m**	**US$ 150m**
Early Stage Fee	100,000	250,000	375,000	525,000
Multiple of Early Stage Fee	3x	3x	3x	3x
Development Fee paid to PDF	300,000	750,000	1,125,000	1,575,000
Recovery of Late stage fees	400,000	750,000	980,000	1,800,000
Total fees to PDF (at project closing) on each project	**700,000**	**1,500,000**	**2,105,000**	**2,835,000**

These detailed assumptions on development costs and recoverable amounts at project closing generate gross margins on each successful project projected in the Base Case as per Table A6.5.

Table A6.5: Base Case proceeds to PDF, third party advisory costs and gross margin on successful projects

	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**
Project size	**US$ 20m**	**US$ 50m**	**US$ 75m**	**US$ 150m**
Proceeds to PDF	700,000	1,500,000	2,105,000	2,835,000
Third party advisory costs	500,000	1,000,000	1,350,000	2,325,000
Gross margin on successful projects	200,000	500,000	755,000	1,220,000
Gross margin as % of proceeds	29%	32%	36%	43%

The gross margin is expected to range between approximately 29% and 43% depending upon the size of the project. The gross margin PDF will generate on successful projects, will have to cover for development costs for unsuccessful projects and for overheads.

Overheads

In addition to funding third-party advisory costs, a portion of PDF funds will be used to support overhead costs, specifically, the following:

- A fee to cover facility management.
- Costs of the Evaluation Committee.
- The staff-costs of TADS, including private sector secondees.

The Base Case assumptions on each of the above items are set out below. All overheads are given in local currency. However, such that costs remain constant in real dollar terms, the rate of inflation is assumed to be equal to the rate of depreciation of the Rupee against the Dollar.

Facility Management Fee

On the basis of the tasks and responsibilities of a procurement/ payment agent, we estimated that the facility management team will be initially comprised as per Table A6.6. These costs are assumed to be incurred for every year in which advisors are commissioned or in which payment is made. Salary costs are estimated as approximately a one-third reduction on private-sector (investment banking) salary costs.

Table A6.6: Base Case Facility Management Team and Management Fee

Facility Management Team	**Annual cost for employee (PKR) in (Base Cost)**	**Number of staff**
Senior procurement specialist	1,400,000	1
Procurement Manager	700,000	1
Procurement Analyst	350,000	1
Treasurer and administrator	300,000	1
Management Fee	**PKR 2.75m**	**4**

It is assumed that facility management costs increase by five percentage points above inflation each year to reflect productivity gains and pay-rises for staff.

Evaluation Committee

Other overheads will include expenses related to the activities of the Evaluation Committee and some other administrative expenses. The Base Case assumes that this annual overhead, including remuneration and expenses for the eight (private and public sector) representatives making up the committee, shall be 300,000 PKR.

Funds to TADS

TADS will comprise a team of experienced professionals, including individuals with private sector experience in project development and PPP structuring and negotiation. TADS will have to offer a competitive package to its staff, based on private sector remuneration, if the appropriate mix of resources is to be attracted and retained. The Base Case assumes that initially the TADS team will include IPDF staff who will have the competence and experience required to take the positions set out in Table A6.7.

Table A6.7: Base Case Facility Management Team and Management Fee

TADS team	**Annual cost for each employee (PKR) in Y1**	**Year 1 (Number at 'low-burn')**	**From Year 2 to Year 5 (Number at 'high-burn')**
Senior development specialist	1,845,000	1	2
Development manager	1,108,000	1	2
Development analyst	450,000	2	3
Administrator	300,000	1	1

Private-sector secondees	1,662,000	0	1
Direct TADS funding		PKR 5.81m	PKR 9.21m

In addition to the IPDF staff at TADS, there will also be a secondee from the private sector. For these salary costs, we have assumed that the cost of such an individual will be equal to the 'Development Manager' Salary, plus a 50% uplift to account for the margin of the private firm.

The number of staff are estimated for both 'low-burn' and 'high-burn' situations, with the former reflecting (i) the initial start-up year for PDF and TADS, and (ii) the period where no new projects are being taken-on, but project development is still taking place. There is thus a four year window in the Base Case where TADS operates at full capacity.

Again, it is assumed that the salaries of TADS staff increase by five percentage points above inflation each year to reflect productivity gains and pay-rises for staff. For the private-sector secondee, this efficiency rise is 10%.

Base Case – Summary of results

This section sets out the estimate of PDF funding requirements for the first five years of full operations on a going concern basis. Table A6.8 below provides details of the uses of funds, the estimates of internal sources of funding and the estimate, in each given year, of the additional external funding required to implement the PDF Business Plan.

Table A6.8: Base Case summary of results

($'000) Base Case	Year 1	Year 2	Year 3	Year 4	Year 5
Early Stage Fees	(725.0)	(1,250.0)	(1,350.0)	(1,500.0)	(1,350.0)
Later Stage Fees	0.0	(300.0)	(2,300.0)	(2,600.0)	(1,400.0)
Success Fees	0.0	0.0	(100.0)	(850.0)	(700.0)
Third Party Advisory Costs	(725.0)	(1,550.0)	(3,750.0)	(4,950.0)	(3,450.0)
Facility Management Fee	(34.5)	(36.2)	(37.9)	(39.7)	(41.6)
Other PDF overhead	(15.6)	(15.6)	(15.6)	(15.6)	(15.6)
PDF Overhead Costs	(50.1)	(51.7)	(53.5)	(55.3)	(57.2)
TADS staff Costs	(52.1)	(121.7)	(127.7)	(134.1)	(140.8)
TADS other overheads	0.0	0.0	0.0	0.0	0.0
TADS funds	(52.1)	(121.7)	(127.7)	(134.1)	(140.8)
Total Use of Funds	**(827.2)**	**(1,723.4)**	**(3,931.2)**	**(5,139.4)**	**(3,648.0)**
Cumulative Use of Funds	*(827.2)*	*(2,550.6)*	*(6,481.8)*	*(11,621.2)*	*(15,269.3)*
Development Fees	0.0	0.0	300.0	2,325.0	1,875.0
Recovery of Success Fees	0.0	0.0	300.0	1,950.0	1,500.0
Internally Realised funds	**0.0**	**0.0**	**600.0**	**4,275.0**	**3,375.0**
Cumulative Internal Realised funds	*0.0*	*0.0*	*600.0*	*4,875.0*	*8,250.0*
External Funding Requirement	**(827.2)**	**(1,723.4)**	**(3,331.2)**	**(864.4)**	**(273.0)**
Cumulative Funding Requirement	*(827.2)*	*(2,550.6)*	*(5,881.8)*	*(6,746.2)*	*(7,019.3)*

The main lessons drawn from the above analysis is that, given the Base Case assumptions described, the PDF does not fully recover costs over the period through successful project development. Table 9 suggests the following:

- In the Base Case scenario, the PDF will require a total of approximately US$ 15m to support the development of the existing project pipeline (i.e. 12 projects beginning in Years 1-3) and additional new projects (i.e. 10 beginning in Years 4-5) over the first five year of operations;

- A portion of the funding required is expected to be recovered at project closing. According to the Base Case assumptions, the PDF would begin to generate fees at project closings from Year 3 onwards. The total cumulative internally realised funds by end of Year 5 is just over US$8m, equivalent to 55% of cumulative use of funds (total Gross Costs in Table 9) from Year 1 through Year 5;
- Given the projected resource burn-rate, and expected recovery, external funding is increasingly needed up to a cumulative amount of US$7.0m required by end of Year 5.
- As mentioned above, this estimate is based on a going concern basis, thus it includes the estimate of funding needs to support new projects in Year 4 and %, even though, given the length of the project development cycle, the cash benefit for PDF will manifest only in later year, should financial close be achieved.

Expanded scenario – Larger project pipeline

As described above, our Base Case is measured to reflect the quality and level of development of the existing project pipeline. However, in this section, we present an Expanded Scenario allowing for greater optimism on the project pipeline and on the ability of Contracting Authorities and IPDF to develop a larger number of projects. This expanded scenario provides an estimate of the PDF funding requirement for the first five years of operations, on a going concern basis, should PDF support a larger number of projects.

Firstly, we discuss the key assumptions, and, secondly, we present a summary of results.

Key assumptions

The central driver of the alternative scenario is the number of projects taken-on by the PDF. It is considered that an additional 19 projects are developed at the "early-stage", with a slightly lower proportion making it to "later-stage" structuring (higher attrition rate) and lower still making it to financial close.[51] This is shown in Table A6.9.

Table A6.9: Expanded scenario – Projects in early stage, late stage and number of project closings

	Total	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Early stage	**41**	7	8	10	8	8
Attrition rate	*32%*					
Late stage	**27**	-	4	6	7	5
Attrition rate	*29%*					
Project closing	**22**			3	3	4
Overall success rate	*49%*					

[51] The overall success rate falls from 59% to 49%. This is a reasonable assumption since the commercial viability of projects is likely to be slightly less as a portfolio expands.

A corollary of expanded activities is the need for additional staff, and so a higher overhead. This is shown in Table A6.10. In addition to costs to the evaluation committee of PKR 550,000, facility management costs are approximately doubled, while at full capacity TADS funding increases by 20%.

Table A6.10: Expanded Case Facility Management Team

Facility Management Team	**Number of staff**
Senior procurement specialist	2
Procurement Manager	2
Procurement Analyst	2
Treasurer and administrator	1
Management Fee	**PKR 5.2m**

Table A6.11: Expanded Case TADS team

TADS team	**Year 1** **Number at 'low-burn'**	**From Year 2 to Year 5** **Number at 'high-burn'**
Senior development specialist	2	2
Development manager	2	4
Development analyst	3	5
Administrator	1	2
Private-sector secondee	1	2
Direct TADS funding	**PKR 9.2m**	**PKR 14.2m**

Expanded scenario – Summary of results

The results of the alternative scenario are shown in Table A6.12. As with the Base Case, the internally realised funds are not sufficient to cover the project development activities of PDF.

Table A6.12: Alternative scenario summary of results

($'000) Expanded Case	Year 1	Year 2	Year 3	Year 4	Year 5
Early Stage Fees	(1,975.0)	(2,500.0)	(2,700.0)	(2,225.0)	(2,075.0)
Later Stage Fees	0.0	(2,600.0)	(4,400.0)	(3,700.0)	(2,200.0)
Success Fees	0.0	0.0	(950.0)	(950.0)	(1,175.0)
Third Party Advisory Costs	(1,975.0)	(5,100.0)	(8,050.0)	(6,875.0)	(5,450.0)
Facility Management Fee	(65.3)	(68.4)	(71.7)	(75.1)	(78.8)
Other PDF overhead	(28.1)	(28.1)	(28.1)	(28.1)	(28.1)
PDF Overhead Costs	(93.4)	(96.6)	(99.8)	(103.3)	(106.9)
TADS staff Costs	(115.9)	(188.9)	(198.4)	(208.4)	(218.9)
TADS other overheads	0.0	0.0	0.0	0.0	0.0
TADS funds	(115.9)	(188.9)	(198.4)	(208.4)	(218.9)
Total Use of Funds	**(2,184.3)**	**(5,385.4)**	**(8,348.2)**	**(7,186.7)**	**(5,775.8)**
Cumulative Use of Funds	*(2,184.3)*	*(7,569.7)*	*(15,918.0)*	*(23,104.6)*	*(28,880.4)*
Development Fees	0.0	0.0	2,625.0	2,625.0	3,300.0
Recovery of Success Fees	0.0	0.0	2,250.0	2,250.0	2,400.0
Internally Realised funds	**0.0**	**0.0**	**4,875.0**	**4,875.0**	**5,700.0**
Cumulative Internal Realised funds	*0.0*	*0.0*	*4,875.0*	*9,750.0*	*15,450.0*
External Funding Requirement	**(2,184.3)**	**(5,385.4)**	**(3,473.2)**	**(2,311.7)**	**(75.8)**
Cumulative Funding Requirement	*(2,184.3)*	*(7,569.7)*	*(11,043.0)*	*(13,354.6)*	*(13,430.4)*

The results suggest the following:

- In the Expanded Case, in which PDF support 41 projects over the first five years of operations and 10 achieve financial close in that time (with a further 10 reaching financial close in subsequent years), the cumulative funding requirement for the PDF is over US$28m;
- The internally realized funds, arising from development fees and recovery of success fee a financial close will be a cumulative amount of US$ 15.5m in five years, equivalent to approximately 54% of cumulative use of funds (or just less than in the Base Case);
- The remaining funding need, which should be provided as external funding is estimated to be an amount of US$ 13.4m in five years , peaking in Year5.

Figures A6.1 and A6.2 compare the internal and external funding requirements over the first five years. Although the expanded scenario exhibits strong growth in 'revenues' from successful projects, the external funding requirement is virtually doubled.

Figure A6.1: Internal and External funding in Base Case

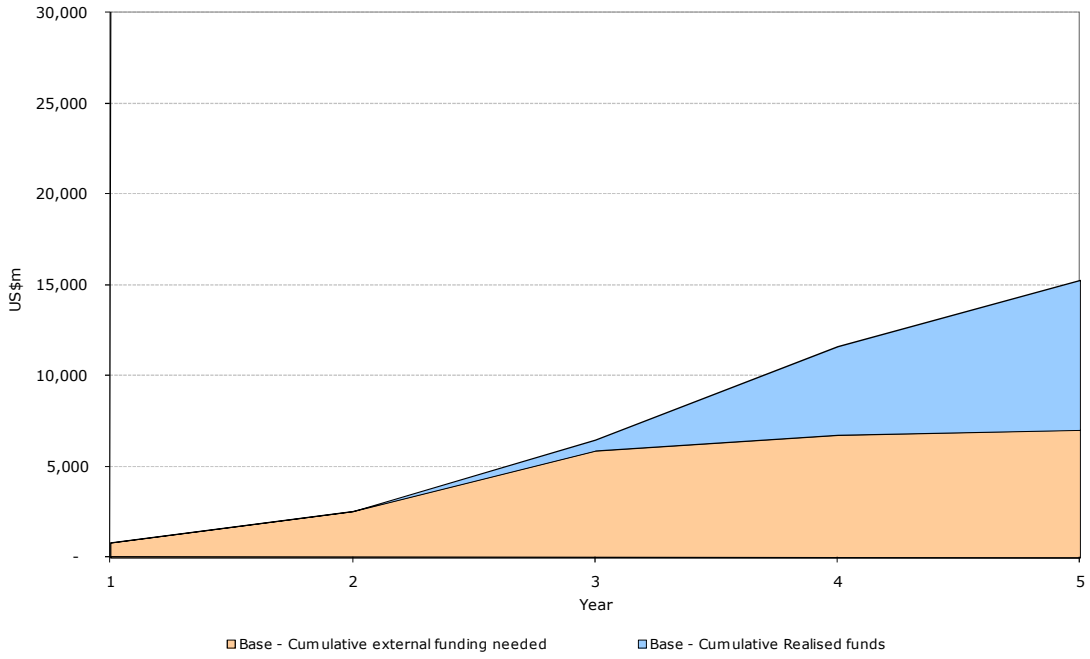
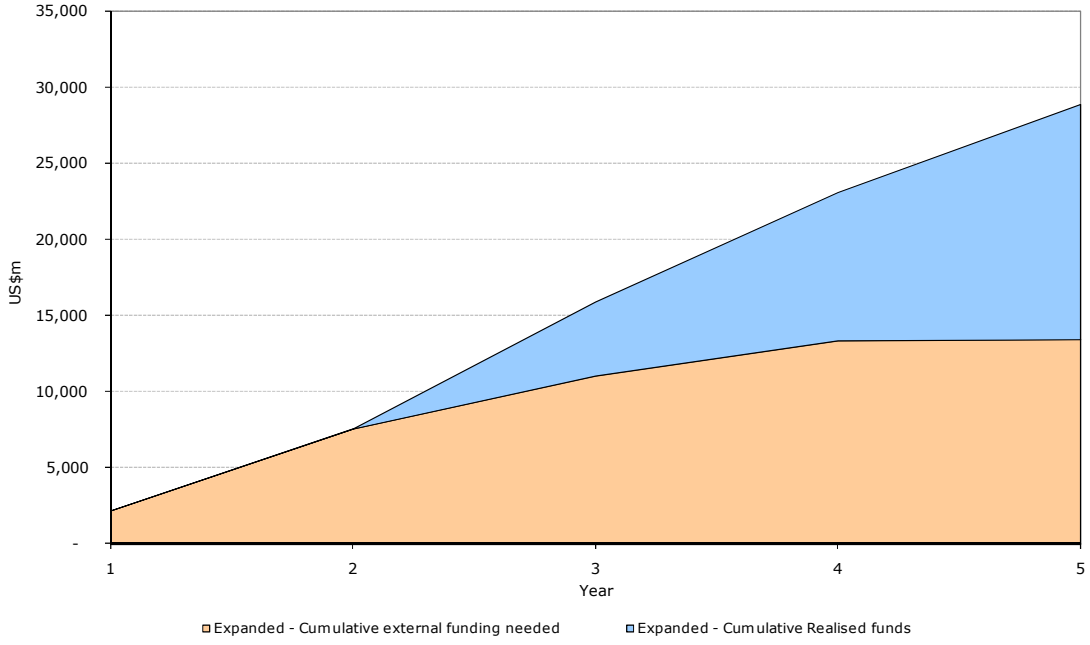


Figure A6.2: Internal and External funding in Expanded



The scope for this scenario to arise is determined by the quality of the project pipeline and, more generally, the strength of the PPP programme in Pakistan. Its outcomes are

purely indicative, since, as mentioned elsewhere, it is our view that the PPP programme is not yet sufficiently developed to support this level of deal-flow.

Sensitivity analysis

In this section, we discuss the results of our sensitivity analysis, designed to test the outcomes of alternative values of key variables, namely:

- The time-lapse involved in different stages of the project development cycle.
- The "later-stage" attrition rate, i.e. the proportion of well-developed projects failing to reach financial close.
- The multiple element of the Development Fee, which is the main driver of funds realised.

We summarise these sensitivities in turn below.

Sensitivity 1: Attrition rate

The Base Case and Alternative scenarios assume that the attrition rate between "later-stage" project development and financial close is approximately 20%. Overall, the proportion reaching financial close is 59%.

The proportion of projects failing to achieve financial close is a crucial variable in the estimate of the PDF funding requirements, since it determines the funds realised and so the remuneration for the PDF, and in turn, the need for external funding. The Development Fee and "later-stage" advisory costs are only realised at financial close. Moreover, the factors contributing to the likelihood of projects reaching financial close are uncertain and unanticipated.

Figure A6.3 and Figure A6.4 show the outcomes of the sensitivity in both scenarios.

Figure A6.3: Internal and External funding in Sensitivity 1 for Base case

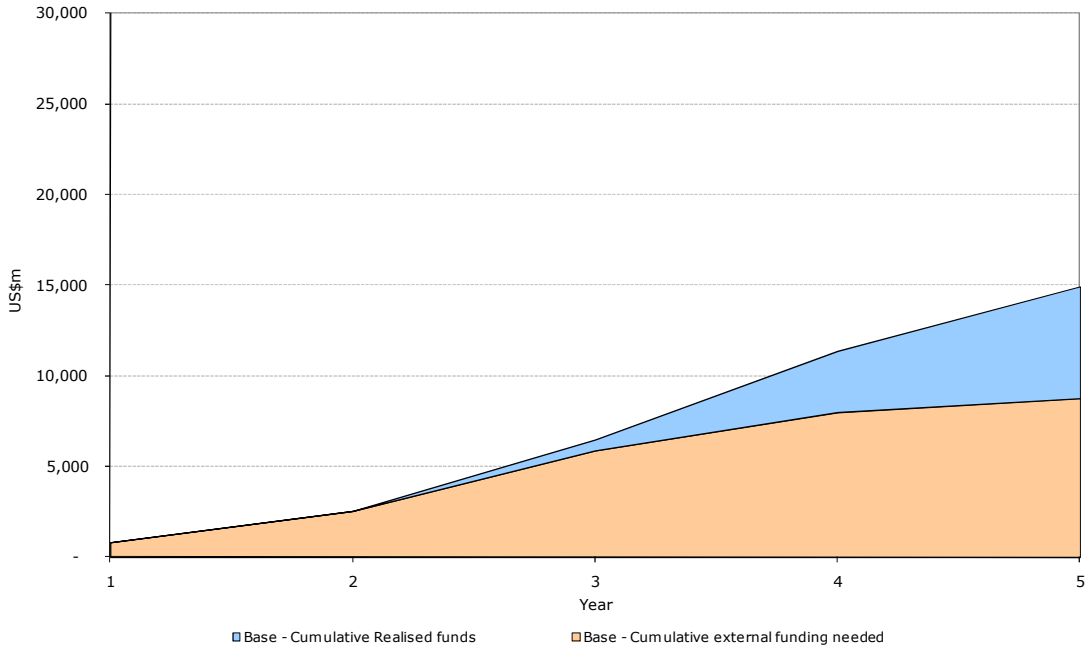
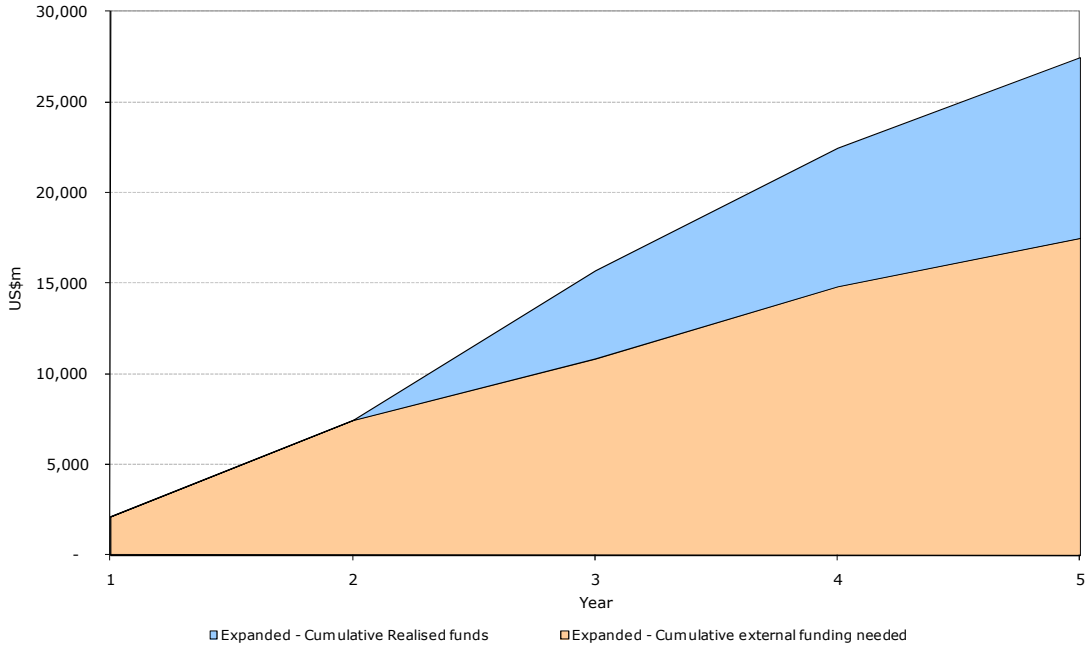


Figure A6.4: Internal and External funding in Sensitivity 1 for Expanded case



Key conclusions:

- A larger "later-stage" attrition rate reduces funds realised by more than a third in the base case by more than half in the in the Expanded scenario. This increases the external funding requirements. In the Base Case, external funding requirements in Year 5 are 46% of total (gross) funding requirements, rising to 59% with a higher attrition rate. The equivalents in the Expanded scenario are 46% and 54% respectively.

- Clearly, the funding requirement of PDF and its overall sustainability are highly sensitive to the assumption of "later-stage" attrition.

Sensitivity 2 : Development Fees

The Development Fee charged to the project sponsors at financial close is assumed to be a multiple of the "early-stage" advisory costs paid to third party advisers for project development activities. The Base Case assumes that this is a multiple of three. The funds realised and the external funding requirement are both highly sensitive to the value of the Development Fee multiple used, which in turn will be determined by the appetite for projects developed, the overall commercial attractiveness of the project, and the strength of the PPP programme.

Here we present a sensitivity analysis using different values of the multiple for development fees. Figure A6.5 and Figure A6.6 show this for the Base Case and the Expanded scenario. In the Base Case, the cumulative external funding requirement in Year 5 rises by US$ 1.5m for every incremental increase in the development fee multiple (e.g. from 1 to 2). Therefore, if the PDF recovers only early stage costs (i.e. the multiple is unitary), the need for external funding is US$ 3m greater than in our Base Case. In the Expanded scenario, the difference is almost US$ 6m. This indicates the level of sensitivity to the development fee, i.e. project profitability.

Figure A6.5: Sensitivity of funds realised and net funding requirements to Development Fee in Base Case

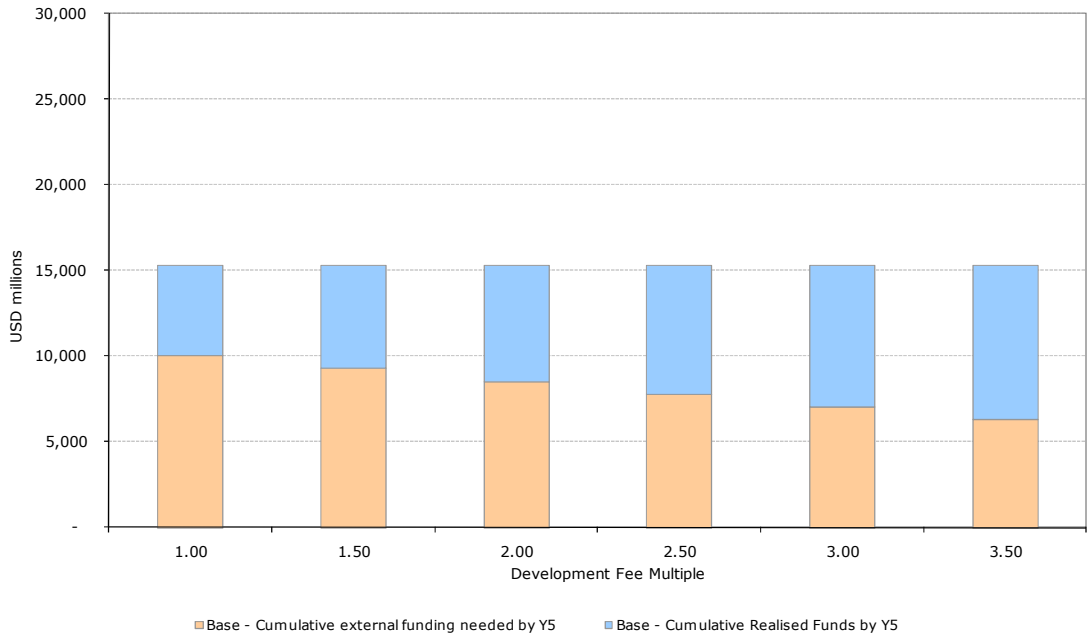
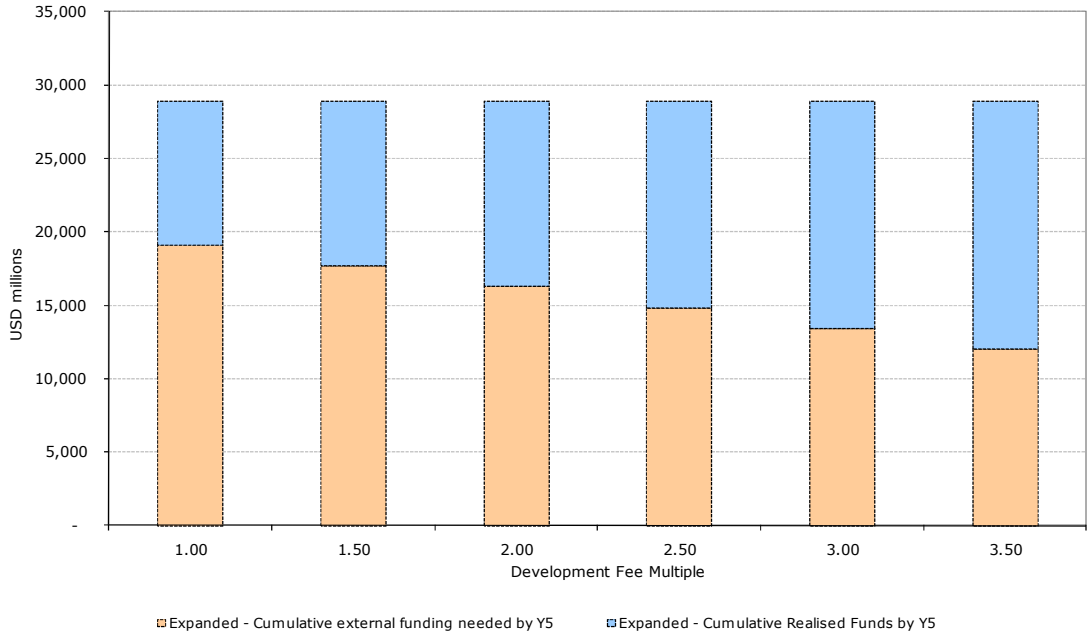


Figure A6.6: Sensitivity of funds realised and net funding requirements to Development Fee in Expanded scenario



Sensitivity 3: Length of project development

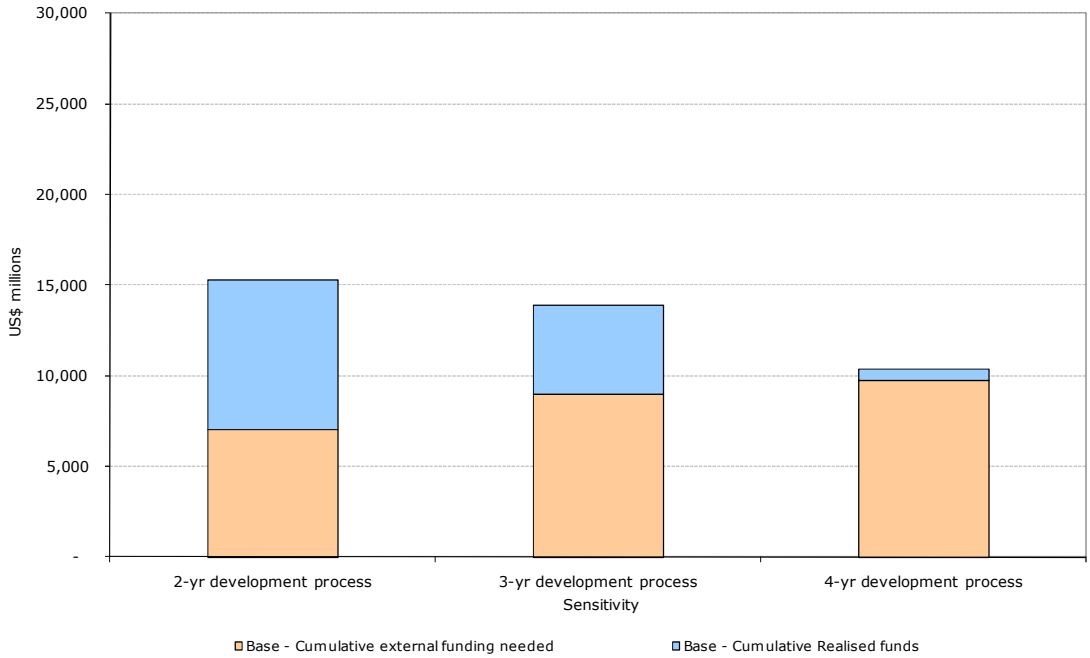
The Base Case and the Expanded Case assume a project development cycle from "early-stage" to project closing of two years. It is difficult to anticipate the variables of project development that will determine the time-lapse for projects. Hence this sensitivity tests the modelled outcomes for a project development cycle of three and of four years. This input, while affecting the magnitude of PDF funds only slightly in terms of a higher overhead, is important for our analysis since it determines the time taken for the PDF to recover the costs of its projects development activities.

A longer project development cycle will affect the rate at which resources are burned and, importantly, when internal resources are realised from project closings.

A longer project development cycle means that more projects are being worked-on at any one time. Where time-lapse is three years, it is assumed that the "later-stage" takes two years. Where time-lapse is four years, it is assumed that the "early-stage" takes two years. As can be seen, while project development costs arte pushed-out somewhat by the longer time-lapse, they are spread evenly over the period, whereas all funds realised are 'back-loaded', i.e. funds are only realised at the very end of project development. Therefore, in addition to a slightly high overall funding requirement due to prolonged overheads, the main effect is that the cash-flow profile becomes worse for the PDF, thus increasing its cost of funds.

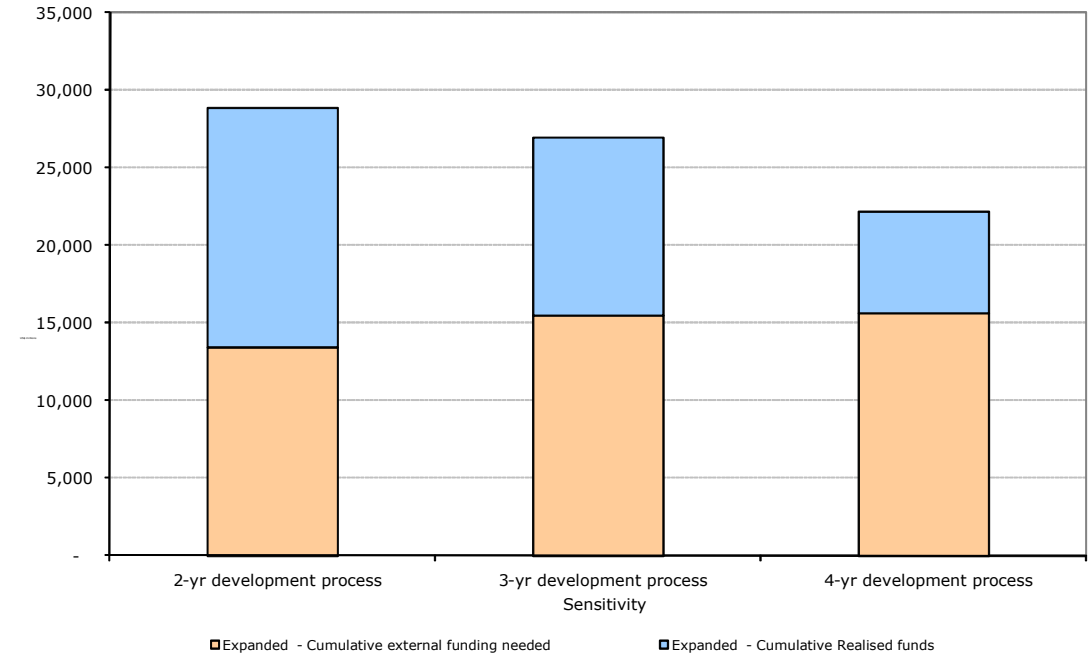
Figures A6.7 and Figure A6.8 show funds realised and net funding requirements for the Base Case and Expanded Case with these different time-lags.

Figure A6.7: Sensitivity of funds realised and net funding requirements to project development period in Base Case



As can be seen, a longer period for project development activities increases the need for external funding. In the Base Case, a four year project development process means that funds internally realised by Year 5 would be approximately US$ 0.6m

Figure A6.88: Sensitivity of funds realised and net funding requirements to project development time in Expanded



In the Expanded Case, a four year project development process means that funds internally realised by Year 5 would be less than US$ 5 m, compared to an amount of US$15.4 m estimated under the assumption of a two year project development process

Conclusions

We estimated the PDF funding requirements for the first five years of operations on a going concern basis. Given a set of assumptions on the project pipeline, on project closing, on the development costs for each project and on PDF overheads, we developed an estimate of the total use of funds, of internally funds realised by PDF and of the remaining funding requirements which are to be provided from external sources. The results of the estimate suggest the following considerations:

- In a Base Case which reflects the quality and level of the project pipeline as of May 2009, PDF is expected to support the development of 22 projects in five years, five of which are estimated to achieve financial closing by the end of Year 5. On these base assumptions, the external funding requirement over the first five years is almost US$ 7m.

- However, results from the sensitivity analysis suggest that the funding requirement could be higher than US$7m, since more conservative assumptions for the rate of attrition between phases of the project (i.e. PDF's performance), the development fee multiple (i.e. the commercial success of projects at financial close), and the length of the project development process (i.e. performance and additional barriers) suggest a need for external funding of approximately US$10m. Should only one project achieve financial close by the end of Year 5.the external funds required could be significantly higher, and increase up to US$ 15.5m.

- In an Expanded Case, i.e. where the project pipeline is developed more quickly than in the Base Case, PDF might have the opportunity to provide support to a larger number of projects in the first five year of operations. The ranges for external funds required and project closings based on the same sensitivities are between US$13m and US$18m for between 4 and 10 projects respectively.

We recommend to be mindful that the above estimates are based on a set of assumptions on input variables which are difficult to anticipate. However, some variables are linked to the overall success of the PPP program in Pakistan and more precisely to the ability of Contracting Authorities and public project sponsors to develop, structure and negotiate infrastructure projects. The most effective use of PDF funding will occur only in combination with an effective implementation of the PPP program.

ANNEX 7: ESTIMATE OF VGF FUNDING REQUIREMENTS

In this annex we estimate the VGF funding requirements to support infrastructure projects according to the approach set out in Section 7.

At this stage, given the limited data on projects that might be developed in the next years in Pakistan, it is not possible to estimate the precise need for VGF support which can only be assessed at a late stage of the project development cycle on a project by project basis. The purpose of this exercise is to provide a first estimate of the VGF funding needs on the basis of preliminary assumptions which will have to be confirmed over time.. In interpreting the results of this analysis, we recommend to be mindful that some modelling assumptions, such as the amount of funding need on each project, the type of funding (Gateway 1 and Gateway 2) are key determinants of the estimate of the VGF funding requirements set out in this section. Results are input driven and due to the limited information on the future projects, assumptions used in the model might not be realistic in the future.

In this analysis, we estimated the VGF funding needs in a scenario which incorporates data and information sources from the project pipeline analysis dated May 2009 .This scenario mirrors the Base Case scenario we developed in Annex 6 for the purpose of estimating the PDF funding requirements.

In summary, the results of the analysis suggest the following:

- In a Base Case scenario, consistent with the assumptions used in the estimate of the PDF funding requirements, the VGF would need approximately US$103m, to provide funding to 5 projects over the first five years of operation. This assumes that VGF would contribute US$90m in the form of structured financing subsidies and US$14m in the form of capital grants to smaller size projects;
- It must be noted that depending upon the criteria set for VGF funding, the number, the size and the type of projects eligible for VGF funding might be different from those projected in this analysis, and in turn, the need for VGF funding might be different from the estimate provided in this section.
- Taking into account different assumptions in terms of project closing, size and form of subsidies, a high-level estimate suggests the following:
    - should eligible projects for VGF comprise mainly small/medium size projects where a limited amount of VGF support is provided in the form of capital grant (Gateway 1), the estimate of VGF disbursed amount, over five years, could be approximately US$60 m;
    - whereas should VGF focus more on supporting large projects by providing structured financing subsidies, the estimate of VGF disbursed amount could increase to approximately US$100m.
- The redeemability component of structured financing subsidies on VGF funding requirements may reduce the Net Present Value of VGF funding, but the need for VGF disbursements to projects in the first years of operations is most likely

not affected by the redeemability component of the subsidies because the cashflow impact of redeemability is likely to occur only after several years since project closing.

In this section we first set out the key assumptions we used for this estimate, then we describe the scenario we developed some sensitivity and we set out some key comments and conclusions.

Key assumptions

VGF is designed to fund:

- Capital grant subsidies – Gateway 1; and
- Structured financing subsidies – Gateway 2.

Gateway 1 is designed for projects where the aim is the provision of capital grant. The subsidy element, as a proportion of total costs, might be quite high, but projects are typically not very large. Gateway 2 is designed for projects which are likely to require greater amounts of subsidy in absolute terms and more complex financial structuring in its delivery. Structured financing subsidies are designed to have some a degree of "redeemability" built into them which can be triggered by the project reaching certain thresholds of sustainability.

For modelling purposes we developed a set of assumptions, including:

- the eligibility of projects for Gateway 1 or Gateway 2;
- the size of the subsidy; and
- the "redeemability" component of structured financing subsidies.

Each of the above is briefly set out below.

The eligibility of projects for Gateway 1 and Gateway 2

The allocation of funds between Gateway 1 and Gateway 2 is driven by assumptions on the project pipeline. The model incorporates the simplified assumption that each project whose size, in terms of total project cost, ranges between US$20m and US$50m meets all the requirements to receive a VGF capital grant through Gateway 1 and each project whose size ranges between US$75m and US$150m requires a more structured financing subsidy which will be provided at project closing through Gateway 2.

Given the above assumptions, in the scenario we developed, the allocation of funds between Gateway 1 and Gateway 2 depends upon: (i) the number of projects for which application for VGF funding are submitted and (ii) on the size of each project.

The project pipeline

The estimate of VGF funding need was developed on the basis of the project pipeline data we used to estimate the PDF funding requirements in Annex 6. Table 1 sets out the number of project closings projected over a time period of five years.

Table 1: Project pipeline assumptions

Project closing	**Project costs (US$m)**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Cluster 1	20			1		1	**2**
Cluster 2	50				1		**1**
Cluster 3	75						
Cluster 4	150				1	1	**2**
Project closing	**Total**			**1**	**2**	**2**	**5**

We have assumed that small projects, whose size ranges between US$20m and US$50m will be eligible for VGF capital grants and all projects whose size ranges between US$75 and US$150 will be eligible for VGF structured financing subsidies. In this scenario, which reflects the assumptions on the project pipeline set out in the Base Case for the estimate of the PDF funding, the VGF will support 5 projects over a period of five years.

Subsidy size

We assumed that each capital grant (Gateway 1) disbursed by VGF will be range between 10% and 20% of total project cost, whereas the amount of each structured financing subsidy (Gateway 2) will range between 20% and 30% of total project cost.

"Redeemability"

In our analysis, we incorporated the "redeemability" component of VGF structured financing subsidies by estimating how this component would impact the VGF funding requirements, under a set of different assumptions.

The impact of the "redeemability" component is estimated in terms of Net Present Value (NPV) of the total amount of structured financing subsidies.

For modelling purposes, we assumed the following:

- the "redeemability" component triggers after 8 years since VGF funds are disbursed; and
- once the "redeemability" is triggered, the repayments to VGF occur over a period of 3 years.

It must be noted, that the above are to be interpreted as modelling assumptions only and not as a suggested approach to structuring financing subsidies. The subsidies are to be

structured, including the features of the redeemability components, on a project by project basis.

Summary of results

Given all the above assumptions, the disbursement of VGF subsidies would be as set out in the Table 2 below.

Table 2: Estimate of VGF disbursed subsidies

($m)	*Year 1*	*Year 2*	*Year 3*	*Year 4*	*Year 5*
VGF subsidies to projects					
Gateway 1	0.0	0.0	4.0	5.0	4.0
Gateway 2	0.0	0.0	0.0	45.0	45.0
Total	0.0	0.0	4.0	50.0	49.0

Key comments on the results of this analysis are:

- Should VGF disburse subsidies to 5 projects for the first five years of operations and should VGF operate accordingly to the assumptions set out above, the amount of funds required would be approximately US$103m.
- As a result of the size and nature of the project pipeline, approximately 87% of the VGF funds result allocated to Gateway 2 and disbursed in the form of structured financing subsidies, whereas the remaining amount would be allocated to Gateway 1 and disbursed as capital grants.

It should be noted that this analysis is based on the assumption that all the 5 projects which are projected to achieve financial closing in the first five years, meet the requirements to access either VGF Gateway 1 or VGF Gateway 2. Depending upon the criteria set for VGF funding, the number of projects eligible for VGF funding might result different from the number projected in this analysis. We developed some sensitivity analysis the impact of different assumptions on the estimate of VGF funding requirements.

Sensitivity analysis

In the Base Case, we assumed that all the 5 projects which are projected to be closed within five years, will be eligible for VGF support, through either Gateway 1 or Gateway 2. Given the need for VGF support is subject to the number of project closings and to the eligibility of each project for VGF funding, we developed a sensitivity assuming a lower number of eligible projects and a different combination of projects in terms of size.

Table 3 sets out the assumptions on projects funded by VGF in the Base Case and in each sensitivity analysis and the estimate of the VGF disbursed amount, over the first five year of operations, under each set of assumptions.

Table 3: Sensitivity analysis on mix of projects funded by VGF over the first five years

($m)	Base Case	Sensitivity 1	Sensitivity 2	Sensitivity 3
Funded Projects:				
-Small	2	1	1	2
-Medium	1	1		1
-Large	2	1	2	1
Total	5	3	3	4
Disbursed amount over five years	104	54	95	58

The results shown in Table 3 suggest the following:

- the size of projects that VGF will support and the type of subsidy which will be provided (either Gateway 1 or Gateway 2) will have a significant impact on the need for VGF funding requirements;
- given all the above assumptions, should eligible projects for VGF comprise mainly small/medium size projects where a limited amount of VGF support is provided in the form of capital grant (Gateway 1), the estimate of VGF disbursed amount, over five years, could be approximately US$60 m;
- should VGF focus more on supporting large projects by providing structured financing subsidies, the estimate of VGF disbursed amount could increase to approximately US$100m.

Estimate of redeemability impact

The impact of the redeemability component of the structured financing subsidies is estimated in terms of NPV of total amount of VGF subsidies. The NPV of VGF subsidies is equivalent to the total amount of disbursed subsidies less the present value of subsidies being repaid over time. We estimated the impact of redeemability under five alternative scenarios, each of them incorporating a different assumption on the portion of VGF disbursed subsidy that will become redeemable. The portion of the subsidy that will be repaid to VGF is assumed to range between 30% and 100% of the disbursed amount.

Results of the analysis are set out in the Table 3 below.

Table 3 Estimate of VGF on NPV of VGF structured financing subsidies

Impact of redeemability on NPV of VGF funding	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Redeemable amount as % of total VGF disbursed amount	0%	30%	50%	80%	100%
Base Case					
NPV of VGF subsidies - Gateway 2 ($ M)	87.0	69.0	58.0	40.0	28.0

Given the set of assumptions set out above, should VGF disburse subsidies in the forms of structured financing subsidies, the NPV of the total subsidy might decrease as the portion of redeemable amount of the subsidy increases. In the scenario in which 100% of

the structured financing subsidy becomes redeemable, the NPV of the total subsidy would decrease from US$90 to US$28m.[52]

The purpose of this analysis was mainly to show the potential impact of the redeemability component of structured financing subsidies on VGF funding requirements. That said, it should be noted that even if the NPV of VGF subsidies might decrease over time due to the repayment of a portion of the disbursed amount, over the first years of VGF operations, the estimate of need for funding to disburse amounts remains unchanged because the cashflow impact of redeemability occurs only after several years since projects are closed.

Summary and conclusions

In this section we provided a first estimate of VGF funding need to support the financing of infrastructure projects in Pakistan. Key comments and conclusions from this analysis are:

- First of all, at this stage the estimate of VGF funding needs cannot be accurate and precise due to the limited data on nature and quality of projects that might be developed in the next years in Pakistan and due to the early stage of the design of theVGF.
- The purpose of the analysis is to provide a first estimate of the VGF funding needs. The analysis set out in this section is driven by preliminary assumptions on the development of the project pipeline and results are to be interpreted with caution.

In summary, the results of the analysis suggest the following:

- In a Base Case scenario, consistent with the assumptions used in the estimate of the PDF funding requirements, the VGF would need approximately 103$m, to provide funding to 5 projects over the first five years of operation. This under the assumption that VGF would contribute US$90m in the form of structured financing subsidies and US$14m in the form of capital grant to smaller size projects;
- It must be noted that depending upon the criteria set for VGF funding, the number, the size and the type of projects eligible for VGF funding might be different from those projected in this analysis, and in turn, the need for VGF funding might be different from the estimate provided in this section.
- Taking into account different assumptions in terms of project closing, size and form of subsidies, a high-level estimate suggests the following:
    - should eligible projects for VGF comprise mainly small/medium size projects where a limited amount of VGF support is provided in the form of capital grant (Gateway 1), the estimate of VGF disbursed amount, over five years, could be approximately US$60m; whereas

[52] A discount of 3.5% was applied to estimate the NPV value of subsidies. This is equivalent to the UK social time preference rate, set by HM'Treasury- Appraisal and Evaluation in Central Government.

- should VGF focus more on supporting large projects by providing structured financing subsidies, the estimate of VGF disbursed amount could increase to approximately US$100m.

- The "redeemability" component may decrease the need for funding in terms of NPV of the VGF structured financing subsidies but not the estimate of disbursements to projects over the first years of operations. This is because the cashflow impact of redeemability occurs only after several years since projects are closed.

ANNEX 8: INTERNATIONAL EXPERIENCE WITH PPP UNITS

Table A8.1 summarises international experience with PPP Units in terms of the possible functions and roles identified in Section 2.

Table A8.1: Functions and roles of PPP Units (based on existing research and CEPA analysis)[53]

Summary/ Rationale	Functions and roles	Performance
PPP Unit, Egypt 2006	**Gatekeeper and Resource-centre** The Egyptian government is currently instigating a PPP programme aimed at meeting around US$ 2bn investment each year. The PPP Unit was established in 2006 to develop, disseminate and enforce PPP policy and work support line ministries in assessing and structuring PPP projects. There is currently draft legislation to give the Unit more ownership of the procurement process and improve the project pipe-line. There is currently legislation being processed to further empower the PPP Unit, the creation of for satellite units, a separate project preparation facility, viability-gap fund, and Long-term Credit Facility (improve the tenors of debt available, assume foreign exchange risk for project sponsors, and channel institutional investors to the PPP market).	The PPP programme is at a relatively early stage, but significant progress has been made to date to implement a clear framework. The $472m New Cairo wastewater treatment plant (WWTP) is the first fully recognised PPP in Egypt, and is path-braking in terms of the tenors achieved in the financial structure. Further WWTPs include the 6th October City project and Abu Ramash BOT. The Rod El Farag Access Road BOT, Alexandria University Hospital, the New Schools project, and the Dairut (Behera) CCGT are all currently being structured for private investment. The importance of proper empowerment for the unit to enforce policy and promote PPPs across the public sector has been recognised in revisions to legislation. The need for adequate project preparation and financing resources is being examined separately.
PPP Cell, India	**Gatekeeper** In addition to various government interventions in lending facilities for infrastructure projects, the government has established a PPP Cell in the Department of Economic Affairs (which is part of the Ministry of Finance). This includes a PPP website that is a portal for information on	India's PPP programme is well established with a significant deal flow. Between 1996 and 2006, there were at least 86 PPP projects reaching financial close in the main sectors in India, the vast majority of which are in the roads sector (although these reflect around a third of PPP capital costs). Despite this, the private sector report that many projects brought to market by state

[53] PPIAF (2007): Public-Private Partnership Units: Lessons for their design and use in infrastructure
World Bank (2006): India: Building capacities for Public-Private Partnerships

	policy and process for the private sector. Its main role is in PPP policy dissemination and guidance, and also to coordinate PPP sponsorship between central government departments and state authorities. A project development fund was set up in 2007 to provide financial support to line ministries in structuring and developing bankable projects. In recognition that a centralised PPP unit is not a practical solution in India, PPP nodes and capabilities within state governments and line ministries have been developed. Experience has varied. In states where there is a limited PPP track record, units have taken a more direct role in sponsoring projects through enlisting private sector capacities through a public-private company (Rajasthan and Karnataka). The Gujarat Infrastructure Development Board is both a developer and enforcer of policy and a project developer. It also provides contract monitoring on request. The Andrha Pradesh Infrastructure Authority does not undertake project development or provide direct preparation funding, but it is both a resource centre and an enforcer of PPP policy.	government were not bankable. With a decentralised approach, there is a danger of uneven development across regions, with better governed and relatively prosperous states excelling compared to poorer states. The World Bank paper explain where gaps remain: • "*While some states in India have made important progress towards developing the frameworks needed for broad and robust PPP programs, others have developed policies and approaches in a single sector only, and most other states are yet to seriously commence PPP programs. As a result, there is considerable diversity in both the strength of policy and legal frameworks in place, and the level of transactions capacities and experiences.*" • "*… a broader, but successful PPP program will require the public sector to develop better capacities to identify possible PPPs, to develop bankable contracts and bid them out, and to monitor their performance and costs… capacities must be strengthened if these programs are not, down the road, to lead to substantial costs for the governments concerned.*"
Infrastructure Investment Facilitation Centre (IIFC) Bangladesh, 1999	**Resource-centre** Development of PPP policy and strategy lied with executive government. IIFC advises government agencies in prioritising potential PPP projects for tender, assisting with the bid process and implementation. Origination of projects and transaction management lied with Line Ministries, while IIFC was did not have power to monitor and enforce policy over individual projects pursued by government agencies.	A handful of transparent and well structured PPPs were possible, but in general PPP activity has happened largely without the input of the IIFC, such that the unit has had little impact on the quality or quantity of PPPs. IIFC lacks any clear or formal power, with Line Ministries often not required to follow explicit guidelines on lease-cost tendering. There are also other bodies involved in PPP procurement, particularly in the power sector where IPPs are seemingly a more attractive investment proposition for the private sector. This lack of authority may mean that IIFC has to focus on less viable projects.
Private Finance Unit, UK	**Pathfinder / Gatekeeper** The evolution of the UK PPP system includes the Private	Around 700 projects reached financial close between 1996 and 2007, and as of 2010 the total capital value of operational projects

	Finance Unit, which sets guidance for the public sector on procurement, deal structuring and evaluation. For example, the unit will develop the public-sector comparator project to be used when analysing value for money. All transactions require Treasury approval at designated points in the project development cycle. The taskforce also has a role in monitoring and enforcement of contracts.	was £34bn (The Economist, 20 March). The UK government established PUK to refocus the government PPP programme from off-balance sheet financing to value for money on a project by project basis. Various assessments of the programme, including by the National Audit Office and Parliamentary committees, have concluded that the UK PPP scheme has achieved value for money at a programme level. However, the scheme is often criticised for the protracted procurement process, off-balance sheet financial liabilities, and the spurious basis of comparison for value for money assessments. Critics argue that the projects selected for PPP are those that would be likely to perform well (in terms of value for money and timing of delivery) regardless of how they are procured, such that the basis for comparison in misleading.
Partnerships, UK 2000	**Corporate developer** PUK can best be seen as a corporate developer, charging fees to the public sector for its services. PUK assists line ministries in identifying suitable projects, providing feasibility analysis, managing transactions and monitoring contracts. It uses this role also as a developer to participate in structuring projects for value for money and ensuring proper risk allocation. Since PUK is also involved with monitoring contracts, it may well have a longer-term view when undertaking upfront assessment. The government is currently reforming institutions by creating Infrastructure UK merging PUK with the policy unit and the Treasury Infrastructure Finance Unit (TIFU).	
Partnerships Victoria, Australia 1999	**Gatekeeper** PV is fully empowered to enforce PPP policy and create an attractive environment for PPP projects. Line Ministries undertake the origination, execution and management of projects, with PV providing an oversight role during the tender process and guidance over the life of the contract. PV undertakes the development of policy and assessment of individual projects, with the aim to improve the quality of PPPs in infrastructure through efficient risk transfer and minimisation of whole-life costs.	PV has had a significant role in clarifying the policy environment for PPPs and promoting the programme in the public sector. A 2003 review of the State's PPP programme found that projects procured by PV registered significant cost and delivery savings on publicly procured projects. Its direct influence on projects has, however, been more limited. PV itself has indicated that it should reduce bid costs, improve financing terms, and better specify performance measures.

Treasury PPP Unit South Africa 2000	**Gatekeeper** The Treasury PPP Unit has clear roles in policy development and strategy and in analysing specific projects. It is also a member of the steering committee for transactions, such that line ministries recognise that it is in their interests to involve the Unit early on. They are also involved in some contract monitoring and renegotiations, providing some powers of enforcement. It is the explicit responsibilities of the line ministries to originate, execute and manage PPP projects and contracts, although the Unit has sometimes aided project identification.	By 2007, the Treasury Unit had closed 13 deals across many sectors, raising significant sums in unitary charges and including high-profile deals such as Gautrain. However, a significant amount of private infrastructure investment has taken place without the participation of the unit, particularly in the telecoms sector. This should not necessarily be seen as a measure of failure, since different sectors have different requirements and the main role of the unit was to aid in the policy formulation and enforcement (originally to prevent ministries using PPP to circumvent budget constraints, putting an emphasis on risk management and value for money). The unit's role in the treasury afforded it significant influence and credibility, as well as providing access to skills (particularly in its fiscal oversight). Lin Ministries are not compelled to seek advice of project development and procurement, but mostly do so.
National Investment Bank, Jamaica 1988	**Pathfinder** Arising from the national privatisation strategy and aimed to optimise government management resources to optimise efficiency and crowd in private investment and international expertise. The NIBJ had some influence on PPP policy but did not have exclusive authority on policy development and strategy. It did have responsibility across the project cycle in origination, analysis and transaction management, with clear authority over line ministries. Many of problems would appear to stem from a programme not specifically designed for infrastructure PPPs, such that there was a lack of policy development and enforcement.	NIBJ completed 12 prviate participation in infrastructure deals between 1989 and 2002 across energy, transport and telecoms sectors worth nearly US$ 2.2bn. Despite some high profile IPPs, most deals failed to achieve improved operating efficiency. Fiscal benefits have not been realised, with deals being bailed out in many instances. Most of the risks for the first and only toll road remained with the public-sector since the debt is government guaranteed. The Sangster Airport concession and privatisation of the state electricity company was protracted and non-transparent. Investments in the water sector were delayed because of failures to meet water delivery.
BOT Centre, Philippines 1993	**Gatekeeper and Resource-centre** Project origination and transaction management were the	There has been some success in the PPP programme, with reasonable levels of PPP investment and some high-profile deals.

	responsibility of the line ministries, while the BOT Centre would assist with technical and financial analysis of individual projects (advising the Investment Coordination Committee in assessing project proposals. The main role is in the development and dissemination of PPP policy and strategy and sometimes in contract monitoring (and contract renegotiation). The centre has no authority to approve or deny a project along the PPP process and cannot even compel ministries to submit reports on project development of monitoring.	However, the quality of the programme is less certain, with government interference in the power sector leading to overbuilt capacity. Many projects closed in 1990s were done so with government guarantees, leaving significant contingent liabilities for the government and delivering questionable value for money. The centre has not been an effective monitor of projects since this role and its authority over line ministries have never been clearly defined. Its overall effectiveness has been limited by a lack of influence and control over PPP procurement.
Portugal Parpública, Portugal 1990s	**Gatekeeper** Portugal Parpública was set up to help structure higher quality PPPs and advises the Ministry of Finance on the development of policy and strategy. This advice also includes analysis of individual projects, as well as contract monitoring and renegotiation on occasion. Project origination and transaction management are undertaken by line ministries, although Portugal Parpública often sits on tender committees.	The PPP law stated that long-term fiscal impacts of projects must be explicitly stated and that some variation of the public-sector comparator should be used. The unit is responsible for implementing these policies. Since establishing Portugal Parpública the government has sought to put greater emphasis on fiscal responsibility. The unit has put more of an emphasis on risk management by advising line ministries in different sectors to better allocate liabilities and uncertainties.
Public and Private Investment Management Centre (PIMAC), Korea 2005	**Gatekeeper and Resource-centre** Line ministries lead project origination, transaction management and contract management, but often seek assistance of PIMAC, who additionally conduct quarterly reviews of projects Otherwise focus is on the development of PPP policy and assisting line ministries with technical analysis of projects (promotion, review proposals, review feasibility studies, examine bid documents, conduct VFM evaluations, etc.). The unit is located under the Korean Development Institute.	Private participation infrastructure has accelerated considerably since PIMAC and its predecessor were implemented. The unit is credited with fulfilling its main roles. Between 1999 and 2006, 154 concessions have been undertaken amounting to US$ 41.4bn. PIMAC provides a key function in the assessment of feasibility studies and aiding line ministries in procurement. Legal reforms in 2005 have put a greater emphasis on value for money, risk sharing and reduced government financial commitments.