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Introduction and scope of the PPP concept

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Introduction and Objectives

This chapter is designed to introduce the PPP Guide and provide readers with a general overview of public-private partnerships (PPPs). It will also introduce some of the basic features and characteristics of PPPs.

PPPs are one way to procure infrastructure and services. As explained later in this chapter, the PPP approach may provide significant benefits if and when a number of conditions are met.

As PPPs are useful in procuring both infrastructure and services, the PPP Guide is especially focused on better use of PPPs as a tool to deliver new or upgraded infrastructure and services. In this way, the greatest possible value from this procurement and financing option can be extracted in order to help countries bridge their infrastructure gap by accessing more private capital and expertise in an efficient and programmatic manner. This approach is especially true for emerging market and developing economy (EMDE) countries.

The main objectives of this chapter are to introduce the PPP concept as an option to procure and manage infrastructure, to provide the term's scope for the purpose of the PPP Guide, and to explain its main characteristics. This chapter also introduces those aspects of PPPs that will be explained further in the rest of the PPP Guide. These include the relevance and features of a proper PPP framework and the entire PPP process cycle, including a description of each of the phases that constitutes the process from a practical perspective. See Box 1.1.

Box 1.1. PPPs: Focus of the PPP guide

PPPs are a way to procure both infrastructure and services that do not necessarily require the use of private capital as most, if not all, PPP benefits could be obtained under contract structures for new infrastructure developments in which finance is sourced directly by the public sector. However, the PPP approach may be appropriate for procuring and managing certain services or managing existing infrastructure assets. The context for this PPP Guide is that there is a general and global acknowledgement of the need to solve the infrastructure gap in many countries. However, due to fiscal constraints and other factors, many countries (especially EMDE countries) need to rely on private sector resources as a way to accelerate infrastructure development (with all the caveats described in this chapter and in the PPP Guide).

Therefore, this PPP Guide will be focused on PPPs as a tool to procure public infrastructure (including finance, construction, operations and maintenance) with private sector participation.

One additional objective of both the PPP Guide and this chapter in particular is to help develop a standardized use of terminology regarding PPPs and the PPP process so that all PPP practitioners will have the same understanding when using PPP-related terminology. The PPP Guide acknowledges there are multiple variations across the globe regarding the definition of a PPP, the main motivations

for using them, and the main drivers for efficiency and Value for Money (VfM). There are also differences over what constitutes a PPP framework and the main components of it, as well as the characteristics of a proper process to identify, prepare, appraise, structure, and execute a PPP agreement.

In this sense, the PPP Guide is advocating for the preferential use of some specific terms. To this end, it provides a comprehensive glossary to help readers understand the PPP Guide and identify equivalencies with other terms and uses that may be more common in particular countries.
For convenience, it also describes the PPP process and its sequence of phases and tasks in a specific manner. However, the process and sequence should be considered with flexibility since there is no intention to prescribe any particular organizational or management approach.

Box 1.2 describes the learning objectives of this chapter.

Box 1.2. Learning objectives

This chapter will allow readers to understand more about PPPs and the PPP Guide, as follows:

Section 1. Introduction and scope of the PPP concept.

- Definition of a PPP for the purpose of this PPP Guide.

The main characteristics of a PPP.

Section 2. Alternatives for infrastructure finance and procurement. What is and what is not a PPP?

- The main conventional or publicly financed procurement methods (for example, Build; Design and Build [DB]; Engineering, Procurement and Construction [EPC] contracts) and what differentiates them from PPPs.
- Definition of a Design, Build, Finance, Operate and Maintain (DBFOM) project (and its variations) and how it can be funded (user-pays versus government-pays and variations).
- How service and/or existing infrastructure management contracts may or may not be PPPs (service PPPs).
- Understanding other private participation contexts and how they are neither PPPs nor procurement methods.
- How PPPs are different from other methods of procuring infrastructure, including privatization.

Box 1.2. Learning objectives (cont.)

Section 3. Types of PPPs and nomenclature issues.

- How there may be many different types of PPPs that have been developed to address different types of projects and service delivery models.
- How the PPP concept and terminology may vary among countries and jurisdictions.

Section 4. Which sectors are more suitable for PPPs.

- Understanding the concept of public infrastructure and how it influences the PPP mode of procurement.
- Which sectors and projects are typically appropriate for PPPs.

Section 5. Motivations for using PPPs: caveats, concerns and introduction to the PPP process cycle.

- The reasons or motivations (purpose and need) usually cited for using PPPs.
- The typical pitfalls and caveats to consider when using PPPs.
- Why sound selection, robust preparation, and transparent tender processes matter.
- How the institutional, legal, and regulatory framework plays a critical role in promoting and protecting a successful PPP approach.
- How and why some EMDE countries, especially the least developed countries (LDC), may find difficulties in developing PPPs.
- Defining risk and its appropriate transfer from the public to the private sector

Section 6. Typical structure of a PPP.

- The main elements of a PPP contract and the different roles of the various parties involved.
- The structure of a PPP contract: upstream and downstream structures.
- The "payment mechanism" and what it does.
- How structuring the PPP matters and how the private partner needs to work to meet its obligations.
- The main structures in terms of scope to be found in the most common PPP sectors.

Box 1.2. Learning objectives (cont.)

Section 7. How PPPs are financed.

- Typical sources of funds and types of PPPs depending on the origin of funding (including co-financed PPPs).
- The role of multilateral development banks (MDBs) and other development institutions such as export credit agencies (ECAs).
- Considerations for the procuring authority regarding financial aspects.
- Potential pitfalls and concerns.
- Hybrid modalities

Section 8. Reasons for project failure: the need for ensuring the project is structured in a way that is "bankable" and procured in a manner that ensures transparency and competition. What constitutes a successful project and why projects may fail.

- What a private partner is looking for in terms of acceptable projects.
- Inappropriate risk transfer and a lack of accountability.

Section 9. Introduction to the PPP framework concept and initial framework consideration.

- The need for a proper framework to succeed with PPPs as a programmatic or strategic tool. What a framework consists of.
- Why a private partner cares about frameworks and PPP markets.

Section 10. An overview of the PPP process. Key phases in the PPP process cycle.

- The PPP process cycle and the main phases (from identification to contract management).

1. Introduction and Scope of the PPP Concept

A PPP is regarded as a method for procuring and delivering both public assets[1] (new assets or upgrades of existing assets) and public services.

This section will propose a broad definition of PPPs to capture the sense of the PPP concept as a means to procure assets, procure and deliver services, and manage existing infrastructure. It will also provide a narrower definition, that will be the main definition to be used in the rest of the PPP Guide, which focuses on PPPs as an alternative way to procure new infrastructure with private sector participation.

After introducing the PPP definition and qualifying general aspects surrounding the PPP term, this section will summarize the main features of a PPP contract.

On the basis of the proposed definition and PPP contract structure, the next section will provide further detail, describing the main types of contracts and other contexts in which the private sector can play a role in public infrastructure management and services.

Further information about the PPP concept will be provided in subsequent sections. These sections will explain how different names and concepts are used to refer to PPP contracts in different jurisdictions, which type of projects and/or sectors are typically suited to PPPs, and what a typical PPP structure looks like.

1.1. Defining PPPs for the purpose of this PPP guide

PPPs are a contractual means to deliver public assets and public services. PPP contracts include those intended to develop and manage new infrastructure, contracts to undertake significant upgrades to existing infrastructure (these are called infrastructure PPPs), and those under which a private partner manages existing infrastructure or only provides or operates public services (known as service PPPs).

There is no universally accepted definition for the PPP concept as it can differ between countries according to their respective legal frameworks. In fact, the term PPP is sometimes used to mean any form of association or cooperation between the public and private sectors for the purpose of reaching a common goal.

In the specific field of procurement and delivery of public infrastructure and services, there is also a large variety of definitions (see Box 1.3 below).

[1] Public assets are fixed assets (that is, assets purchased for long-term use) that are public works, subject or dedicated to public use, or concomitant to the provision of a public service.
Public assets are often referred to as public infrastructure, using infrastructure in the broad sense, as is the type of public asset being normally procured under a PPP. The Oxford English Dictionary defines infrastructure as "basic physical and organizational structures and facilities (for example, buildings, roads, power supplies) needed for the operation of a society or enterprise". Section 4 further describes the concept of infrastructure and provides examples of infrastructure projects in different infrastructure sectors.

Box 1.3. Examples of PPP definitions

The Organization for Economic Co-operation and Development (OECD) defines a PPP as an agreement between the government and one or more private partners (that may include the operators and the financers). Within the agreement, the private partners deliver the service so that the service delivery objectives of the government are aligned with the profit objectives of the private partners. Furthermore, the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners.

According to the International Monetary Fund (IMF), PPPs refer to arrangements in which the private sector supplies infrastructure assets and services that traditionally have been provided by the government. In addition to private execution and financing of public investment, PPPs have two other important characteristics: an emphasis on service provision and investment by the private sector. In this way, significant risk is transferred from the government to the private sector.

For the European Commission, the term public-private partnership is not defined at the community level. In general, the term refers to various forms of cooperation between public authorities and the world of business that aim to ensure the funding, construction, renovation, management, and maintenance of infrastructure for the provision of a service.

Standard & Poor's definition of a PPP is any medium- to long-term relationship between the public and private sectors involving the sharing of risks and rewards of multi-sector skills, expertise, and finance to deliver desired policy outcomes.

For the European Investment Bank, PPP is a generic term for the relationships formed between the private sector and public bodies, often with the aim of introducing private sector resources and/or expertise in order to help provide and deliver public sector assets and services. The term PPP is thus used to describe a wide variety of working arrangements from loose, informal, and strategic partnerships, to Design-Build-Finance-and-Operate (DBFO) type service contracts and formal joint venture companies.

Source: From OECD (2008) Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money.

Based on the definition provided by the *Public-Private Partnerships Reference Guide, V3.0* (World Bank 2017, as a broad concept to be applied both to new or existing infrastructure and services, a PPP may be defined as:

"A long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party[2] bears significant risk and management responsibility, and remuneration is linked to performance."

[2] "Private party" is the term selected to refer to the private sector agent(s) or participant(s), meaning the company or companies that will act as a "private partner" in the "partnership" (that is, the PPP contract). This private partner is the contractual counterparty of the "public party" and will usually be a project company that may also be named as a Special Purpose Vehicle (SPV), such as a company constituted specifically for the purpose of signing the contract and managing the project – See Box in section 6.1. This is explained later in this chapter. The public party concept is intended to include either governments (the respective procuring authority), agencies, companies or entities that may act in the respective contract as procuring authorities in the name of the government. See glossary for further clarifications.

This is the broad definition that will be used within this PPP Guide in reference to the PPP concept as a method for delivering public infrastructure and/or services as an alternative to "conventional procurement". Countries will differ in the forms of procurement they regard as "conventional" depending on their respective tradition of procurement. In addition, some countries will sometimes introduce new forms of procurement (or new types of contracts) that are not traditional in the relevant country but that also are not deemed to be PPPs in this PPP Guide. For convenience, this PPP Guide will refer to any contract for the acquisition by the public sector of goods (including works) and services that does not fall within the above definition of a PPP as traditional or conventional procurement.

The broad definition of a PPP assumes there are significant risks and responsibilities borne by the private agent under a long-term relationship. This does not necessarily imply that the private agent will finance part or all of the works when the PPP relates to infrastructure development (infrastructure PPPs). Rather, it assumes that construction/development and management (maintenance and operations) are bundled together. It also assumes there is a contract acting as the legal instrument that contains the obligations and rights of both parties. It is intended to cover not only the procurement of new (greenfield) or upgraded infrastructure (brownfield), but also the procurement of infrastructure management services for assets already financed and built, and even services in the narrow sense of the word (that is, public services, such as utilities, transportation of passengers, water supply to homes, and so on, which may be called service PPPs).

However, the focus of the PPP Guide is on PPPs as an alternative means to procure capital-intensive infrastructure projects that rely on private sector finance. This can either be new infrastructure or significant upgrades and renewals of existing infrastructure. Therefore, this chapter will also propose a narrower definition of PPPs specifically as an option to procure new or upgrade existing infrastructure on the basis of private capital resources. For convenience, this PPP Guide will refer to these PPPs as private finance PPPs or simply as PPPs. See also Box 1.4.

Box 1.4. Definition of a "private finance" PPP contract (as an alternative method for procuring infrastructure for the purpose of this PPP guide)

A long-term contract between a public party and a private party for the development (or significant upgrade or renovation) and management of a public asset (including potentially the management of a related public service), in which the private party bears significant risk and management responsibility throughout the life of the contract, provides a significant portion of the finance at its own risk, and remuneration is significantly linked to performance and/or the demand or use of the asset or service so as to align the interests of both parties.

This definition largely follows the broader definition in the *PPP Reference Guide 3.0* (World Bank 2017) introducing the assumption of the existence of private finance provision by the private party.

The presence and inclusion of a private finance provision in the bundled list of obligations of the private party is not a necessary condition to enjoy the benefits of a PPP approach. However,

risk transfer is more effective (though not necessarily more efficient)[3] when the private agent is providing capital resources that are at risk, rather than when the private agent is not providing any of its own capital and is only subject to performance penalties. At the same time, attracting private finance to PPPs represents a significant challenge for EMDE countries facing infrastructure gaps.

This definition is also intended to capture the two main types of PPPs considered by this PPP Guide: PPPs whose revenues are based on user payments (user-pays PPPs, also known in many countries as "concessions") and those whose revenues are based on public or budgetary payments (government-pays PPPs,[4] also known as availability payment PPPs).

PPP is a legal term in some jurisdictions

For some jurisdictions, PPP may be a legally defined term (that is, a legal type of contract/procurement as defined in the legislation). In other jurisdictions, PPP remains a concept to describe a different way of procuring infrastructure or services, which may be implemented under one or more different types of contracts. In certain countries, PPPs may also just be considered a subset of procurement methods and may not have a clearly defined legal description, which may lead to uncertainty on what a PPP constitutes legally.[5]

In a number of jurisdictions in which a legal framework provides a definition for PPPs, the term is reserved (from a legal standpoint) for PPPs in which the revenues consist of public payments, or in which those payments represent the majority of the revenues of the PPP company (for example, the European System of Accounts definition). It can even be used for PPP-type projects with any level or amount of government payments.

In these jurisdictions there may be public contracts that fall within the PPP Guide definition of a PPP, but do not fall within the local legal definition of PPPs. In these cases, the term "concession" is usually used for PPPs based on user payments.

These and other nuances related to the terminology used to refer to PPP contracts are explained in section 3.2, "Nomenclature – other names used for the PPP concept."

PPP is not privatization

There is often confusion between privatization and PPPs. There is however a clear difference between these two forms of private sector engagement. In its true sense, privatization involves the permanent transfer to the private sector of a previously publicly owned asset and the responsibility for delivering a service to the end user. However, a PPP necessarily involves a continuing role for the public sector as a "partner" in an ongoing relationship with the private sector (World Bank – Farquharson, Torres de Mästle, and Yescombe, with Encinas 2011).

[3] To enjoy the potential efficiencies that private finance may bring in the PPP, likewise the potential incremental efficiency of any PPP, a number of conditions have to be met. This is described later in section 5.

[4] Also known in the United Kingdom as Public Finance Initiatives or PFIs.

[5] In Islamic countries, Sharia Law may define PPPs differently. In this case it is important that Sharia advisors be consulted for their definition if there is no clear national legal description.

Confusion can arise because sometimes the term "privatization" is used more broadly; for example, to mean any form of private management. When used in this way, the term can apply to a wide range of arrangements, including PPPs. However, for the purposes of this PPP Guide, privatization is defined in its true sense as described above, and under this definition PPPs are not privatizations.

Furthermore, by definition, privatization in its true sense is not an option for governments to procure new infrastructure, as privatization implies that the infrastructure has already been constructed.

Differentiating PPPs from privatization can also be important from a communications standpoint, particularly in countries seeking to deliberately distinguish between PPPs and prior privatization programs. For example, in Mexico, PPP projects are often referred to as projects for the provision of services (PPS), and as co-financed concessions in Peru.

Similarly, the contracting out of the management of existing infrastructure is not privatization because it does not involve a permanent transfer of that infrastructure to the private sector. In addition, there is a continuing role for the public sector as a "partner" in an ongoing relationship with the private sector. Section 2.4 explains this distinction and the features of privatization further.

1.2. Analyzing the definition of a PPP proposed by this PPP guide and explaining the features of a PPP contract as a tool to procure new infrastructure

This PPP Guide focuses on PPPs as a method for procuring new infrastructure development and management on the basis of private finance, as introduced in Box 1.3. The definition of a private finance PPP provided in this PPP Guide implies a number of features that need to be present in a PPP contract to be properly regarded as a private finance PPP. This section will describe and explain each of these features. Most of these, with the exception of the presence of private finance, are also necessary features to be met by any infrastructure contract to be regarded as a PPP under the broad definition.

1) "A long-term contract between a public party and a private party"

Long-term: The long-term nature or condition of a PPP relates to one of the essential features of any PPP, which is the effective risk transfer and responsibilities to the private party over a significant part of the life of the infrastructure asset. The "long-term" also connects with the financial structure as explained below.

Contract: The relationship and/or delegation of management by the public sector to the private sector usually requires the use of a contract, that is, a written document comprising the rights and obligations enforceable by either party. Normally the contract is a single document, with attachments, identified as binding. Sometimes the contractual relationship may be more complex, including different contract documents linking the private party with different public institutions (for example, a PPP for a new power plant may be governed by a license or authorization by the respective ministry for the plant, together with a Power Purchase Agreement with the state-owned transmission company).

This contract must usually be granted through a public competitive process, which may take the form of a variety of tender processes.

Public party: Includes governments (the procuring authority), or agencies, companies, and entities that may act in the respective contract as procuring authorities in the name of the government. These procuring authorities may be national or sub-sovereign (states in a federal country, regional governments, municipalities, and so on). The public partner is also referred to in this PPP Guide as the procuring authority,[6] although other terms are internationally accepted or used in some jurisdictions (see Glossary).

Private party: Commonly refers to the key private sector company or companies that will be involved in the delivery of the project, whereas "private partner" refers to the contractual counterparty of the public party. In a PPP, it is common for a group of private parties to form a consortium to bid for the PPP contract. If the consortium is awarded the contract, it creates a new company to sign the contract and act as the private partner. This new company is also referred to in this PPP Guide as the project company or as a Special Purpose Vehicle (SPV).[7]

A government-owned company or State-Owned Enterprise (SOE), including a potential government-owned SPV, may be regarded in some countries as a "private entity" subject to civil (rather than administrative) regulations. However, a contract between a procuring authority and a government-owned "private" entity (when the SOE is owned by the government that procures the project) would not normally be considered a PPP and it is not regarded as such by this PPP Guide (see Section 2.2). It is not regarded as a PPP because there are reasonable doubts there is risk transfer to the private sector.[8]

2) "For the development (or significant upgrade or renovation) and management of a public asset (including potentially the management of a related public service)"

Development and management of the asset: One of the essential features of the PPP model is the search for efficiency through the involvement of the private party. This applies not only to the design and construction of the asset, but also to its long-term maintenance so that construction and maintenance are bundled obligations. In some projects, management will also include operations (either of the infrastructure or a related service).

Significant upgrade or renovation: This PPP Guide deals with PPPs as a delivery option for capital-intensive projects. PPPs may be also used for intensive additional investment in an existing asset.

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[6] Generally, the public partner or public contractual counterparty in the PPP contract will coincide with the procuring authority that tenders and executes the contract. For convenience, this is assumed by this PPP Guide to be the common situation. However, there may be cases in which the procuring authority that tenders and awards the contract is not the public body or institution that signs or executes the PPP agreement, but is a public entity related to the same government.

[7] An SPV is not a necessary condition for a contract to be regarded as a PPP. Section 6 further explains the rationale of SPVs and other alternative forms of constitution of the private partner.

[8] A different case is when a public company or SOE is owned by a different government than the one which procures the project. It operates in the market like any private economic operator (that is, competing for the market), so that the risk transferred to that SOE is effectively transferred out of the procuring government.

Potentially including management of a related service: The focus of the PPP Guide is infrastructure development. However, many PPPs also include the management or operations of a public service when the infrastructure relates to such service or is a platform to allow public authorities to render the service. For example, a PPP of a major transport system, including the operation of transportation service falls within the scope of the PPP.

3) "In the contract, the private party bears significant management responsibility and risks through the life of the contract"

Significant management responsibility: The private party should be materially and integrally in charge of the management of the asset (especially life-cycle cost management), rather than only being dedicated to specific and/or minor areas of management. Otherwise, there is likely to be limited in transferring life-cycle risks and in relying on a long-term contract under a PPP scheme.

Additionally, the scope of responsibilities will naturally determine the extent of risk transfer. Risk should not be transferred for activities and events over which the private partner has no control or mechanisms to influence risk management. Risks are related to responsibilities: for instance, risks associated with the long-term management of infrastructure should only be transferred if the responsibility for long-term management—especially maintenance and renewals—has been delegated to the private partner. While certain risks, such as those related to construction, may be transferred to the private sector, it is crucial that the public sector continues to monitor projects to ensure that the private sector is fulfilling its project management responsibilities and achieving the desired outcomes.

Significant risk transfer: There should be significant risk transfer to the private sector over a significant part of the asset life cycle (that links to the long-term nature of these contracts), in addition to the transfer of construction risks. This risk transfer should take into consideration which party is best suited to manage specific risks before risk transfer is even considered.

Significant: The bulk of the risk has to be transferred (as risk transfer is the main driver for PPP efficiency – see Section 5), but there is no need to transfer all risks/events and their consequences. There may be significant inefficiencies in transferring certain risks that can be reduced by means of the public partner retaining or sharing the risks.

4) "And provides a significant portion of the finance"[9]

As stated in the introduction, private participation in the financing of a project is not a necessary condition for a project to be regarded as a PPP. However, the focus of this PPP Guide is on private finance PPPs.

[9] From a broad perspective, any financing provided by the private sector might be regarded as private finance. However, "private finance" may be considered a regulatory matter: from a national accounting and reporting perspective, private finance means financing that is not regarded as public debt (that is, it is not consolidated in the government sector balance sheet). However, this PPP Guide considers "private finance" as any finance provided by the private sector that is at risk, that is, it is dependent on the performance of the project-contract. This view is aligned with the concept of the economic ownership of the asset, which is used by some standards and guides to assess whether a PPP asset should or should not be consolidated or recorded in the government balance sheet. More refined or specific criteria are applied in some countries according to standards which define whether the asset should be regarded as public. Chapter 2 provides more information on the matter of accounting and reporting for PPPs in national accounts and public financing statistics.

Securing private finance may be an objective or motivation in itself for a public authority to procure infrastructure under this mode (however, as a motivation, this has to be carefully assessed as explained in section 5).

Furthermore, private finance (usually under a "project finance" structure) may also be an essential factor for efficiency because when the private partner finances all or a significant part of the infrastructure and its remuneration is based on the performance (availability and/or use) of such infrastructure, then financing is at risk. This is a powerful mechanism to align the objectives of the public and private partners as it incentivizes the private partner to be proactive in maximizing the objective of the public party (which is to ensure that the infrastructure is available and adequately operated and/or maintained). The use of private finance also incentivizes the private partner to more efficiently manage whole-of-life costs (over the life cycle of the asset)[10] so that, after meeting operating costs, the private partner has sufficient revenues to service its debt and provide a return to its investors.

5) "And remuneration is significantly linked to performance and/or the demand for or use of the asset or service, so as to align the interests of both parties"

This notion is linked to the private finance feature and risk transfer characteristics of the PPP. The most effective way of transferring responsibility and significant risks over the life of the contract is to compensate the contractor (the private partner in a PPP) on the basis of the performance of the asset (in the sense of quality of service) or on the basis of the level of use, or a combination thereof. Typically, the performance of the asset will depend on the degree to which agreed service levels or the level or volume of use (when the main objective is to extract the financial value of the asset as a revenue maker) are met. The latter case is generally the case in user-pays PPPs, and the former is generally the case in government-pays PPPs.

The link to performance and/or use also results in another particular feature of infrastructure PPPs: the contractor will only receive payments (or most of the payments) once the infrastructure asset is completed, that is, the procuring authority will usually only begin to make payments once the asset is in service.[11]

The link of remuneration to performance is paramount for aligning the interest of the private partner (mostly focused on obtaining benefits) with the objectives of the public sector (mostly focused on service reliability and quality). However, interests should be aligned without being too prescriptive in the means and methods to be applied (inputs) and leaving reasonable scope for innovation.

The typical contract form of a private finance PPP is the Design, Build, Finance, Operate and Maintain (DBFOM) contract. But it will only be regarded as a true private finance PPP if significant financing is provided by the private sector at its own risk and most of the remuneration for the works and operations and maintenance (O&M) activities are linked to performance, maintenance, or the effective use of the infrastructure. This contract type has a number of variations and is also referred to by other terms in some countries.

[10] PPPs provide a focus on all costs during the useful life of the infrastructure, or during the life of the contract that regulates the management of the infrastructure. This includes the initial investment/costs of construction and any other maintenance work required to maintain the asset in an acceptable, constant technical state or condition, or in a state necessary to meet the performance requirements established in the contract.

[11] As with many other characteristics, this may include exceptions in the form of part of the compensation or payments to the private partner being received during construction, depending on the financial structure of the PPP (see co-financing in Section 7.3).

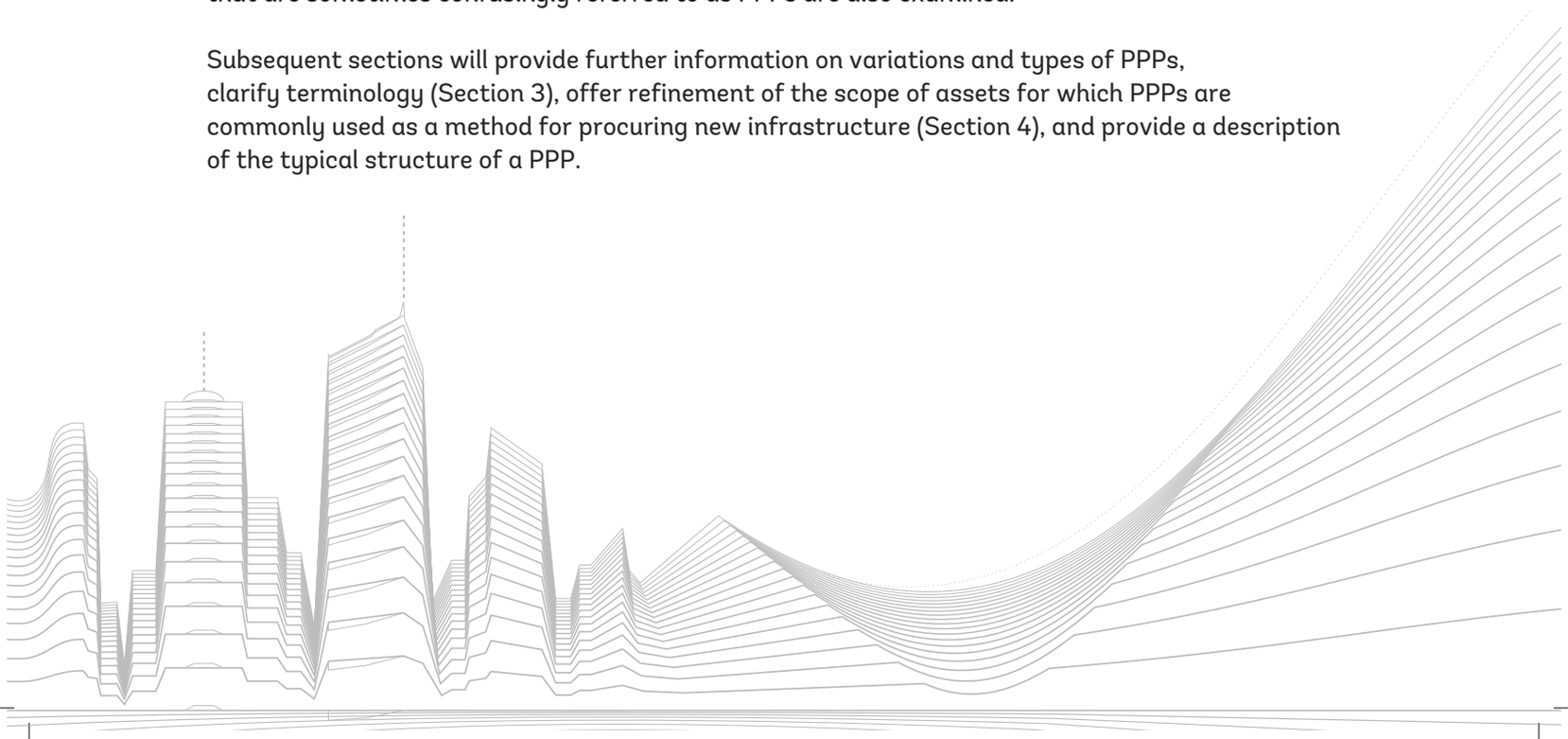
There are also other contract forms that may be regarded as PPPs, including some infrastructure PPPs that do not involve private finance. These are notably Design, Build, Operate and Maintain (DBOM).

Box 1.5. Summary of essential and other common features of a private finance PPP

Essential features	Other common features
• There is a long-term contract between public and private parties. • The construction and long-term management of the asset are bundled together under one contract. • There is significant risk transferred to the private sector over a significant part of the life cycle of the asset. • There is significant private finance at risk. • The private partner's remuneration is linked to, and at risk of, performance and/or demand benchmarks (alignment of interests).	• The private party is usually constituted as an SPV. • Financing raised by the private party is usually in the form of "project finance." • Revenues are earned by the private party only (or mainly) when the asset is completed and ready to be used. • Consistent with the performance focus of remuneration to the private partner, technical and service requirements are focused on results or "output specifications", rather than on "input specifications". This focus on "outputs" encourages innovation.

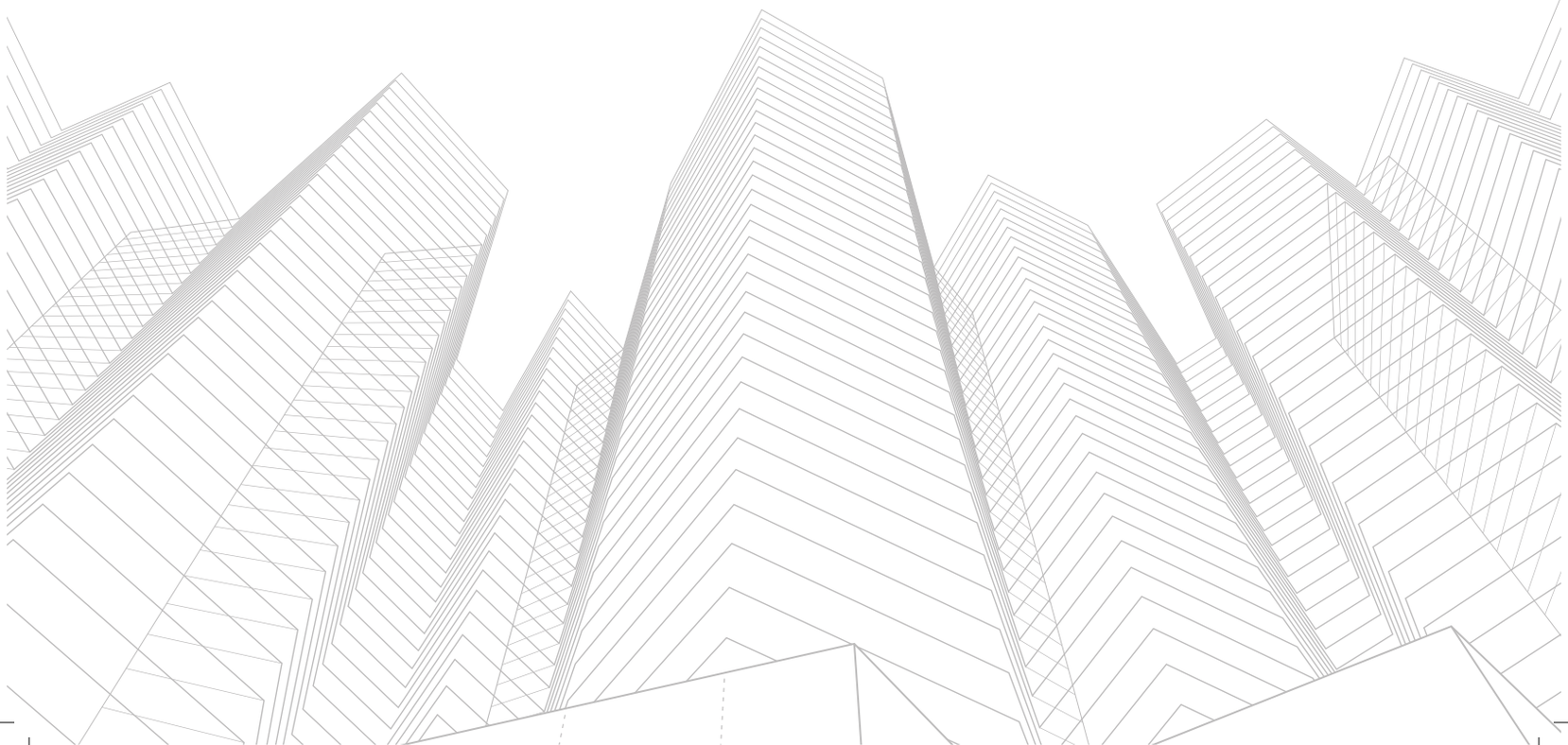
The next section introduces and explains these and other contract structures used to develop (or manage) infrastructure, so as to analyze which are PPPs and why. Other contract structures that are sometimes confusingly referred to as PPPs are also examined.

Subsequent sections will provide further information on variations and types of PPPs, clarify terminology (Section 3), offer refinement of the scope of assets for which PPPs are commonly used as a method for procuring new infrastructure (Section 4), and provide a description of the typical structure of a PPP.



Box 1.6. Key points regarding the introduction to the PPP concept

- A PPP is an option to procure infrastructure (infrastructure PPPs) and services (service PPPs) in partnership with the private sector, which may provide some incremental benefits in addition to being a means to access private financing for the promoting governments.
- PPPs can also be seen as mechanisms to promote the economic development of countries.
- The focus of this PPP Guide is on PPPs as a tool to develop new infrastructure (or upgrades) in an efficient manner. Specifically, the PPP Guide focuses on PPPs relying on significant private finance (private finance PPPs).
- There is no universal definition of PPPs, but there is a reasonable consensus on some key features that need to be present if a contract is to be regarded as a PPP: long-term contract, significant transfer of risks and responsibilities from the government to the private sector, and remuneration linked to performance and/or demand for the services of the infrastructure asset being built.
- PPPs may be classified as user-pays PPPs (funding of the payments is based on charges to users – for example, tariffs) or government-pays PPPs (funding of payments is based on the public budget).
- PPPs may be referred to using a variety of terms, the most common alternative nomenclature being concessions (for user-pays PPPs) and availability payments (for government-pays PPPs).
- PPPs are not the same as privatization, which involves the permanent transfer of public assets to the private sector.



2. Private Participation in Public Infrastructure and Services: What is and is not a PPP

Important note: "Infrastructure" is used in this PPP Guide in the broad sense. This includes not only complete systems or facilities with significant civil works, but also equipment (for example, rolling stock for rail) and plants (independent power producers, wastewater treatment plants, and so on) where the civil works may be less relevant. For the purposes of this PPP Guide, infrastructure includes social infrastructure (such as hospitals and schools) as well as economic infrastructure (those that relate to water, energy, transport and telecommunications). This PPP Guide uses "infrastructure," "public asset," and simply "asset" interchangeably to refer to the public asset to be developed and managed under the PPP contract. See Section 3 for a further description of the infrastructure term and examples of PPP assets.

This section introduces and explains the main contexts and potential examples of private participation in public infrastructure (see Figure 1.1) with the aim of contextualizing the PPP approach. It includes not only procurement options for contracts, but also other contexts in which the private sector may be managing public infrastructure or providing services that may be regarded as public (privatizations and similar situations).

Private Participation in Infrastructure (PPI)[12] is not a synonym for a PPP. The PPI concept includes other forms of private involvement in the delivery and/or management of public infrastructure.

The section will explain which of these procurement options and contexts for private participation may be regarded as PPPs and which may not. It describes the following:

- Infrastructure procurement options that are not regarded as PPPs.
- Infrastructure procurement options that may be regarded as PPPs.
- Contracts for managing services or existing infrastructure.
- Other private involvement in public infrastructure and services.

PPPs as a broad concept are an option to procure and/or manage infrastructure (including systems, facilities, equipment and plants) and related services, that is, the term implies the existence of a contract and the specific intention by a government to contract out the development and/or management of infrastructure or service.

[12] Private Participation in Infrastructure projects (PPI projects) is a term frequently used by a number of institutions to mean any modality of private investment and/or private management of infrastructure. For example, the PPI database of the World Bank Group (http://ppi.worldbank.org/about-us/about-ppi) includes PPP projects, but also other projects and contracts with private participation that are not regarded as PPPs.

Only a procurement contract can be a PPP, and only when all the features described in Section 1 are met (with the exception of significant private finance, which is the distinctive feature for private finance PPPs). Therefore, mere private sector involvement alone does not constitute a sufficient reason to describe an arrangement as a PPP, nor does the presence of a complete scope bundled in one single contract, or the provision of finance by the private sector. The nature of the revenues does not constitute a decisive factor either, as there are many forms of contractual and non-contractual arrangements in which revenue may come either from users or from the public sector budget.

Schemes to deliver, finance and manage infrastructure

This section explains the contractual schemes used to deliver, finance and manage infrastructure, as well as other contexts of private participation. These methods show the differentiating factors of a PPP route or model of procurement for contracting infrastructure development and management, which are summarized in Table 1.2.

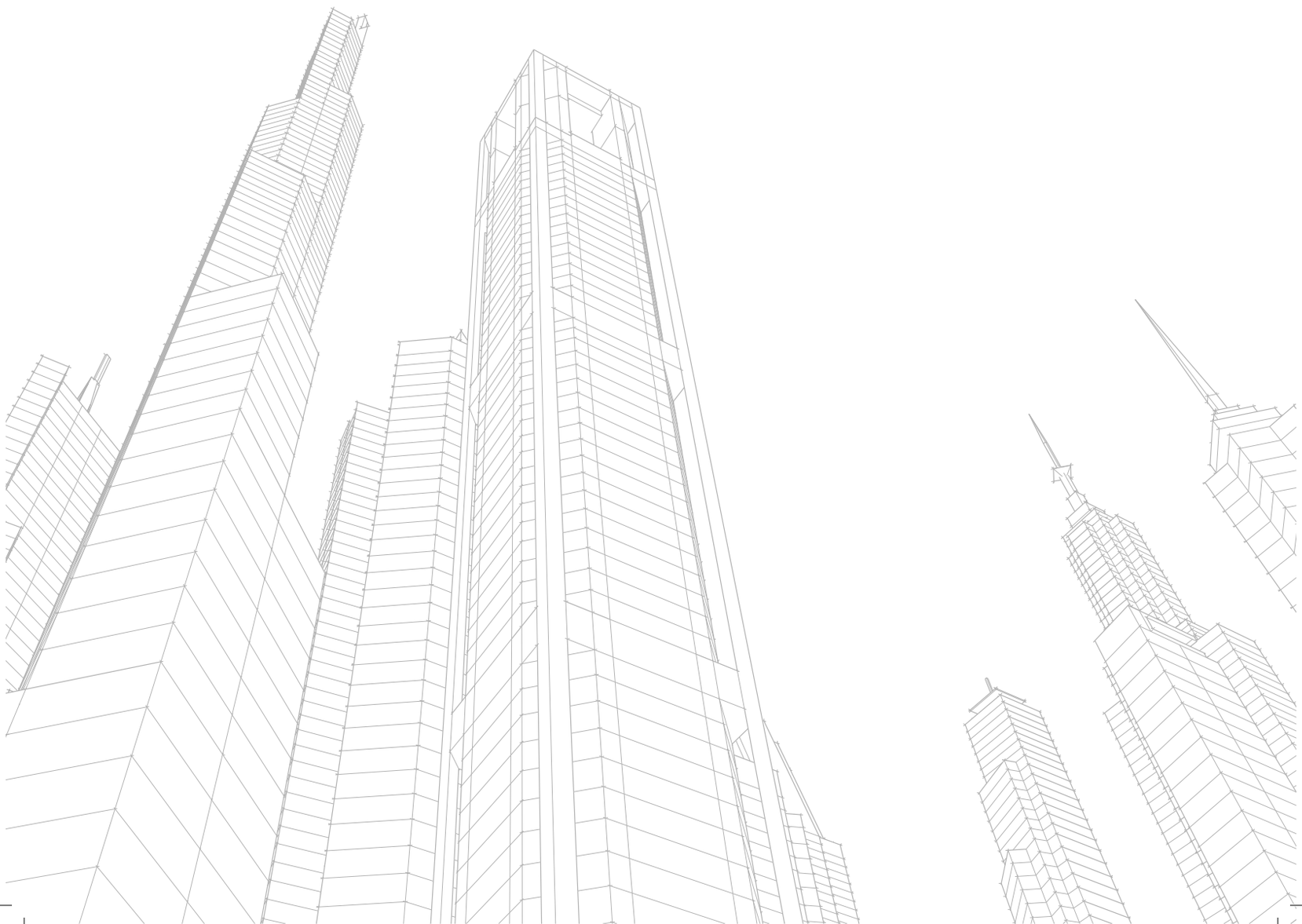
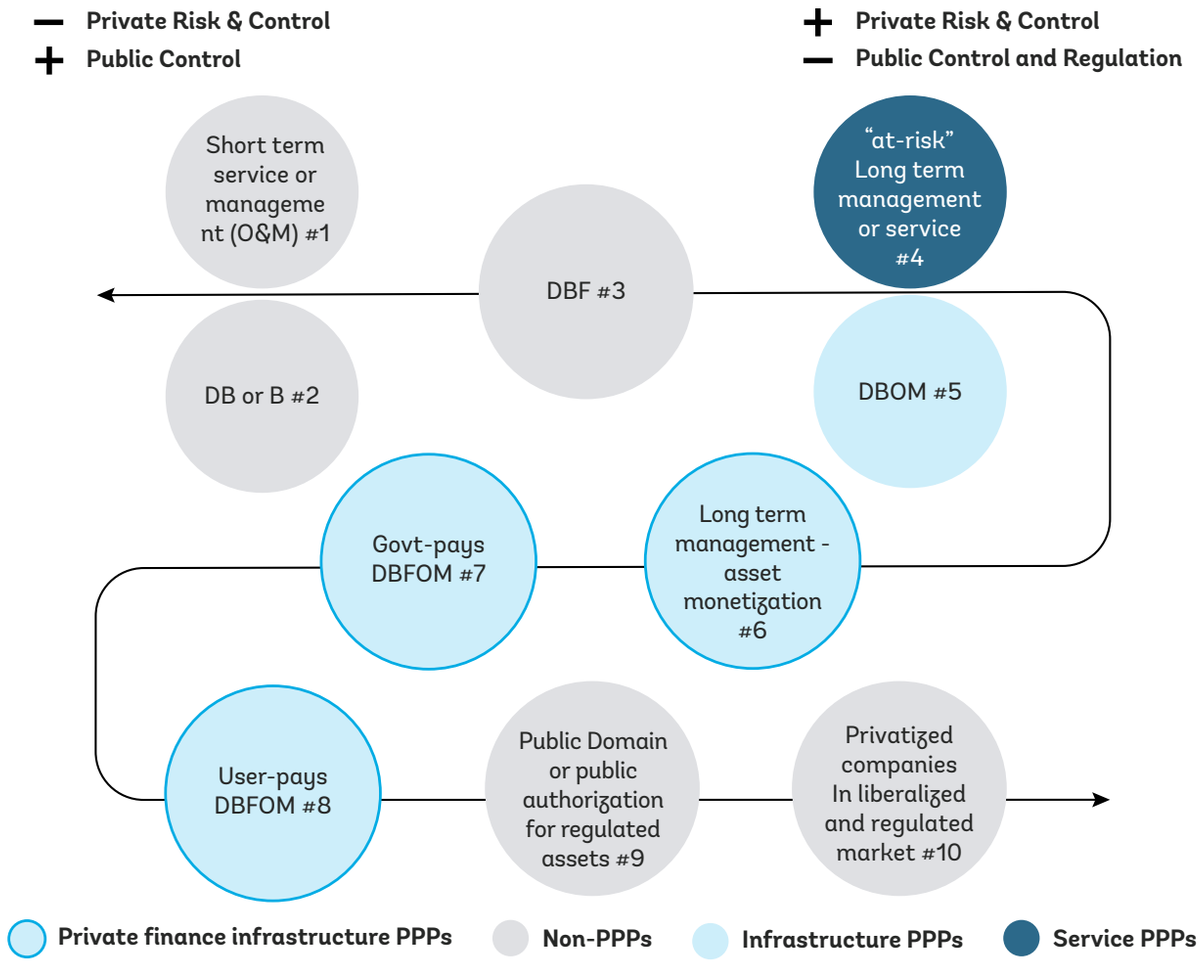


Figure 1.1. Spectrum of private participation in public infrastructure and services



#1 O&M two-year contract for a road.

#2 Contract for design and build, or build only, of infrastructure (for example a road, a rall track, an entire rall system).

#3 As in #2 but having the contractor pre-finance the works against future payments.

#4 10-year contract for managing a water supply service, 15-years contract to manage bus transport operations in a city, 15-years contract to manage renewals and ordinary maintenance in a road, under fixed price and quality deductions. Sometimes named lease, affermage, concessions...

#5 contracts for delivering an asset where contractor will also provide maintenance for a number of years.

#6 30-year lease or concession to operate an existing toll road against the payment of an upfront fee, or to operate a water system in a city.

#7 25 DBFOM contract to build, finance and manage a hospital facility/building, or school, a road or a WWTP, etc. Being compensated by performance/availability payments. A power purchase agreement (PPA) In an Independent Power Project (IPP).

#8 DBFOM 30-year contract of a road compensated by charges to users collected by the private partner, or a concession of water supply where extensive refurnishment and upgradings of Infrastruture and plants.

#9 A concession to use the land in a port location to develop and operate port related facilities for 99 years at the entire risk of the developer, an authorisation to develop a renewable energy IPP to be compensated according to a regulated price subsidised according to renewable energy regulations

#10 A telecom operator, or electricity distributor that competes for the clients/users under some limits/regulations.

2.1. Infrastructure procurement options that are not regarded as PPPs

Traditional procurement of infrastructure: public finance and public management

Build and Design, and Build contracts

Public works and public infrastructure are traditionally financed by the government. The source of funds for such traditional procurement is the public budget.[13]

The public sector may raise debt/funds for specific projects. However, this is not the most common approach. In the majority of jurisdictions, public debt is managed under the "single-till principle" (that is, borrowings are for the general purposes of government, not tied to specific projects).

Furthermore, in the past, many governments had their own means for delivering public works, including their own equipment and personnel. Today, practically all public works are constructed by separate corporations that are, in most cases, contracted under a public tender. Some public corporations do exist, but even in those cases most of the works are carried out by private corporations under subcontracting schemes.

Traditional procurement usually takes one of the following forms:

- Build-only (B) contracts, in which a design has already been completed by a different entity and a contract is tendered to build the infrastructure asset.
- Design-Build (DB) contracts, in which a single contract is tendered for both the design and construction of the infrastructure asset.

In some countries, B or DB contracts may also be referred to as an Engineering, Procurement and Construction (EPC) contract, especially when the asset to be built consists mainly of a plant. Another term that may be used to refer to the same scope of contract is Turnkey contracts, in which the price and construction term are fixed.

When infrastructure is procured by conventional or "traditional" means, the procuring authority pays for the works against its budget and assumes the entire responsibility of the asset once construction is completed (see Figure 1.2). Payments are usually made as work is progressing, and at the stipulated price (or subject to revisions). The contractor may be responsible for fixing defects at its own cost during a short period and may provide security (such as a bank guarantee) in respect of its liability for defects. The contractor may also remain responsible for hidden defects over a longer period, but with no security provided during this period.

The ordinary maintenance tasks are usually contracted out to a private party through a separate contract. However, long-term management or life-cycle management (and related risks) remain a direct responsibility of the government, public agency or corporation created for that purpose. Renewals and major maintenance will usually be contracted and funded by the government or such agency as and when needed.

[13] Note that in some countries, governments establish specific taxes for funding transport infrastructure (typically roads), usually structured as levies charged on oil consumption. In other cases, funding may be based on specific charges to the users of the infrastructure, which may be used to finance the costs of the infrastructure through different financial and public corporate structures, with the infrastructure still being procured under a conventional method. For example, a SOE may raise finance against future toll revenue and contract out the construction of the road under a DB scheme.

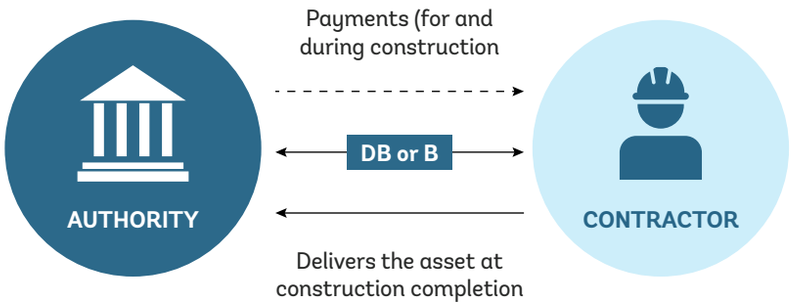
B or DB contracts do not incentivize the contractor to care about the long-term quality and resilience of the asset. However, the contractor does have a clear motivation to increase profits by either reducing costs (and hence compromising quality) or claiming extra payments (for example, for government variations to the scope of the contract). The risk of reduced quality or increased costs for the public sector may only be controlled with intensive quality assurance oversight and/or a natural inclination for being highly prescriptive in defining the technical requirements.

However, B or DB contracts may be appropriate options for developing infrastructure in many instances, provided that the public sector:

- Has the skills,
- Knows clearly what it wants as a technical solution,
- Prefers to retain the maintenance responsibility over the life of the asset, and
- Has available funds from the budget to pay for the works

There is not a universally preferred or best procurement option for any infrastructure, but each project will demand a specific procurement route as the optimum.

Figure 1.2. Basic scheme of a Design-Build or Build-Contract



Works are financed by the public sector. Payments for the works are received by the contractor as work progresses (funded by the budget) and the asset is received by the Authority at construction completion.

Service related flows Contract realationship Cash related flows

Note: B=Build; DB=Design-Build.

Design, Build and Finance (DBF)

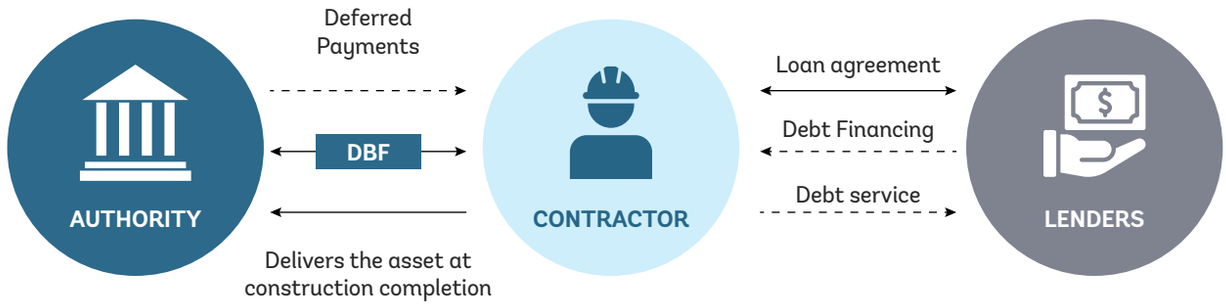
A DBF contract is similar to a DB contract in that the government receives the asset once construction is completed. The government also retains the responsibilities and risks related to the state of the asset in the long term.

However, in a DBF contract, the government does not pay directly for the works but defers the payment, making the contractor a "de facto" lender. A DBF contract may be regarded as a variation of traditional procurement, with the variation being the timing of payment given the fact that the private contractor is funding the construction costs. In this sense, the contractor is acting not only as the construction contractor, but also as a lender to the public sector. The lending is often indirect, as ultimately the funds will be provided by a lending institution — such as a bank — against a pledge on the right to receive the government payments (see Figure 1.3), or even buying at discount without recourse to those future payments.[14]

The payments are not made until the end of the construction period, that is, at the commissioning stage. It is usually in a number of fixed installments over a number of years, for an amount offered by the successful bidder (which includes the construction costs and the financing costs).

Although the private sector is providing finance to develop the infrastructure, that financing is not materially subject to project performance risk — only construction risk. So, it is not regarded as private financing for the purpose of this PPP Guide. Also, this procurement method is usually considered as public finance under many national accounting regulations.[15]

Figure 1.3. Basic Scheme of a Design, Build and Finance (DBF) Structure



Works are financed by the contractor (usually by a bank) against the future payments granted under the contract by the public party, usually under a fixed calendar of payments. Public party takes over the infrastructure at construction completion (as in a B or a DB).

Service related flows **Contract realationship** **Cash related flows**

Note: DBF=Design-Build-Finance.

[14] Rather than financing the works through a loan subscribed by the contractor and to be repaid with the installments of payments from government, it is not uncommon that the financing is structured by means of the sale by the contractor to the lender of the right to receive those payments, a sale that is usually without recourse (or with limited recourse that is waived when construction is completed). These structures are also known as forfaiting.

[15] Any country that follows any of the international standards on government accounting and fiscal reporting will/should regard this structure as public finance, that is, consolidating in government accounts the asset and the liabilities, as the asset is completely under the control of the procuring authority who assumes full ownership of the assets and all risks related once constructed. See Chapter 4 for statistical information and national accounting as to when an asset and related liabilities are regarded as public according to some standards.

The aim of this procurement option is usually for the public sector to bridge a short-term restriction of funds. There may also be benefits in the provision of the finance, as the debt is dedicated to the asset (hence the financer provides an additional layer of due diligence for the project, but only with respect to construction risks). There is potentially a greater transfer of construction risk than in a B or DB contract (basically the risk of construction delays) as long as payment for the construction works will only come (in cash terms) once the work is completed.

This feature may provide benefits in terms of efficiency (especially the reliability of the proposed construction term) provided that payments are to some extent conditional upon construction completion and commissioning.

The government should consider whether the potential benefits of the DBF contract will offset the higher cost of the financing. Even though there is a very limited credit risk in the scheme (basically related to construction term considerations), there will be an interest rate premium over the cost of direct public debt raised by the public sector.

As in a DB contract, in a DBF contract there is no natural incentive for quality construction. However, as noted, there still may be a perverse incentive for the contractor to maximize its margin during construction because the payments are not linked to the performance of the works or future service, and the long life-cycle cost of the infrastructure is not managed by the contractor but retained by the public sector.

There are some countries that regard DBF contracts as a type of PPP (sometimes referred to as a method of "innovative financing"), based on the financing characteristic and the ability to transfer more construction risks. However, for the purpose of this PPP Guide, a DBF is not regarded as a PPP.

In any case, a PPP may not be the most appropriate option to procure a particular infrastructure project, but a DBF contract may offer some advantages and benefits to the public authority, compared to a purely conventional DB or B contract.

2.2. Infrastructure procurement options that may be regarded as PPPs

Design, Build, Operate and Maintain (DBOM)

There are some contracts which are financed by the government against the budget (such as a conventional procurement) but in which the selected contractor will carry out the design, construction works, future operations, and maintenance.

These contracts are referred to as DBOM (Design, Build, Operate and Maintain). If the contractor is not responsible for operating[16] the infrastructure, the contract is usually referred to as a DBM. Under a DBOM contract, maintenance work is pre-contracted and is paid for directly by the government at a pre-agreed price. See Figure 1.4.

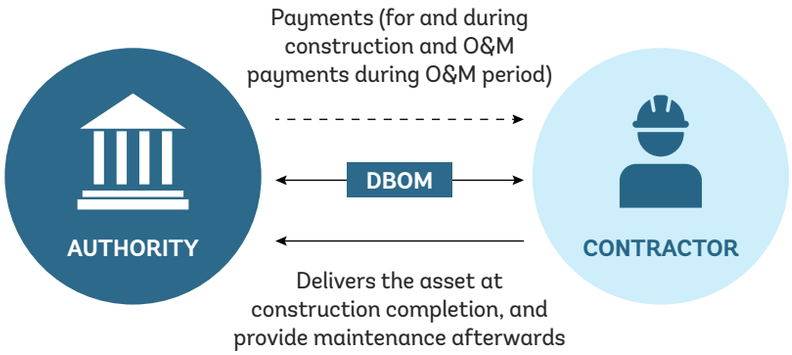
[16] Operations may be understood in a narrow sense (linked to collection of fees, sometimes referred to as commercial operations) or in a broad sense. In the latter case, the term includes other obligations and responsibilities that allow the infrastructure to be available for use and are not necessarily only maintenance activities in the strict sense of the word. For example, for a road project, the clearance of accidents, or the service of removing snow (winter viability service). Many jurisdictions, and common practice, use the term "operations" for all the activity concerning the availability of service, even if this is mostly related to maintenance activity.

A DBOM contract (as opposed to a private finance PPP) is still financed by the public sector, that is, construction work is paid for directly as work progresses. The Operation and Maintenance (O&M) price is closely tied to the performance of the O&M work and paid for in a separate stream. However, there may still be incentives for the contractor to reduce quality in construction as a way to save costs and increase margins, all of which need to be carefully controlled.

The risk of unexpected maintenance costs can be transferred to the contractor in a limited manner, usually by means of liquidated damages. Nevertheless, the main portion of the maintenance risk, which depends on the proper design and construction of the asset, usually remains in the hands of government.

The incentives for the contractor to properly perform the works and deliver high construction quality may be limited. However, due to the absence of capital at risk, if maintenance risk is transferred to the contractor, together with construction risks, a DBOM contract may be close to the PPP concept in terms of scope and potential efficiencies[17] (for this reason, many countries regard a DBOM contract as a type of PPP).

Figure 1.4. Basic Scheme of a Design, Build, Operate and Maintain (DBOM) Structure



Works are financed by the public sector. Payments for the works are received by the contractor as work progresses (funded by the budget) and the asset. There after the contractor (considered here as a private partner) provides maintenance (or operate and maintenance and is paid an O&M price for it). Works may be received by the Authority at construction completion or at the end of the contract depending on the jurisdiction and project.

Service related flows **Contract realationship** **Cash related flows**

Note: O&M= Operations and Maintenance.

The government may choose to deliver a project as a DBOM if it considers that the benefit of a more integrated management approach will exceed the loss of efficiency incurred. This loss is inherent in giving up the possibility of running a separate competition for the future O&M contract. This choice tends to occur when the project specifics and financial context are not sufficient to justify a private finance PPP (usually a DBFOM contract, as will be explained below).

[17] Section 7 explains the motives for, and advantages of, PPP — only achievable for the right projects and under the right preparation and structuring process, as is explained later in this chapter.

DBFOM contracts

In a DBFOM contract, the contractor will develop the infrastruture with its own funds and funds raised from lenders at its risk (that is, it will provide all or the majority of the financing). The contractor is also responsible for managing the infrastructure life cycle (assuming life-cycle cost risks), in addition to current maintenance and operations. To carry out these tasks, the contractor (a private partner in the PPP context), will usually create an SPV (Section 6 explains infurther detail the structure of a PPP under a DBFOM contract type, its agents and main relationships).

The contract is often referred to as a DBFM when operations are not included in the scope of the contract.

DBFOM (and DBFM) contracts (and other equivalent terms such as Build-Operate-Transfer [BOT], Build-Own-Operate-Transfer [BOOT], Build-Transfer-Operate [BTO] and so on — see Section 3.2.) are the only type of contract (in terms of scope) that fulfill all of the conditions required to be a private finance PPP. However, whether a DBFOM contract may be regarded as a true private finance PPP depends upon the effectiveness of risk transfer and the nature of the links between the performance and revenue, as some DBFOMs may represent a DBOM with financing provided by the private party without the investors taking on any material risk. If there is no material risk transfer to the investors, the project will provide a similar VfM outcome to a DBOM rather than a DBFOM contract.

DBFOM contracts based on user payments (user-pays PPP or a concession)

When authorities decide to charge for the use of infrastructure, the potential revenue to be generated by such a public asset or infrastructure may be used in several ways. It may be used as revenue for the general budget, as a source of funds for the funding needs of the particular sector (for example, the eurovignete approach in some European Union [EU] countries), or even earmarking the revenues to the specific system that generates them (for example, water supply system revenues in a city, tariff revenues generated by a public metro operator in a city, or toll revenues generated by the government's own highways — as is the case of the Turnpike enterprises in some states in the United States).

The future revenues to be generated by a new investment/asset may also be earmarked to the specific project investment, assigning those revenues to a specific new company or SPV established by the private sector partner.

Funds coming from users may be sufficient to cover O&M expenses and long-term maintenance with a surplus that can then be used as a source to repay the financing of the construction of the asset.

A contractual assignment by a public administration to a private party of future/potential revenues associated with the public use of public infrastructure as a means to fund the procurement of the infrastructure and related services is a user-pays PPP. User-pays PPPs are also known as concession schemes, especially in civil code-based countries.[18]

[18] In civil code countries, concession may be applied to both DBFOM contract types and service contracts, or contracts granting the right to operate an existing asset. For existing assets, common law countries also use the term "lease". See Section 3 for nomenclature clarifications.

A user-pays Public-Private Partnership (PPP) used to finance, deliver, and manage infrastructure is a type of contract that encompasses Design, Build, Finance, Operate, and Maintain (DBFOM) in an integrated manner. In this arrangement, the financing is private and typically considered private finance under national accounting standards. The primary or sole source of revenue comes from the right to commercialize the use of the asset, meaning that all or the majority of the revenues are generated from the users. See Figure 1.5.

In these contracts (in the context of procuring new infrastructure or significant upgrades), as opposed to the conventional procurement described above, the private partner will not only construct (and likely design) the works, but will also operate and maintain the asset under a long-term contract (in addition to financing it at its own risk — with exceptions discussed later in this chapter).

The private partner will recover its investment through the user payments and will use these payments to repay debt and provide returns to investors through the form of equity dividends and/or repayment of shareholder loans. The private partner will remain the economic owner of the asset during the life of the concession contract. This means that the private partner will have to maintain and renew the asset at its own expense and risk, without the ability to make claims on the public party (with exceptions inherent to a proper risk allocation scheme).

If and when the expected revenues surpass the revenue needed to provide a minimum level of return to the private party, the user-pays PPP structure may include some form of revenue sharing in the form of a payment from the private party to the procuring authority (see Chapter 5.4).

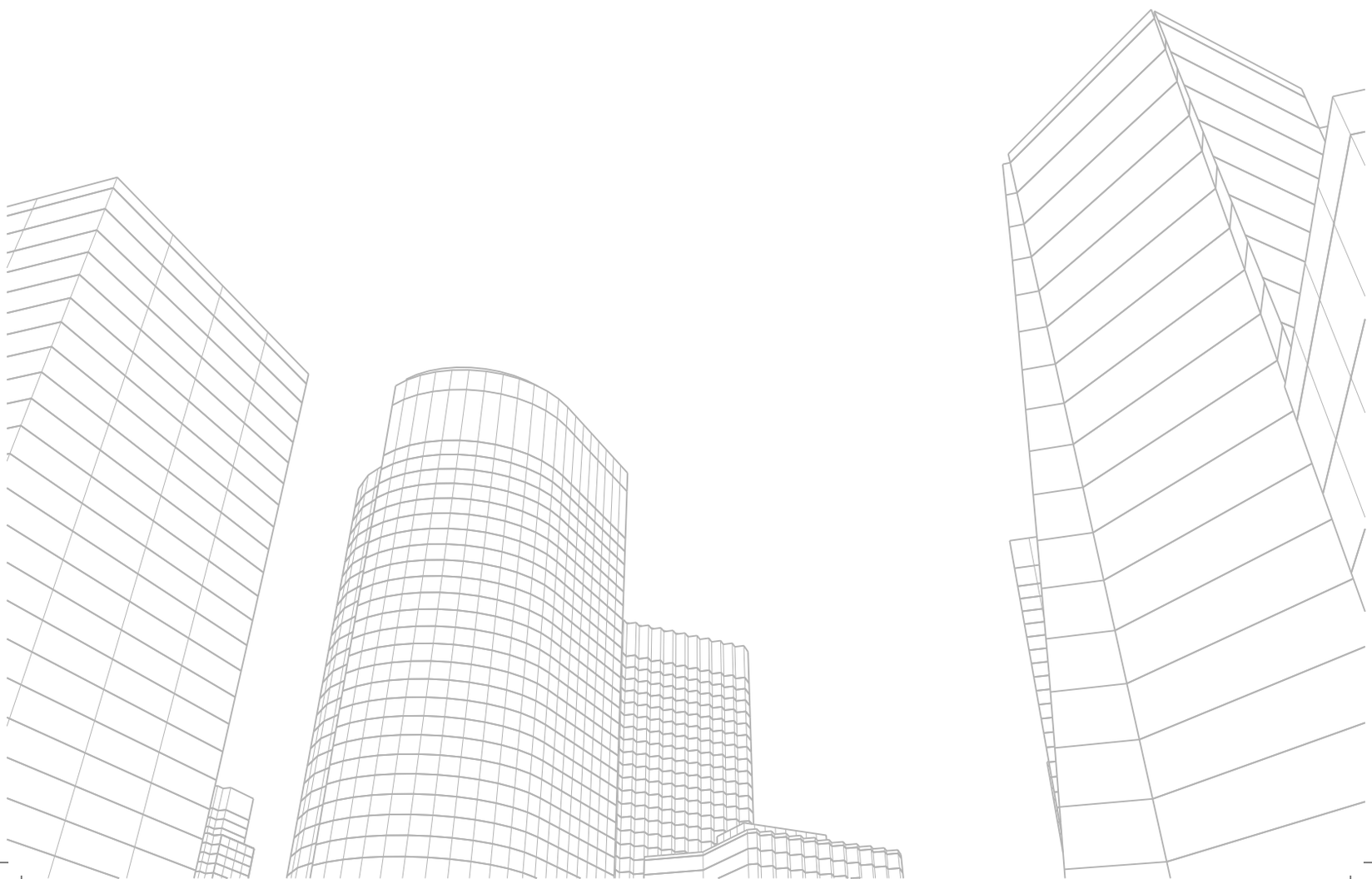
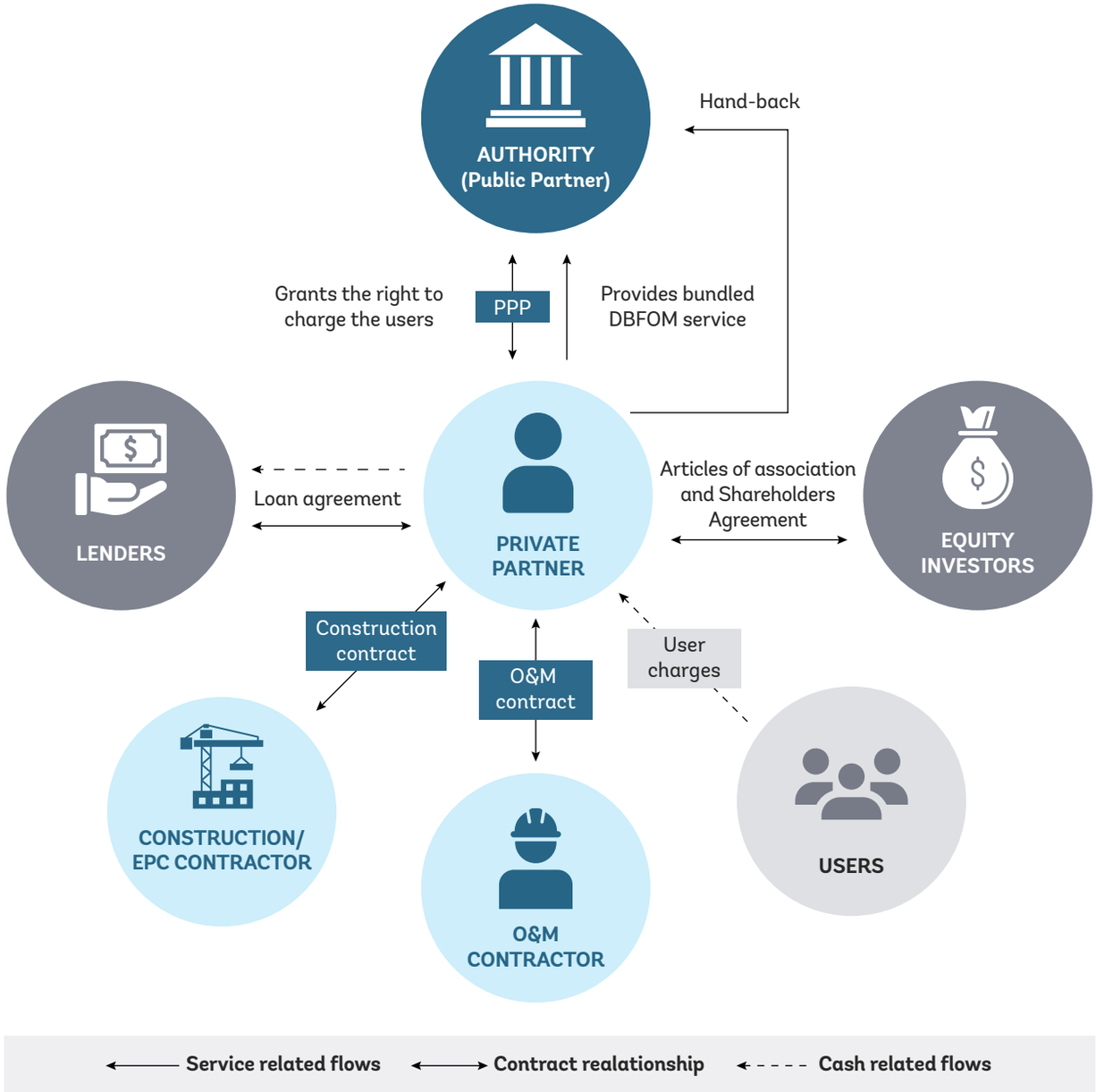


Figure 1.5. Basic scheme of a DBFOM contract structure (user-pays)



Note: DBFOM=Design, Build, Finance, Operate and Maintain; EPC=Engineering, Procurement and Construction; O&M=Operation and Maintenance; PPP=Public-Private Partnership.

Conversely, it may happen that the user revenues are not enough to offset all of the financing obligations as well as the O&M costs that is, the project is not financially viable. However, if the project is still regarded as a sensible and valuable project solution (that is, it generates sufficient economic and social benefits) for the public/taxpayer, the government may be keen to fill the "viability gap" under a variation of the DBFOM scheme (see Box 1.7 below).

Apart from the standard form of user-pays PPP described above and the co-financing variation, there is another relevant variation in the DBFOM scheme — the public-private mixed equity company or public-private joint venture ("empresa mixta"). See Box 1.7 below.

Box 1.7. User-pays PPP variations (including Hybrid PPPs)

Co-financing and hybrid schemes in concessions which are not self-financing: viability gap funding.

A concession as a means to procure and finance new infrastructure requires the existence of a margin or benefit in terms of revenues in comparison to the construction and O&M costs, that is, the project should generate a surplus of revenues over construction and O&M costs that may be used to amortize the financing applied to the asset and generate a return for the private investor.

However, the revenues, and therefore this surplus, may not be enough to offset the private partner's financial obligations and provide a return on its equity. This situation is referred to as a financial or commercial viability gap.

This gap can be potentially filled by public financing, usually in the form of grants (co-financing schemes) or by means of complementary budgetary payments linked to performance, that is, viability gap funding.

Typical sectors/project types where user revenues are usually significant enough to fund most or all of the needs of the project are roads, airports and ports. Also, some telecom and water projects can also generate sufficient revenues to ensure the financial viability of the project.

However, in those projects where user revenues are insufficient to fund all of the needs of the project, public sector co-financing and other forms of revenue support may be needed to fill the viability gap.

There are some sectors and project types that generate user-based revenues which will almost never cover the funding needs for the infrastructure project to be financially viable. This is typically the case for infrastructure rail transportation, due to the combination of highly intensive capital needs with socially subsidized prices, in which co-financing and hybrid payment regimes (mixing user charges with availability or service payments) are a standard feature.

Other forms of hybrid PPP structures can also include the use of capital subsidies or viability gap financing to buy down capital costs to enable financial viability.

Note that co-financing may be used even when a user-pays project is self-viable for other reasons. Co-financing is further explained in section 7.5 in this chapter and with greater detail in Chapter 5.4.

Box 1.7. User-pays PPP variations (including Hybrid PPPs) (cont.)

Mixed-equity companies, joint ventures, and institutionalized PPPs[19]

It is not uncommon to see PPP contract structures where the government participates in the equity of the PPP project company that will act as the private partner. However, these structures will vary significantly depending on the extent of the government equity participation, the rights and degree of participation, and the influence that the government reserves for itself in the management of the project company.

Many of these structures are referred to in some countries as mixed equity companies (or "empresas mixtas" in Spanish-speaking countries) or as joint ventures (between public and private partners) in others. The EU Commission uses the term institutionalized PPPs.[20] They may be also referred to informally as institutional PPPs when the government retains the control of the project company, and usually holds the majority of the shares (see "Public-Private Partnerships and Institutional PPPs (controlled by the procuring authority)" below).

This PPP Guide uses the terms joint venture, joint equity companies, mixed equity companies, and institutionalized PPPs as synonyms to refer to contract structures where the government retains a material equity participation in the company as a shareholder, has a presence (with voting rights and commensurate to their equity shares participation) on the SPV board, and participates actively in the management of the company (for example, with the ability to designate high-level staff). The equity participation is held either directly by the government/procuring authority or by a public entity in charge of the area of service related to the PPP contract.

Conversely, when the government participation is represented simply by a minority stake in the equity shares, with no right to influence the management beyond the rights usually enjoyed by a minority shareholder acting under market standards, it is not customary to refer to the PPP structure as a joint venture or alike terms (while this may happen depending on the custom of some jurisdictions). The distinction between a joint venture and a "conventional PPP with government participation in equity" can be very subtle or even quite unclear, and sometimes may only reflect the legal nomenclature or conventional terminology used in the respective country.

[19] *Resource Book on PPP Case Studies* (European Commission, 2005) includes a number of European case studies of joint ventures in the water and transportation sectors. Of special note is case study 10 which describes an effective example of a German JV constituted in 1993 for the modernization of both infrastructure and management of the water supply service in the city of Schwerte.

[20] See *Green Paper on Public-Private Partnerships and Community Law on Public Contracts and Concessions*, Section 3. European Commission, 2004. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52004DC0327&from=EN

DBFOM Based on Government Payments (government-pays PPP or Private Finance Initiative [PFI])[21]

The preceding paragraphs explain how a user-pays PPP or concession is an alternative for financing and procuring infrastructure under a DBFOM scheme. A public authority or administration (the original and ultimate owner of the right to charge users for a public service or for the public use of infrastructure) endorses those rights to a party in exchange for that party's obligation to develop and construct the asset, provide the financing, and maintain the asset/infrastructure to certain quality standards on an ongoing basis.

The previous section explained that when user revenues are significant but not enough to entirely fund the project, the project may be made viable by means of grants or complementary payments from the government.

However, if there is no revenue from users (for instance if there are no final users to be charged) or the potential revenue is insignificant in comparison with the capital needs (typical of rail projects) or the government wants to make the infrastructure available to users at no charge (for example, non-toll roads), a government may decide it wants to pursue one of the following options:

(i) The contractor assumes the integral life cycle of the infrastructure, that is, managing it from construction through to a renewal (or even more cycles); or

(ii) The contractor finances the works with its own funds; or

(iii) The contractor maintains and/or operates the infrastructure according to certain service levels or performance requirements during the life of the contract. This is usually based on the availability and quality of the infrastructure and service rendered from it; or

(iv) The contractor/investor will be paid for both construction and O&M only as long as, and to the extent that, the infrastructure is available under specified availability and quality standards.

As in the concession, the contractor derives revenue from the infrastructure. However, under a government-pays PPP, the revenue results from service provision to the grantor, providing a service related to the availability of use for the infrastructure, with the precedent conditions of design and construction, and an ongoing obligation to maintain and (usually) operate. In some of these projects the government is not the user (for example, for a toll-free road), and in other projects the infrastructure is used by the government or by public employees/servants (for example, a hospital to provide public health services, a prison operated by public officials, a court, or a school).

As in the case of user-pays PPPs, government-pays PPPs may include user revenues and/or other commercial revenues. When these market or comercial revenues are not predominant (that is, they do not represent the majority of the revenue), the PPP contract may still be properly considered to be a government-pays PPP.

[21] As noted earlier in this section, there are a number of countries (especially in Latin America) that reserve the term PPP only for government-pays contracts, referring to user-pays projects as concessions. In contrast, some other countries use the term "PFI" (which stands for Private Finance Initiative) for government pays PPPs.

Other variations applicable to user-pays PPPs are also present in government-pays PPPs: co-financing (see Section 7.4.) and "joint venture", although the latter variation is rarer in the case of user-pays PPPs.

A specific variation of a government-pays PPP occurs when users are charged with a toll or a tariff, but the user-revenue is intentionally left out of the revenue received by the private partner (see example in Box 1.8 below).

Box 1.8. The I-595 Road, an Example of a Government-Pays Toll Road PPP with Grant Co-financing

The I-595 road project promoted by the Florida Department of Transportation (FDOT) in 2008 consisted of a DBFOM contract for the reconstruction, widening, resurfacing, operation and maintenance of two roadways, as well as the construction, operation and maintenance of three reversible Express Lanes for one of the roads. The total project capital expenditures (capex) amounted to approximately $1.6 billion.

The private partner had the obligation to finance the majority of the infrastructure (against the right to receive availability payments once the infrastrucure was open to service), but FDOT also provided the project company with $685 million in deferred grants (not reimbursable) received in seven payments on dates established in the contract, or on the construction final acceptance date, whichever date was later.

In this way, FDOT used a part of its budget allocation during the early years of the contract, while enjoying lower yearly commitments related to the availability payments.

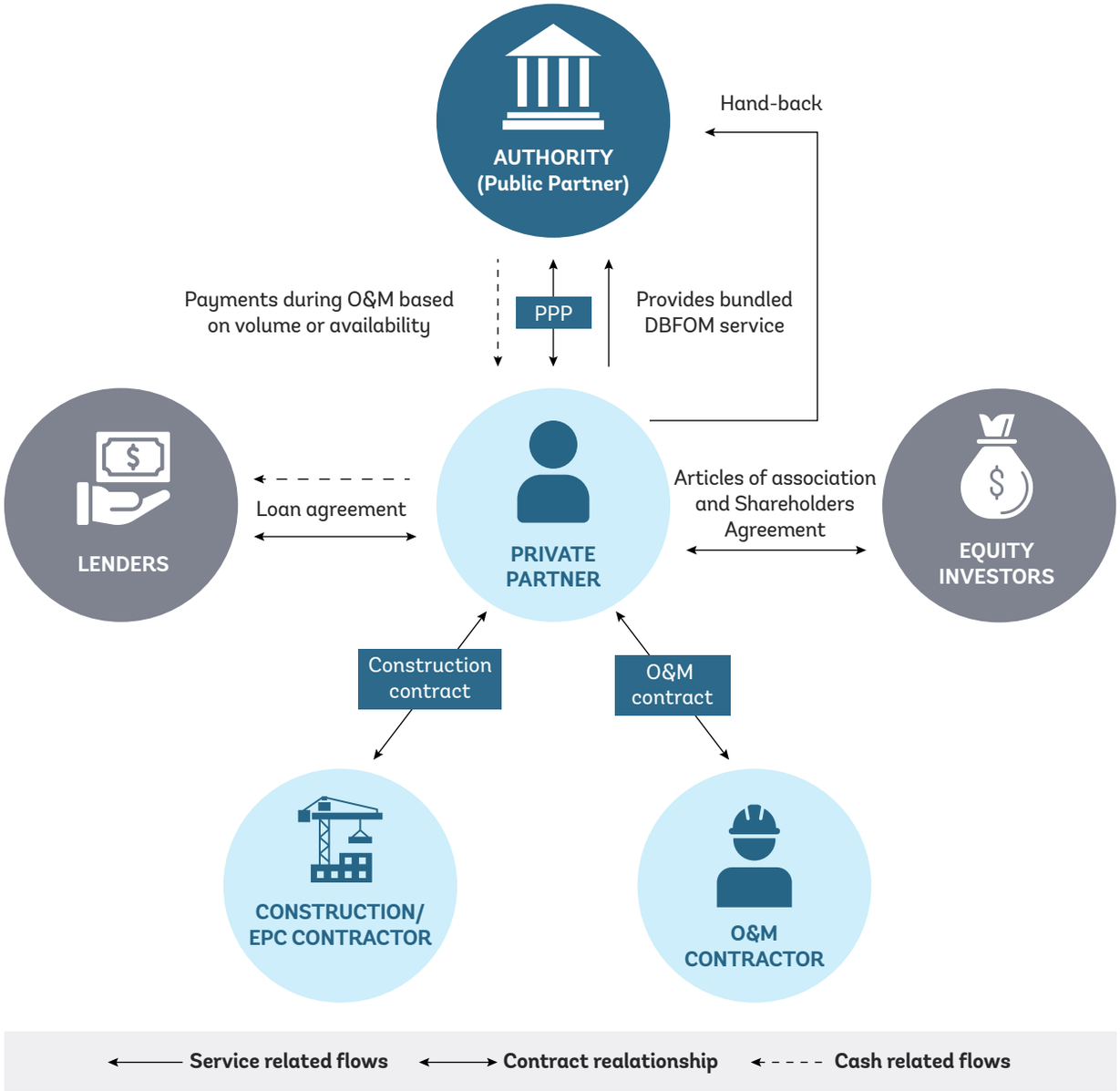
The infrastructure is subject to tolling. It was decided that traffic revenues remained the property of FDOT (and therefore at its risk). FDOT would then use the traffic revenues to partially or totally offset the availability payments to be made to the private partner, rather than transferring them to the private partner as a source of revenue. That would allow for higher flexibility for FDOT in terms of a tolling strategy, which was a sensitive issue as it was used as a dynamic tolling system with the main aim of managing traffic congestion. It was considered that, if the private partner collected tolls rather than receiving availability payments, there could be a conflict between the government's objective of managing congestion and the private partner's motives for maximazing revenues.

A description of other features and drivers of this PPP project may be found in various case study papers and articles.[22]

Figure 1.6 illustrates the DBFOM basic structure for government-pays PPPs. A more detailed figure and explanation of the structure (both for user pays and government pays) is provided in section 6.

[22] See "Paving the Way: Maximizing the Value of Private Finance Infrastructure", World Economic Forum, 2010; and "I-595: North American Transport Deal of the Year" – Infra-*structura* Magazine, Deloitte, July 2010. Project websites: http://www.i595express.com/ and http://www.595express.info/

Figure 1.6. Basic scheme of a DBFOM structure (government-pays)



Note: DBFOM=Design, Build, Finance, Operate and Maintain; EPC=Engineering, Procurement and Construction; O&M=Operation and Maintenance; PPP=Public-Private Partnership.

Public-Public Partnerships and Institutional PPPs (controlled by the procuring authority)

Governments can create ad hoc government owned companies (State Owned Enterprises or SOEs) to construct, finance, and manage infrastructure, usually on the basis of revenues generated by the infrastructure or the service provided by the infrastructure (such as road tolls, public transit tariffs, and user charges/tariffs for water supply services).

When a public corporation is created specifically to develop, finance, and manage infrastructure under a DBFOM contract from the government that owns that corporation and that has approved the project (or such a DBFOM structure is implemented by an existing SOE), the arrangement may emulate much of the financial and governance structure of a conventional (private) PPP vehicle. In this case, the contract structure may be sometimes referred to as a "Public-Public Partnership."

However, such structures are not regarded as PPPs by this PPP Guide: many service arrangements between governments and publicly-owned companies do not involve a contract in the strict sense of the word, but rather a general public authorization and assignment of economic rights to a government corporation or SOE. When these schemes involve a specific (in a narrow/strict sense) contract with delimitations of rights and responsibilities (including a defined term), they may benefit from project finance techniques (with lenders acting as financiers based primarily on the quality of the asset); however, there are reasonable doubts there is a real risk transfer to the private sector of the economy.

An example is the public service contract structures developed by the European Bank for Reconstruction and Development (EBRD) for upgrading urban transportation in some European countries. In these cases, the authority signs a public service contract with its public operator, which emulates many of the PPP features (in which public payments necessary to reach a financial equilibrium are to some extent based on or affected by performance). The authority also signs a Municipal Support Agreement (MSA) with the EBRD to reinforce its financial commitment to the project.[23]

However, a government may also procure a DBFOM type of contract to be assigned to a project company that is jointly owned by public and private partners (that is, a joint venture scheme), but where the government retains the control of the SPV (usually by holding the majority of the equity shares). These schemes, whether a joint venture or mixed equity company, are also commonly regarded as "institutional PPPs" (see Box 1.9 below).

This PPP Guide considers that an institutional PPP may only be regarded as a true private finance PPP when the private sector is significantly involved as an equity investor (with a significant portion of the equity shares) in the project company. Therefore, the private partner assumes the project risks, participates significantly in the management of the company and/or the infrastructure operations (for example, as a nominee contractor), and the debt financing is at risk of performance.

This PPP Guide is focused on conventional PPPs (privately owned or otherwise controlled by a private investor, and with potential minority stake shareholdership by a government body) and the PPP process, including contract structuring. The tender process and contract management described in this PPP Guide is dedicated to this conventional form of PPP (while most of the contents of this Guide are equally applicable to a joint venture scheme).

[23] See *Accelerating Infrastructure Delivery* (WEF 2014). http://www.weforum.org/reports/accelerating-infrastructure-delivery-new-evidence-international-financial-institutions

Box 1.9. An Example of an Institutional PPP: Madrid Calle 30

The Madrid Calle 30 (M-30) is the main ring road in Madrid and the busiest road in Spain. In order to accommodate future growth and manage congestion, as well as repair deteriorating parts of the road, plans were made to reroute parts of the traffic underground using a system of tunnels. The project includes 99 kilometers (kms) of new roads, including a 12-km tunnel segment in south Madrid that is the world's longest urban tunnel.

The total project cost is €4.5 billion ($5.4 billion). It is financed by long-term debt subscribed to by a pool of banks as well as equity provided by the city council and a private investor (who is in charge of the effective operation and maintenance of the project).

The project was structured as a 35-year DBFOM with availability payments between the city council and the project company. It is a joint venture ("Madrid Calle 30") between the municipality and a private consortia (Empresa Mantenimiento y Explotacion M 30 – EMESA, comprised of three private operators). The city council retains 80 percent of the equity (in addition to acting as the procuring authority), and the private partner owns a 20 percent share through EMESA. The joint venture company subscribes to the loan.

A public tender was issued by the city council to select the private partner to enter into ownership of Madrid Calle 30. The private partner had to commit 20 percent of the equity and enter into a back-to-back management contract (sub-contract) to deliver the operations and maintenance service (against a portion of the availability fees) that were contracted by the city council with the JV company.

Interestingly, the civil work contractors chosen to deliver the tunnels and upgrades of the ring road were selected under a separate process and were directly contracted by the mixed equity company (Madrid Calle 30).

The project was developed as a PPP with the intention of transferring it off of Madrid's balance sheet. However, due to a number of factors, especially insufficient transfer of risk according to Eurostat, it was finally treated as an "on the public (municipal) balance sheet" project, registering the value of the project as a public debt.

However, the structure seems to provide the right incentives for the private parties (private operators that are also significant equity investors in the project) to perform, and the service is generally well perceived by the public.

The project's website is: http://www.mc30.es

Source: Adapted from International Public-Private Partnerships synthesis report (Parsons Brinckerhoff commissioned by FHWA, 2013)[24]

[24] http://www.fhwa.dot.gov/ipd/pdfs/us_ppp_case_studies_final_report_7-7-07.pdf

2.3. Contracts for managing services or existing infrastructure

Contracts for the procurement of services or management of existing infrastructure can be divided into two categories.

- "At-risk" long-term management or service contracts that can be regarded as PPPs (these are service PPPs, not DBFOM contracts,); and
- Contracts that are regarded as conventional O&M or service contracts.

"At-risk" long-term management or service contracts

Contracts whose scope is only maintaining or operating infrastructure or a service may be regarded as PPPs (in the broad sense or according to the broad definition proposed by this PPP Guide), as long as they transfer significant risks, are performance oriented and have relatively long terms.[25]

Some examples of these types of PPPs are as follows (please note, the terms are only intended to be indicative):

- A 7-year contract to manage the tariff collection for a water supply service in a city, with performance penalties and bonuses (for example, based on increases in billing ratios);
- A 15-year public transport bus-operating concession where the PPP partner finances or renovates the fleet of buses and operates the service (including ticket collection). The revenue is based on the fare box plus subsidies, or on a service payment per kilometer;
- An IT management contract with a term of 7 years, where a public entity or governmental department contracts out the supply and maintenance of IT equipment and systems;
- A 12-year contract for the limited refurbishment and management of an existing public facility — including cleaning, catering, waste management, and maintenance (for example, a school, a public building office, and so on) — based on the payment of a rent in the form of availability payments, significantly subject to quality adjustments;
- A 10-year contract to manage waste collection services in a city under a fixed fee per year subject to quality deductions;
- A 10-year concession for the clinical services in a public hospital (usually including the medical equipment);
- A 10-year contract for street cleaning and gardening in a city, where the PPP partner is compensated by an annual fixed rent, subject to deductions based on Key Performance Indicator (KPI) targets.

[25] While there is not a universal consensus about when one may properly talk about the long term, contracts below 5 years are generally referred to as short term. For service management or maintenance, 2-4 years are not long enough to merit the concept of PPP as those terms do not allow for a proper transfer of risk associated with costs and results. Ten years is commonly regarded as long term, but 7 years and above may be regarded as a sufficient term for these types of contracts to be regarded as PPPs, although this is a question of judgement.

- A 10-year O&M contract to operate and maintain an existing toll road, where the private partner´s revenue is an agreed percentage of the toll collected, or a fixed amount subject to availability and/or quality deductions; and

- A 40-year concession to operate and maintain an existing toll road which is highly profitable (see Box 1.10 below).

Some of these projects include a material initial investment (for example, buying a new fleet for the bus transport service). The rationale for these contracts to be considered "management contracts" or "service contracts" rather than DBFOM is the relative amount involved in the initial investment/ financing. For example, for most bus concessions, investment is only in the renovation of a limited number of vehicles per year, so the predominant cost for government and the private partner is an annual cost.

As noted, consideration about whether something falls into the category of being a PPP is a question of degree and judgement, so any management contract where there is significant initial investment could easily be classified as a private finance PPP.

It should be noted that none of these contract examples should be regarded as a PPP when the revenue of the private counter party is on a cost-plus basis, reflecting the actual costs incurred rather than pre-agreed amounts. Payment on this basis transfers little, if any, risk.

Management Contracts

Management contracts do not share the long-term characteristics of PPPs. They are less complex than PPPs and leverage private sector expertise for service design and delivery, operations control, staffing, and equipment procurement, in which the private sector assumes certain responsibilities related to the provision of a service and does not assume commercial risk. The public sector retains ownership of assets (usually existing assets), while the private contractor is paid a fee to manage and operate services, typically on a performance basis (often through payment and penalties schemes).

Management contracts do not involve significant private capital investment and efficiency gains are therefore more limited than in PPPs as the private sector is not incentivized to invest for long-term performance. In addition, while the private contractor's profit may be at some risk, because there is no or limited private sector capital at stake, management contracts lack the disciplinary mechanisms typically found in PPPs. In particular, this includes lenders' due diligence and subsequent exposure of capital investment to performance risk (World Bank – Farquharson, Torres de Mästle, and Yescombe, with Encinas 2011).

Management contracts are typically short, usually two to five years. But longer periods are sometimes being used for large and complex operational facilities, such as ports or airports. Management contracts can be politically and socially more acceptable for certain projects (such as water and other strategic projects). They are also a useful tool when there is no willingness for the private sector to invest or where the government does not want to make a long-term commitment.

There are several different models of management contract (United Nations ESCAP, 2008),[1] including:

- Supply or service contract
- Maintenance management
- Operational management[26]

Short-term services and conventional O&M contracts

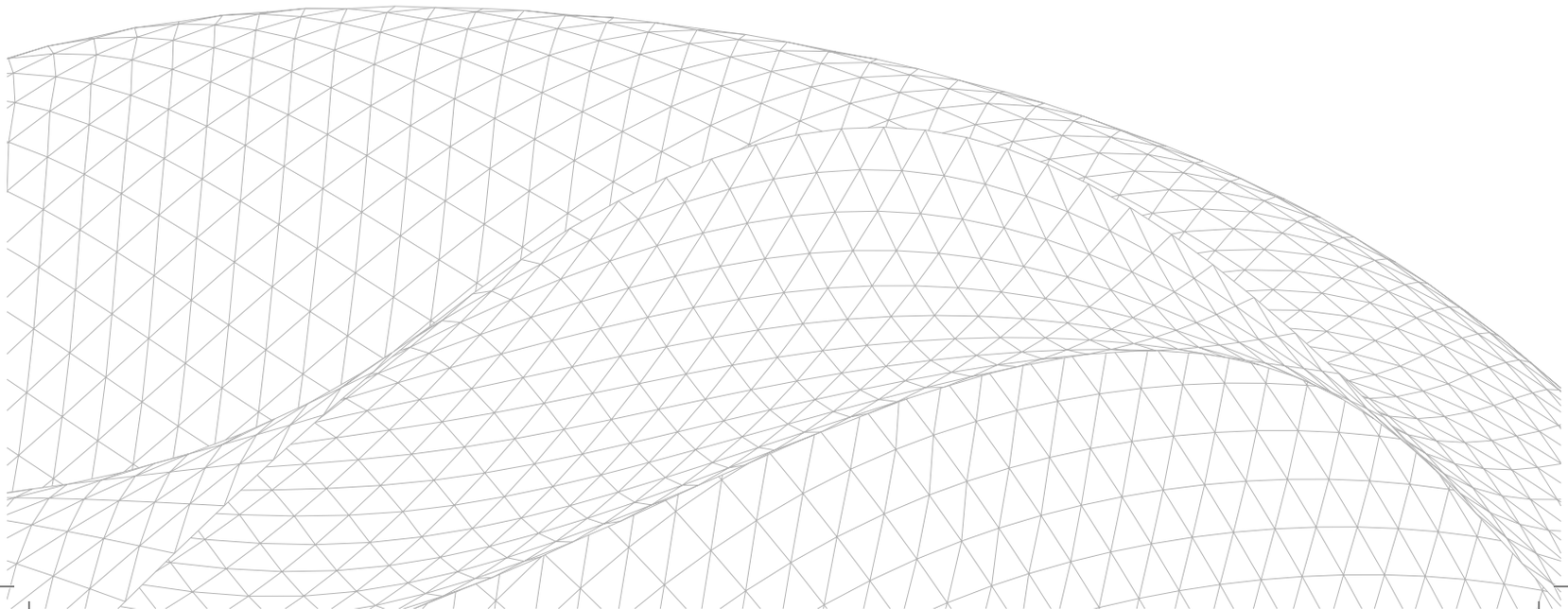
Any management or service contract that does not include the features mentioned above for a service PPP will not be regarded as a PPP.

Conventional O&M contracts will usually be based on the cost-plus concept, and/or focus on payment for the means (inputs) rather than the results, under highly prescriptive contract documents. Such short-term service contracts or other conventional O&M or maintenance (M) contracts are suitable in many contexts, and they have the advantage of flexibility.

Financial Lease Contracts

Financial lease contracts are long-term contracts for the provision of public assets typically involving the transfer of assets in return for periodic lease payments. Compared to PPPs, these contracts transfer significantly less risk to the private party and the government retains a significant share of the risk. In addition, financial lease contracts do not transfer significant responsibility for management and performance to the private party. Financial lease contracts are not expected to produce significant improvements in service performance or to reach efficiency savings. They are purely financial arrangements that are typically used to obtain tax benefits and/or reduce financing costs.

[26] [1] https://www.unescap.org/ttdw/ppp/ppp_primer/222_management_contracts.html



Box 1.10. Long-term leases or concessions for an existing user-pays infrastructure as a special case of management or service PPP with significant private finance. Asset monetization schemes and asset recycling

When a government owns and operates (usually through a SOE) existing infrastructure (especially in the transportation field) for which either users are charged or other economic operators pay for the use (for example, airlines in an airport or cargo ships and cruise liners in a port), and the business is profitable (generating financial returns), the government may be willing to incorporate a private partner into the infrastructure operation and/or management for a variety of reasons.

The government may decide to retain the ownership of the cash generated by the business but improve cost management and service quality. This may be done by tendering out a management or a service contract which externalizes the actual management of some areas (such as tariff collection, ordinary maintenance, and so on). It may even include long-term maintenance or significant upgrading of works (creating a DBFOM contract of a secondary stage type). This may be done by paying the private partner for the operational costs (subject to deductions or to volume risk) and retaining direct ownership of the excess revenue.

However, there are a significant number of cases where the government decides to transfer the overall O&M responsibilities (usually including major maintenance, that is, the life cycle cost management) together with the economic rights of the business. Therefore, the task of revenue collection is transferred to the private partner. This is done with the objective of raising funds from the financial value of the infrastructure as an asset. This is a typical case in toll road projects.

Whether such a transaction provides value for the government will depend on receiving a fair price for the asset and, above all, what will be done with the proceeds. With the funds raised by the asset monetization, the government may develop other infrastructure, attend to other public needs, or reduce its level of debt. The utilization of the sale proceeds may be managed by creating a dedicated fund for infrastructure development, with the proceeds of these concession sales being one of the main feeders to this fund. FONADIN in Mexico is an example of this approach.

There are other approaches, including a combination of uses for the sale proceeds.
The important point is that when there is a clear and sensible plan to apply those resources, which is properly communicated to the public/taxpayer, it is easy to obtain the necessary political consensus and wider public consent.

An example from the United States is the lease arrangement for the Chicago Skyway.[27]

[27] See Chicago Sky Way case study in "Paving the Way: Maximizing the Value of Private Finance in Infrastructure" (WEF, 2010), page 106.

Box 1.10. Long-term leases or concessions (cont.)

In December 2004, the Chicago City Council approved Mayor Daly's proposed allocation of the $1.83 billion Skyway proceeds. It agreed that $875 million will be set aside to establish a $500 million long-term reserve fund, and a $375 million medium-term annuity the city can use to smooth the effects of economic cycles and stabilize the need for additional revenues. It was stipulated that $100m will be invested over the next five years to improve the quality of life in the city's neighborhoods for people and businesses. The largest portion of that $100 million — $28 million — will fund "safety net" programs that will bridge the gap for Chicago's residents most in need, including many who have suffered from the effects of a slow national economy and what the City calls inadequate federal and state funding for critical programs. This includes a city program Plan to End Homelessness, home heating assistance programs, assistance for the disabled to make home modifications, affordable housing and homeowner programs, job creation and training through re-entry programs for ex-offenders and a new Small Business Development Fund, and facilities and programs for children and seniors such as after-school programs, Meals-on-Wheels, and senior satellite centers.

The remaining funds will be used to pay off $463 million in Skyway debt, $392 million in long- and short-term debt, as well as to pay other existing city obligations, the city says.

Toll Road News, December 2004

Other approaches to realizing the value of the funds raised by a project using private participation include the following:

- The government receiving a combination of an upfront concession fee and a minority stake of shares in the PPP project company (with the ability to sell it in the future).
- Imposing a yearly fee on the private partner in the form of a fixed payment or as a percentage of the revenue (see Chapter 4.4).
- Reducing the lease term so as to recover back the asset sooner.

These types of contracts are regarded as private finance PPPs, and most of the information included in this PPP Guide is applicable to them.

Asset Recycling is a related approach where governments monetize the value from revenue-generating public assets (for example toll roads, airports etc), and then reinvest these proceeds in existing and/or new infrastructure assets. Brownfield PPPs can be part of an asset recycling program, but it is also important to note that asset recycling can involve structures outside of PPP approaches, for example securitization of revenues, or outright sale of assets.

2.4. Other private involvement in public infrastructure and services

Privatized Companies and Companies operating in a liberalized and regulated market — "Regulated Investor owned utilities"

There is often confusion between privatization and PPPs (especially with user-pays PPPs). Confusion can particularly arise when the term "privatization" is used more broadly; for example, to mean any form of private management, including PPPs. However, under the definition of PPPs within this PPP Guide, privatizations are not PPPs. Differentiating PPPs from privatization can be important from a communications standpoint, particularly in those countries seeking to deliberately distinguish between PPPs and prior privatization programs, as a result of political sensitivities.

The differences between PPPs and privatization are illustrated in table 1.1.

As highlighted earlier, in its strictest sense, privatization involves the permanent transfer to the private sector of a previously publicly-owned asset and the responsibility for delivering a service to the end user, whereas a PPP necessarily involves a continuing role for the public sector as a "partner" in an ongoing relationship with the private sector (World Bank – Farquharson, Torres de Mästle, and Yescombe, with Encinas 2011).

In the 1980s and 1990s, during the privatization peak, governments were typically motivated to divest public/state-owned enterprises (SOEs) to improve performance and the use of public resources to enhance economic efficiency, reduce government intervention and increase revenue, and create competition in monopolized sectors (Vickers and Yarrow 1988).[28]

Privatization requires a legal implementation environment to consistently implement them. In many countries (including Australia, France, the United Kingdom, the United States, and others), utility type infrastructure (such as electricity generation and distribution systems, and telecommunication systems) can be owned outright by private entities (rather than being subject to concessions) in schemes that may be regarded as "regulated investor-owned utilities." Although these schemes also inherently grant the investor the right to charge users (as in a user-pays PPP), they are not procurement methods. The public sector is not contracting the private agent for the specific purpose of developing and managing a public asset but granting the private sector the right or authorization to conduct a business under certain regulated conditions for an unlimited period of time.

Table 1.1. Privatization versus PPPs

Privatization	PPP
The private sector owns the full property of the asset.	Normally the legal owner of the asset is the government and the asset has to be handed back when the contract expires.
There is no contract in strict terms, but authorizations and conditions are set in the regulation of the respective market sector. The responsibilities of the private party might still be stipulated by the government and/or regulators.	There is a detailed contract specifically ruling the rights and obligations of each party.

[28] John Vickers and George Yarrow, Privatization: An Economic Analysis, MIT Press, 1988.

Privatization	PPP
Time to operate the asset is unlimited.	Time is limited by contract. A concession could include a buyback provision that reflects fair market value at the end of the concession.
Privatization involves no strict alignment of objectives since it usually means that the government is not involved in the output specification of the privatized entity. It is of course the private providers that set the quality and quantity of the goods delivered, while they also specify the design and set the price (possibly after negotiating with their clients). (OECD 2008). KPIs could be imposed on a privatized entity through regulation.	The government specifies in detail both the quantity and quality of the service that it requires.
The privatized entity will have much more liberty to set the price to be charged to users. However, pricing could still be subject to spot market and regulatory rules.	The company will receive the agreed price for the service (government-pays) or user-charges (in user-pays PPPs) which will be defined by government or agreed by the contract with no or very limited flexibility.

Some typical examples of privatization are in the telecommunication and energy sectors, when a government decides to liberalize the specific sector. The government usually owns a monopoly, and when liberalizing the market (that is, opening the market service to regulated competition), it will sell the company to a private investor (or sometimes to different investors after splitting the asset to boost competition).

In such liberalized markets where operators are subject to specific regulation, no contracts between the government and the operators are required to develop further infrastructure. There is a natural incentive for each operator to further develop its assets, including infrastructure/networks, at its own risk.

Public Domain Concession and Public Authorizations for Investment and Operating Public Interest Infrastructure under Regulated Conditions

In addition to the privatization of existing assets in a regulated market, there may be specific infrastructure development projects where a private promoter is authorized to develop infrastructure or a plant, and operate the asset under regulated conditions, sometimes including subsidies and regulated prices. Obligations and incentives can be provided by regulatory or market rules.

An example of this may be an independent power producer of renewable energy, where the private party buys land and asks for authorization to produce wind energy under a subsidized system. There is neither a contract nor any direct requirement from the government to the developer, rather there are general regulatory conditions that allow the private party to sell the power to the system. Conversely, when there is a public counterparty that commits to pay for the power generated and intentionally launches a tender for DBFOM of the plant under specifications against the committed payment — usually under a long-term, off-take contract called a Power Purchase Agreement (PPA) — this is regarded as a PPP.

Other similar situations are those related to the concept of "public domain concessions" in some civil code countries. This is where the use of land is granted for a long term (potentially up to 99 years), but the use is limited to (for example) developing port facilities that will be operated under certain regulations and will revert back to the government after that period.

These arrangements are not PPPs because, similar to privatizations and other liberalized businesses related to public interest infrastructure, there is no contract and the government acts as a relatively passive regulator (unlike a PPP in which the government actively manages the contract).

Partial divesture of public operators

Finally, a distinct situation of private participation is private sector participation in the shareholdings of an existing public company/operator, through the sale of shares on the stock market, that has the responsibility of operating certain infrastructure. However, there is no contract (in the strict sense) between the government and the operator, private investor, or investors. These situations may be regarded as "partial privatizations", and they are commonly structured through an initial public offering (IPO), with all or the majority of the privatized shares floated on the stock market. In this case the management and oversight of the SOE does not change. These situations do not constitute a case of PPP contracts, as there is no contract in the strict sense, and private investors do not have any control of the service and operations delivered by the public company (an example being the partial privatization of the Spanish airport operator AENA in 2014).

Table 1.2 describes the most relevant features of infrastructure procurement that have been discussed in this section and explains how they do or do not fit with the main features of a PPP contract.

Table 1.2. Features of a private finance PPP and what is missed in other infrastructure procurement methods

	PPP Features	DB	DBF	DBOM	DBFOM/ Concession (user pays)	DBFOM or DBFM/PFI (public pays)
1	Formal contract a contract (between private and public parties)	Yes	Yes	Yes	Yes	Yes
1B	Long-term nature	No	Sometimes	Yes, normally	Yes	Yes
2	Includes DB and OM bundled	No	No	Yes	Yes	Yes
3	There is significant risk transfer over the asset life cycle	No	No (only construction risks)	Sometimes	Usually	Usually
4	Includes finance by private sector	No	Yes	No	Yes (under project finance)	
5	Revenues are linked to performance and/or use	No	No	Sometimes (usually by means of penalties or liquidated damages)	Yes (use)	Yes (performance /quality)

DBFOM=Design-Build-Finance-Operate-Maintain; DBOM=Design-Build-Operate-Maintain;
PFI= public finance initiative; PPP= public-private partnershi

Box 1.11. Key points summarizing types and forms of Private Participation in Public infrastructure and services

- Private participation in infrastructure may be under public contract procurement (where the government remains the ultimate owner of the infrastructure and/or service, controlling the asset and/or service to different degrees with higher or lower private involvement in the asset cycle) or may be under liberalized and regulated conditions (liberalized markets and/or privatized assets and services such as telecommunications or energy in a number of countries).
- Infrastructure contract procurement may range from traditional contracts for construction (B, DB and other similar forms) to wider and longer involvement by the private sector (DBOM), and to the widest scope where the private sector delivers and manages the infrastructure (and its potentially related services) under a public procurement contract (DBFOM and similar forms such as BOT and so on).
- DBF contracts are regarded as an infrastructure PPP model in some jurisdictions. However, only DBOM and DBFOM (and similar forms such as BOT and so on) include the obligation for long-term maintenance to be bundled with the construction obligation. These are also usually the only contract forms in which remuneration is based on the performance of the asset.
- DBFOM (or DBFM) contracts are the most typical form of private finance PPPs.
- Variations of DBFOM and DBFM include joint ventures (public and private parties co-owning the project company with material participation by the public party in managing the business), and co-financing PPPs (where the government is directly financing a portion of the asset investment from its budget).
- Joint ventures where the procuring authority (or a related government entity) controls the project company are referred to as institutional PPPs or "publicly controlled PPPs." This PPP Guide considers that they may be properly regarded as PPP only when there is significant private equity investment in a joint venture.
- One hundred percent public company structures or "public-public partnerships" are not considered proper PPPs.
- Independent Power Producers (IPPs) operating under a Power Purchase Agreement (PPA) are a PPP case, similar in scope to a DBFOM.
- The PPP concept is also applicable to the management of existing infrastructure and the operation of public services, where there are long-term contracts transferring risks and where the remuneration of the private partner is based on performance of the asset or service (availability and/or volume of use). This is sometimes used to "monetize assets" or to "refinance" the public investment, previously done through conventional construction procurement, in a sequence of DB (and later on, FOM) contracts (mostly in self-feasible user-pays PPPs).
- A PPP should not be confused with a privatization, nor is the term PPP appropriate in the context of economic operators acting in a liberalized and regulated market (for example, electricity distribution companies acting in an energy market that has been liberalized and open to competition) as long as there is not a specific procurement to build and/or manage the asset for a limited period of time under a public contract with such a private operator. Obligations to build and expand a transmission system in a concession agreement can be provided by the regulator subject to certain parameters/KPIs, and concession agreement.

3. Types of PPP and Terminology Issues

This section provides information regarding the following:

- Variations or types of PPPs; and
- Nomenclature issues – explaining the various names that are used for contracts that may be regarded as PPPs.

3.1. Types and variations of PPPs

Previous sections have introduced the main variations and types of PPPs. The most relevant classification has been explained extensively, that is, user-pays versus government-pays PPPs. This and other variations and types of PPPs that consider other factors (ownership, scope, and so on) are shown below in an organized manner, presenting the PPP types depending on specific factors.

- Source of funds for the private partner's revenues: user-pays PPPs (mainly based on charges to users) versus government-pays PPPs (mainly based on government payments for the service);
- Ownership of the PPP company or Special Purpose Vehicle (SPV): There are conventional PPPs (100 percent private ownership), institutional PPPs (publicly owned with 100 percent public ownership or under a JV or *empresa mixta* scheme with the public party controlling the PPP company), and other JVs or *empresas mixtas*;[29]
- Scope of the contract and/or object of the contract: Infrastructure PPPs or PPPs that include significant capital investment, where the main objective is developing and managing infrastructure over the long term; integrated PPPs when, in addition to the infrastructure, the private party is granted the right and obligation to operate a service; and O&M PPPs or service PPPs when there is neither capital investment nor development of new infrastructure by the private partner; and
- Relevance of private sector financing: Co-financed or Hybrid PPPs (PPP schemes where there is a material portion of public finance, usually in the form of grants), versus conventional PPPs.

PPPs may also be distinguished based on the past use of the site. From the perspective of the investor industry, the following alternative definitions are common.[30]

- **Greenfield projects:** Project investments in new infrastructure that relate to a DBFOM that is recently awarded or under construction;

[29] A PPP with equity participation by the public party may be legally categorized as an *empresa mixta*, depending on the jurisdiction. Commonly, a JV or *empresa mixta* scheme will imply a significant participation of the public party in equity and significant participation in management, while a mere public equity participation, with no strategic influence in the PPP company, is not regarded as a JV by this Guide.

[30] There are alternative uses of the terms Greenfield and Brownfield. See Glossary.

- **Brownfield projects:** Project investments in infrastructure assets that existed before the time of procurement or that were previously greenfields, but are in operation at the time the investment is made; and

- **Yellowfield or secondary stage:** PPPs where the investment is related to significant renewals, refurbishment or a substantial expansion of the existing infrastructure.

3.2. Nomenclature – other names used for the PPP concept

A single type of PPP may be given different names in different sectors or countries, despite the scope of the contract and the features being the same. This difference is often due to variations in legal tradition and legislation but may also relate to variations in common or standard language.

Table 1.3 below presents a comprehensive list of alternative names used to refer to private finance PPPs (again, the focus of this PPP Guide). Most of them may be used in a particular jurisdiction to mean either of the main types of PPPs (user-pays or government-pays), but some of them are only used to mean one of the two. PPP contracts are constantly evolving, so it is possible that new models may evolve.

Any of the contracts implemented under these names may be regarded as private finance PPPs, as long as the PPP features described above are present.

In addition, table 1.4 provides the names used for non-capital-intensive PPPs (that is, contracts that may be regarded as PPPs but are dedicated to the management of existing infrastructure and/or public services, for which a broad definition of PPP was provided).

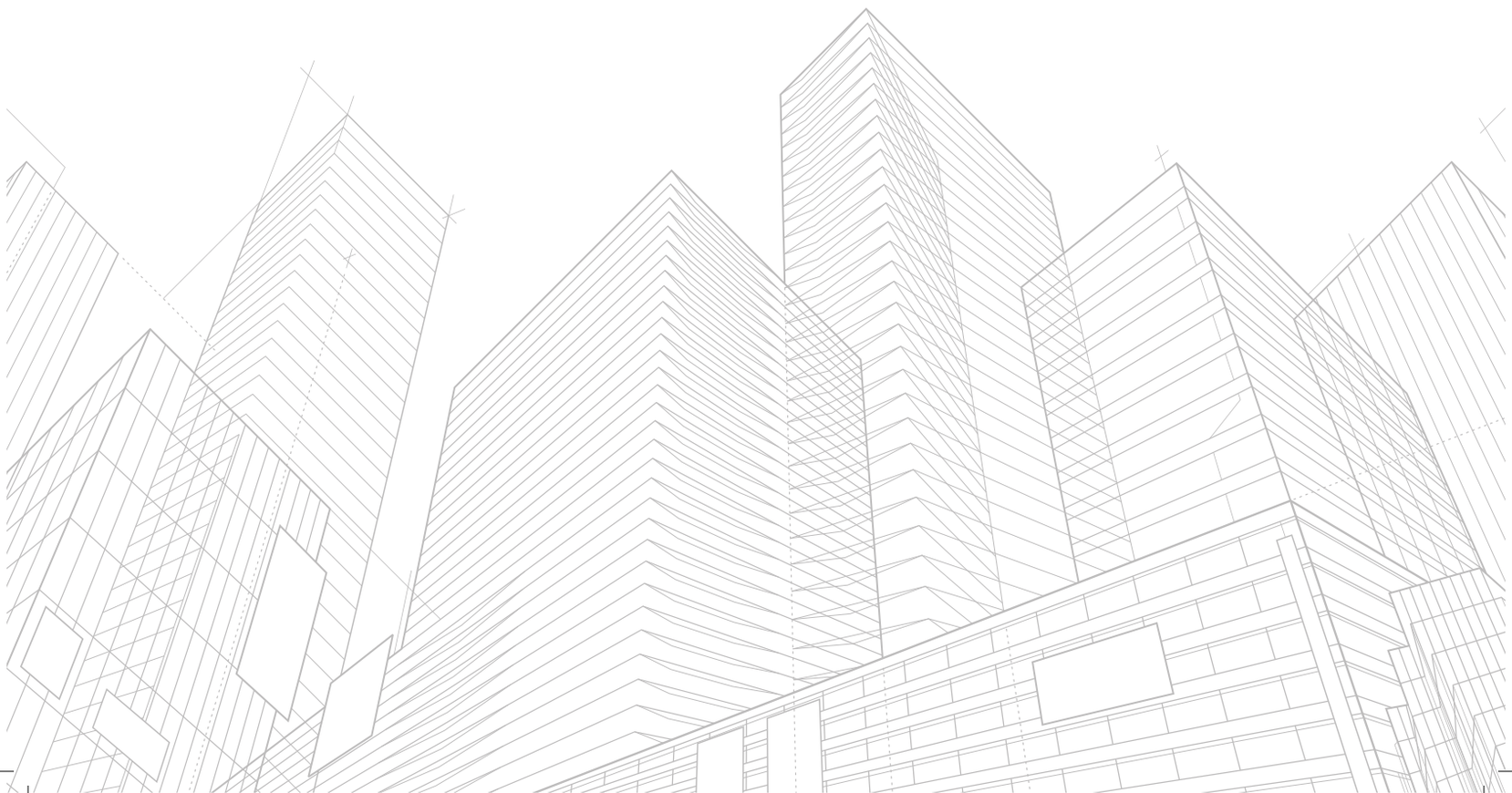


Table 1.3. Nomenclature for PPP contracts related mainly to new infrastructure or infrastructure upgrades developed with private finance[31]

DBFOM (Design, Build, Finance, Operate and Maintain), DBFM (Design, Build, Finance and Maintain)/DCMF (Design, Construction, Maintain and Finance) and DBFO (Design, Build Finance and Operate)	Some jurisdictions refer to the contract types by describing the functions transferred to the private party by the contract, or by using acronyms for these descriptions. For example, a contract may be described as a Design, Build, Finance, Operate and Maintain contract, or DBFOM. For the purpose of this PPP Guide, all the nomenclatures listed here are synonyms for a private finance PPP. Sometimes (for example, when the term DBFO is used) the "maintain" function is considered implicit in the operations. Similarly, for those contracts with no operations in the strict sense of the word (interface with users, especially collecting fees), the O "operation" is sometimes omitted. These concepts may equally refer to government-pays PPPs and user-pays PPPs. It should be mentioned that a DBOM is a type of infrastructure PPP but with no private finance involved, so it is not a private finance PPP.
BOT (Build-Operate-Transfer), BOOT (Build-Own-Operate-Transfer), BTO (Build-to-Order), ROT (Rehabilitate-Operate-Transfer) and similar terms	This type of definition captures the concept of legal ownership and control of the asset. In some jurisdictions, legal ownership by the private partner in complete terms is not possible (for example, in some civil code countries) except in very specific projects: generally the private partner is regarded as the owner only in "economic terms", but the asset remains in legal terms under the ownership of the government (this is the public domain concept used in most civil code countries). Hence, the use of these acronyms is not useful in these geographies. In any case, there are many dimensions of ownership (legal, economic, tax) and these acronyms may create unnecessary confusion as to which form of ownership is being referred to. BTO refers to contracts in which legal ownership of the asset is on the private side of the contract only during construction. ROT simply replaces the "build" element with "rehabilitate" and is used for some contracts in some jurisdictions where the capital investment is associated with the rehabilitation or upgrading of the infrastructure asset. These concepts may equally refer to government-pays PPPs and user-pays PPPs. This PPP Guide considers all these names as a synonym of the DBFOM group of terms.

[31] Partially based on a similar table provided in the Public-Private Partnerships Reference Guide V3.0 (World Bank 2017)

BOO/ROO	In the Build-Own-Operate (BOO) type and its other variants such as Design-Build-Finance-Operate (DBFO), the private sector builds, owns and operates a facility, and sells the product/service to its users or beneficiaries. The ROO model has the same characteristics as BOO model, but the Private Partner shall obtain ownership rights of the existing Project Asset(s) for rehabilitation of that Project Asset(s).
O&M	An O&M contract (that is, a contract in which the scope or functions include operations and maintenance but not capital investment) should only be regarded as a PPP when the contract is clearly long-term and life-cycle cost management is transferred to some extent. This is in addition to the transfer of cost-related risks and a clear performance orientation. In general terms, it may be said that only a few O&M contracts will "deserve" to be regarded as PPPs. It is possible that O&M can have attributes of a PPP when the terms of the concession include requirements to invest substantial CAPEX.
Hybrid PPPs	Hybrid PPPs are PPPs that combine concessional financing with private sector investment to deliver vital public infrastructure and services that might otherwise not be possible through purely public financing or private investment. Hybrid PPPs are a specific PPP structure in which concessional financing is used to partially or fully cover a project's government support requirements. This improves the project's affordability, for people and governments, by reducing risks that would otherwise prevent private investment or drive-up costs for end users.
PFI (Private Finance Initiative)	An alternative name introduced by the United Kingdom, mainly to refer to DBFOM PPPs of the government-pays type. PFI is essentially the same as a BOT where the government-pays availability payments as in the case of transport PPPs, or capacity charges in the case of IPPs.
Concession (of public works)	Concession is a traditional legal term in civil code jurisdictions. A concession is in essence the legal title or institution that in an administrative law jurisdiction entitles the government to transfer economic rights of use in a public asset to a private partner. Originally this term was only used for DBFOM-type contracts based on user revenues. It was also used in some jurisdictions for long-term O&M contracts where there is a transfer of economic rights to collect user fees, together with a clear responsibility for maintaining the infrastructure in the long-term on an integral basis (that is, the life-cycle cost risks are transferred). On many occasions, the term is further defined by adding a reference to public works to distinguish the contract from those concessions where the only objective is the transfer of the operation of a public service. Some civil code countries also use the term to refer to DBFOM contracts based on public service or performance-based payments (for example, in Chile and Spain), while other civil code countries reserve the term only for user-pays contracts.

Leasing of public works (under a grant of public land), known as *arrendamiento* in Spanish.	This term is used in civil code countries to refer to a procurement option for buildings/facilities. *Arrendamiento* can be used as a legal alternative to government-pays DBFOM contracts when the land on which a facility will be constructed is not land reserved for public use, but instead is real estate that can be disposed of by a government. The contract is deemed to be a private contract subject to civil jurisdiction rather than being subject to administrative law (while the tender process will remain subject to public law).
PPPs (APP in Latin America) – as a legally-defined term rather than a concept	As noted, a number of civil code countries have defined legally those DBFOM contracts based on government-payments as PPPs, on some occasions creating a specific law to regulate them. In those contexts, the legal term is usually used for any PPP contract in which the majority of the revenues come from the budget or public service payments. This is also the case in EU national accounting standards (ESA 2010). Some countries however (such as Brazil) treat as PPPs any contract of a DBFOM type that includes any level or amount of public payments.
Joint Ventures or "*empresas mixtas*"	A JV is a structure where the contracted party is a company owned by public and private shareholders. It is referred to as "*empresa mixta*" in Spanish-speaking countries (usually as a defined legal term and a procurement method). The public investor may be an existing SOE that wants to partner with a private economic operator to jointly develop and operate a new or existing project. On other occasions, there is no existing public company and the government wants to promote a PPP where it will reserve a certain percentage of economic and voting rights (or even control the company, the arrangement then being regarded as an institutional PPP – see below). In these structures, the private shareholder is selected under a competitive process and the SPV is jointly created by public and private parties. These legal structures can be used for DBFOM contracts and for O&M/service contracts. Mixed equity companies are rarely seen in government-pays PPP schemes.
Public service contact plus a project support agreement	These are terms coined by the EBRD to refer to a particular structure developed by a Multilateral Development Bank (MDB) in some PPPs in eastern Europe (mostly for water supply projects). The public service contact would act as a PPP contract between the private operator/partner and the procuring agency. The project support agreement is a contract signed by the procuring authority with the EBRD, by which there is an expressed direct commitment to "cover the resulting financial revenue shortfall".[32] This is also explicitly structured in the project support agreement in the form of service payments, or in some way conditioned to performance.

[32] See page 8 in "Accelerating Infrastructure delivery. New Evidences from International Financial Institutions" (World Economic Forum, 2014).

Institutional PPPs	This term refers to PPPs where the government controls the PPP company and usually owns the majority of the shares. This PPP Guide considers that an institutional PPP may be regarded as a true Private Finance PPP when the private sector is involved significantly as an equity investor, (with a significant portion of the equity shares) therefore assuming project risks, and the debt financing is at risk of performance. Service contracts or contracts for the management of existing infrastructure may also be institutional PPPs, in addition to DBFOM types of contracts.

Table 1.4. Nomenclature used for PPP contracts which relate only or mainly to the management of existing infrastructure or only to the operation of public services

Concession (of services)	The term concession may also refer to an O&M type of contract with no significant or material investment. It is generally only used as a legal term for contracts where all or most of the revenue comes from users, and mostly in reference to businesses related to public services and public utilities. Concessions may also be used for PPPs to contract out the operations of an existing asset with charges to users (typically the concession of an existing road or airport) with the expectation of receiving an upfront fee from the private partner (a situation sometimes referred to as "monetization").
Leases	As with concessions, leases refer to the legal institution that allows the government to grant economic rights over the infrastructure or the economic ownership of the asset. Leases will be more commonly seen with O&M contract types on the basis of existing infrastructure (that is, with no material capital needs) and more normally applied to user-pays PPPs (including asset monetization structures). In some countries, the term "lease" may be reserved for project contracts where the government remains responsible for capital expenditures, and the private partner is only responsible for ordinary maintenance and operation.
Affermage	*Affermage* is a French term used within that jurisdiction to refer to contracting out the right to economically operate existing infrastructure, with the operator retaining the operator fee out of the receipts and paying the remainder to the procuring authority. In some cases, affermage contracts can include the requirement for some CAPEX. The term is never linked to government-pays contracts.
Service contracts	A service contract is a legal term in civil code jurisdictions. It usually refers (and in some jurisdictions only refers) to a transfer of the operation of a public service in the strict legal sense (for example, a service related to water or transport of passengers, rather than maintaining or operating a road). In common law jurisdictions, the term "service contract" does not have a specific legal meaning and is used for a wide variety of outsourcing contracts, usually contracts for relatively short periods. Only a few service contracts will be regarded as PPPs.

Management contracts	Management contract is an alternative name used for many O&M contracts where the core or the only object/function transferred to the private sector is the long-term maintenance of equipment or infrastructure assets. In other cases, it may refer to a "service only" contract with no implications for infrastructure management (life-cycle costs), especially in water. As with O&M and service contracts, a management contract will only deserve to be considered as a PPP if the contract covers a long-term time period, and there is a risk, as well as a performance orientation.

Box 1.12. Key points of PPP types and nomenclature

- The terms used to refer to private-finance PPP contracts in which the private sector constructs and manages (operates and maintains) the infrastructure differ, particularly depending on whether they refer to ownership. DBFOM and its variations (DBFO, DBFM) do not include in their definition the term "ownership." However, the group of terms that hinge around the words "Own" and "Transfer" (BOT, BOOT, and so on) specify whether the asset is regarded as owned (or not) by the private partner. This distinction is not considered to be at the heart of the main features of the PPP tool for private finance PPPs, as long as the asset is considered a public asset (publicly owned) or the contract will foresee a transfer of it at the end of the contract.

- There is a group of terms for PPP contracts that are based more on the legal title granted for the use and operation of the asset (for example, lease, *affermage*, concession, and so on). Some of these terms may be used to cover PPP contracts with privately financed infrastructure investment or for service PPPs (concessions). Others are only used for existing infrastructure or for long-term management contracts, usually (in most jurisdictions) only for user-pays PPPs (lease, *affermage*, and so on).

- Contracts that only relate to the operation and/or maintenance of an existing infrastructure may also be named by reference to their scope (O&M, management, service contract). They will only be regarded as PPPs if they transfer risk under a long-term contractual link with a remuneration element linked to performance or subject to demand risk.

- Some variations of PPP types include the role of the public party as potential finance provider (under grants/non-revolving finance provision), or as equity partner (joint venture or *empresas mixtas*) in which the public party is controlling the SPV or is an active partner in managing the company (as opposed to a PPP with simply a minority ownership in the shareholding arrangement).

- The main classification of PPPs is related to the origin of the funds that represent all or the majority of the revenues of the SPV: user-pays versus government-pays PPPs (with some countries and institutions identifying the former with concessions and the later with PFIs).

4. Where PPPs are Used – Infrastructure Sectors

This section explains further the concept of infrastructure and public assets. It provides examples of infrastructure types that are usually developed under PPP schemes.

Public assets and infrastructure

This PPP Guide is focused on the procurement of public tangible assets using a PPP process. Public assets are fixed assets (that is, assets developed for long-term use) that are subject or dedicated to public use or concomitant to the provision of a public service.

The PPP Guide also refers to public infrastructure instead of public assets, using infrastructure in the broad sense, as infrastrcuture is the type of public asset normally procured under a PPP.

The Oxford English Dictionary defines infrastructure as: "The basic physical and organizational structures and facilities (for example, buildings, roads, and power supplies) needed for the operation of a society or enterprise."

This may include complete systems, but also parts of it, such as structures, plants, facilities or equipment generally necessary for the provision of a public service or subject to public use. Some examples are as follows:

- Facility buildings hosting the provision of justice, health, education, public security services, and culture (for example, theaters and convention centers);
- Transport structures, facilities or systems used by the public for transportation purposes. This includes structures such as roads, bridges, and tunnels; complex facilities such as airport terminals; systems such as light rail lines or groups of lines (including the rail structures, electro-mechanical equipment, depot facilities, communication and signaling systems); and vehicles for public use/transportation of passengers;
- Transportation structures, facilities or systems linked to a public service used by economic operators, including electricity or gas transportation, water transportation, passenger transportation (the rail track and related systems), and data transportation (in telecommunications);
- Equipment or plants treating sewage, and those generating public goods such as power, gas, and water;
- Buildings for social housing, that is, those intended to be rented to low-income families;
- Housing or accommodation facilities to host public servants (for example, office accommodations); and
- Systems or equipment for testing or investigating for a public benefit, such as public security, forensic services, or defense force equipment.

Box 1.13 sets out the distinctive features of a public asset that influence the concept of PPPs as an infrastructure procurement method.

Box 1.13. Features of a public asset that potentially suit a PPP

Public infrastructure has a number of distinctive features that influence the concept of PPPs as an infrastructure procurement method.

- Infrastructure refers to public works, that is, works subject to public use or concomitant to the provision of a public service.
- Infrastructure will usually be procured (tendered) under public procurement rules using the principles of equality, non-discrimination, efficiency, and transparency.
- Infrastructure is a fixed asset. It has a long life and is a potential generator of cash flow in the long-term, or it is available for public use or the provision of a public service over the long term.
- The government is usually the ultimate legal owner of the asset or of the land/site on which the asset is located.
- Infrastructure may be a complete system, or comprise relevant parts of a complete system that function as a single unit.

Types of infrastructure: economic versus social infrastructure

There are two main types of public infrastructure: economic and social infrastructure.

Economic infrastructure is infrastructure that makes business activity possible, such as communications and transportation (for passengers and freight), as well as utilities' networks, and systems and plants such as in water, waste and energy supply systems.[33] Typically, the activity that uses the infrastructure is priced or a related service is charged to the user or to an economic operator that uses the infrastructure to provide the service to the ultimate user/consumer.

Communications infrastructure is de-regulated in many countries and private operators are the ultimate legal owners of the infrastructure. They use the infrastructure to provide communications services in an open and competitive market. However, telecommunications systems can be considered public infrastructure in those countries in which the utilities are publicly owned and the activity is reserved for the public sector, or when the public sector decides to boost a telecommunications network in specific areas (for example, rural areas) through government investment.[34]

Social infrastructure is infrastructure (mostly facilities in the form of buildings) that accommodates social services. For example, hospitals, schools and universities, prisons, social housing, law courts, and so on. See Box 1.14 for distinction between social and economic infrastructure.

[33] Some authors and institutions use the term environmental infrastructure to refer to water, waste and renewable energy networks, systems or plants. Also, when the respective infrastructure market is open to competition (for example, in telecommunications), this is sometimes referred to as "commercial infrastructure" which is also regarded as a subset of economic infrastructure (WEF 2010).

[34] In some cases, the majority of the infrastructure may be in private hands. However, the government may retain ownership or control of parts of the utility (the international gateway in telecommunications, or the transmission network in electricity).

When the objective of the facility is to host or accommodate administrative functions or even to provide housing for public servants and their families (that is, where there is no public service provided from the building), the infrastructure is usually referred to as accommodation infrastructure.

This type of infrastructure and other assets used in government activities that do not necessarily provide a direct service to the public (for instance, defense) are sometimes also referred to as government infrastructure.

Box 1.14. Social infrastructure versus economic infrastructure

Any infrastructure is a platform to provide a public service or use. Such infrastructure can include:

- A facility that hosts public servants/officials or hosts the provision of a social service (for example, a hospital, a school, prison, or court).
- A platform that provides a transport or a utility service (for example, water or electricity), or is available for the users and the general public.

The former are usually referred to as social infrastructure, and the latter are regarded as economic infrastructure.

Social infrastructure does not usually generate user payments. Alternatively, if present, they are usually marginal and collateral (that is, ancillary revenues, while economic infrastructure, may or may not generate user revenues). This is because (i) the infrastructure may be provided to users free of charge; (ii) a charge may be levied for use and collected and retained by the developer of the infrastructure; or (iii) a charge may be levied for use, but collected and retained by another public or private entity.

Type of assets by sector

Public infrastructure assets may be classified into a number of sectors. Table 1.5 provides a long list of subsectors and types of infrastructure assets where it is common to see examples of PPP developments with private finance.

However, two considerations are relevant:

- Developing PPPs and any other form of private participation in certain sectors in some countries may face strong public and political opposition; and
- Some country jurisdictions have opted to leave some sectors out of the scope of PPP policies and legislation (a notable example being health infrastructure and services). This may be appropriate as a compromise solution in order to gain political consensus on the use of PPPs.

So, while PPPs may fit well with most infrastructure sectors, the approach will not necessarily suit all specific projects (see Section 5.5. and Chapter 3.5).

Table 1.5. Sectors in which an infrastructure asset may be procured under a PPP scheme[35]

Sector	Examples
Economic – transport > roads	• New road/highways • Specific tunnel or bridge projects • Access links (for instance, to ports) • Upgrading and expansion of roads and networks
Economic – transport > rail	• High-speed rail lines • Heavy conventional rail lines • Rapid links (for instance, to airports) • Operational leasing of rolling stock • Metro and other mass transit projects • Ticketing and fare collection systems • Metro stations
Economic – transport > other urban mobility infrastructure	• Bus rapid transit infrastructure • Parking • Intermodal interchange or hubs
Economic – transport > ports and airports	• New or upgraded airports • New or upgraded ports
Economic – water and waste	• Desalination plants • Wastewater treatment plants (WWTP) • Integrated water cycle concessions • Solid waste management systems • Waste to energy plants – incineration plants
Economic – energy	• Independent power producer plants through PPAs • Electricity transmission lines • Gas pipelines • Energy efficiency (for instance, in public buildings or in urban lighting) • Electricity distribution facilities

[35] PPP Knowledge Lab provides further information about the application of PPPs in some of these sectors, including concrete examples and case studies. See https://www.pppknowledgelab.org/sectors. More material providing a cross-sector overview of experience and project examples, as well as material "by sector", may be found in the PPP Reference guide 3.0 (World Bank, 2017) in section 1.2. "How PPPs are used".

Sector	Examples
Economic – Information and Communications Technology (ICT) / telecommunications	• Optical fiber lines or networks • Telecommunications networks/broadband
Economic – Tourism	• National parks • Cultural heritage buildings
Economic – Agribusiness	• Cold storage facility • Grain storage PPPs • Irrigation projects
Social – health, education, security/ prisons, courts/justice, social housing	• Hospitals • Student residences • University facilities • School facilities • Court buildings • Prison facilities • Social housing
Social (others) – sports, emergency response and local security, government accommodations	• Sport centers • Fire stations • Police stations • Government offices
Other potential sectors for PPPs	• Defense: flight simulators or other simulators • Military facilities • National border posts or facilities • Dry ports and industrial parks

5. When to Use PPPs: Motivations and Caveats

There are a variety of reasons commonly given for using PPPs as an option to procure infrastructure. These reasons may be classified according to three main groups:

- Those related to the financial nature of PPPs, or PPPs as a financial mechanism for governments (including the "off balance sheet" motivation);
- Those related to project efficiency and effectiveness; and
- Others related to overall efficiency for governments (including fostering transparency and controlling corruption.[36]

This section describes and explains the rationale behind these groups (5.1 to 5.3).

It also describes the main disadvantages of PPPs that limit or qualify the usefulness of PPP as a procurement method (section 5.4), and it provides a number of recommendations for the better use of PPPs (section 5.5).

Finally, section 5.6 provides some reflections for the specific context of least-developed countries and the challenges that they face when deciding to promote the PPP route as a means to boost infrastructure development.

5.1. Access to Finance: PPPs as a financial mechanism for governments to develop infrastructure projects

The financial motivation may be divided into two subgroups. One relates to the statistical and national accounting perspective (private financing that may be regarded as "off balance sheet" of the government, which constitutes a dangerous bias in favor of PPPs). This should be differentiated from the pure cash motivation, that is, the access to external resources to tackle a funding shortage for infrastructure development, regardless of whether or not this is considered, in the respective accounting system, as public debt (explained in 5.1.2).

5.1.1. PPPs as an alternative method for financing infrastructure (private financing)

PPPs are a procurement mechanism and not a financing mechanism. However, one of the benefits of PPPs is that they can help to mobilize private sector financing for the development of new infrastructure of upgrading of existing infrastructure. As an alternative to public finance, it may allow for the acceleration of infrastructure development. However, it must be noted that PPPs are generally a more expensive source of finance because investors will charge a blended cost of private debt and cost of equity that is higher than the government's borrowing rate. In addition, the government may have to provide certain indirect and direct fiscal support to the project that will give rise to fiscal liabilities that need to be taken into account when deciding whether to proceed with a PPP.

[36] Another category of reasons that is not developed in this chapter is "ideological motivations", for example, when a government pursues a "small government" policy.

Funds to finance the works will come from the private partner (in the form of equity plus debt, raised by the promoter through the PPP vehicle), instead of coming from the government budget. This does not necessarely mean that the investment will not be accounted for as public debt, particularly if it is a government-pays PPP (see Chapter 2 and Chapter 4.12). However, many PPPs may not impact public debt if they meet certain criteria (depending on the national accounting standards followed by the respective country).

Therefore, when public borrowing is limited by fiscal constraints and regulations and the level of debt is close to the prescribed limits, the PPP solution may allow a government to develop infrastructure that otherwise could not be developed. This, in turn, can allow the government to accelerate a plan or a program. In such circumstances, governments should note that regardless of the fiscal treatment of the PPP, significant resources are being committed under a long-term contract. In government-pays projects, the cost is met by taxpayers, whereas in user-pays PPPs the general public (users) are charged directly for the use of the infrastructure. Hence, there is a danger that a potential abuse of the tool to circumvent debt restrictions will unduly burden society, either directly through the user charges, or indirectly through the impact of future government payments. See Box 1.15.

When using a PPP to access an alternative source of financing, governments should also be cautious regarding the potential loss in terms of efficiency or Value for Money (VfM). If the PPP option does not show evidence of VfM (that is, incremental efficiency and Value for Money for society in comparison to a traditional delivery or government financed option for the project), a PPP may significantly reduce the cost-benefit outcome of the project (see 5.2).[37,38]

Box 1.15. A PPP that does not result in public debt will nevertheless create a commitment

Even when the assets and liabilities associated with a PPP (in government-pays PPPs) are not reflected in national accounts — so that there is no increase in public debt — there will still be a long-term commitment of public payments (explicit or implicit as contingent liabilities) which affect the government's long-term fiscal position. For that reason, a number of jurisdictions impose a legal limit on PPP procurement, usually as a percentage of the total amount of capital expenditure that may be procured through PPPs, or similar methods such as a percentage of the gross domestic product (GDP).

Chapter 2.8 provides further explanation on the need for assessing and controlling fiscal commitments and PPP aggregated exposure.

[37] Furthermore, some national accounting standards (for example, European System of Accounts [ESA] in the EU) may boost higher risk transfer to the private partner than the optimum allotment of risk to maximize VfM. Optimum risk transfer or risk allocation is explained extensively in chapter 5.

[38] "PPPs: in the pursuit of risk sharing and value for money" (OECD 2008) provides an explanation on the risk of the PPP bias in section 1.2.

5.1.2. The access to cash motivation

Another financial motivation for PPPs is that private sector financing may provide more financial flexibility for the government, regardless of the implications for a government's reported debt position. The "cash motivation" is usually the main driver in the case of many EMDEs.

If a PPP is used, there is no need to allocate resources in the short-term budget for the year or years of construction. Nor is there a need to include the funds required for the project in the government's treasury strategy, or for the government to negotiate specific or additional debt for the project. Even if the PPP is reported as public debt, it has the advantage of transparency and accountability as it is a financial facility clearly dedicated to the specific need.

Regardless of the debt accounting implications, PPPs allow governments to mobilize additional sources of funds. Debt funders that may be interested in lending to the PPP infrastructure project may not be interested in providing direct lending to the government.

5.2. Efficiency and Effectiveness: PPP as a potential source of higher efficiency for infrastructure projects

The other main motivation for the use of PPPs as an alternative tool to both procure and finance infrastructure is the potential long-term gain in terms of efficiency (when applying PPP to the right projects and under the right structure and procurement process) and effectiveness (when using PPPs for achieving the desired outcomes in a time and cost effective way).

For PPPs, the long-term expected cost to the public sector may be lower under a PPP structure than with conventional procurement (and/or the expected benefits may be higher). This is the case even after considering the higher cost of capital (financial costs) associated with the private financing that forms part of the PPP. For user-pays PPPs, the efficiency might also result in lower charges to users.

Irrespective of the procurement solution, a technical solution (that is, a project) must be tested through cost-benefit analysis. The solution must also be sensible and valuable in terms of socioeconomic outcomes (or simply be the optimum technical solution).

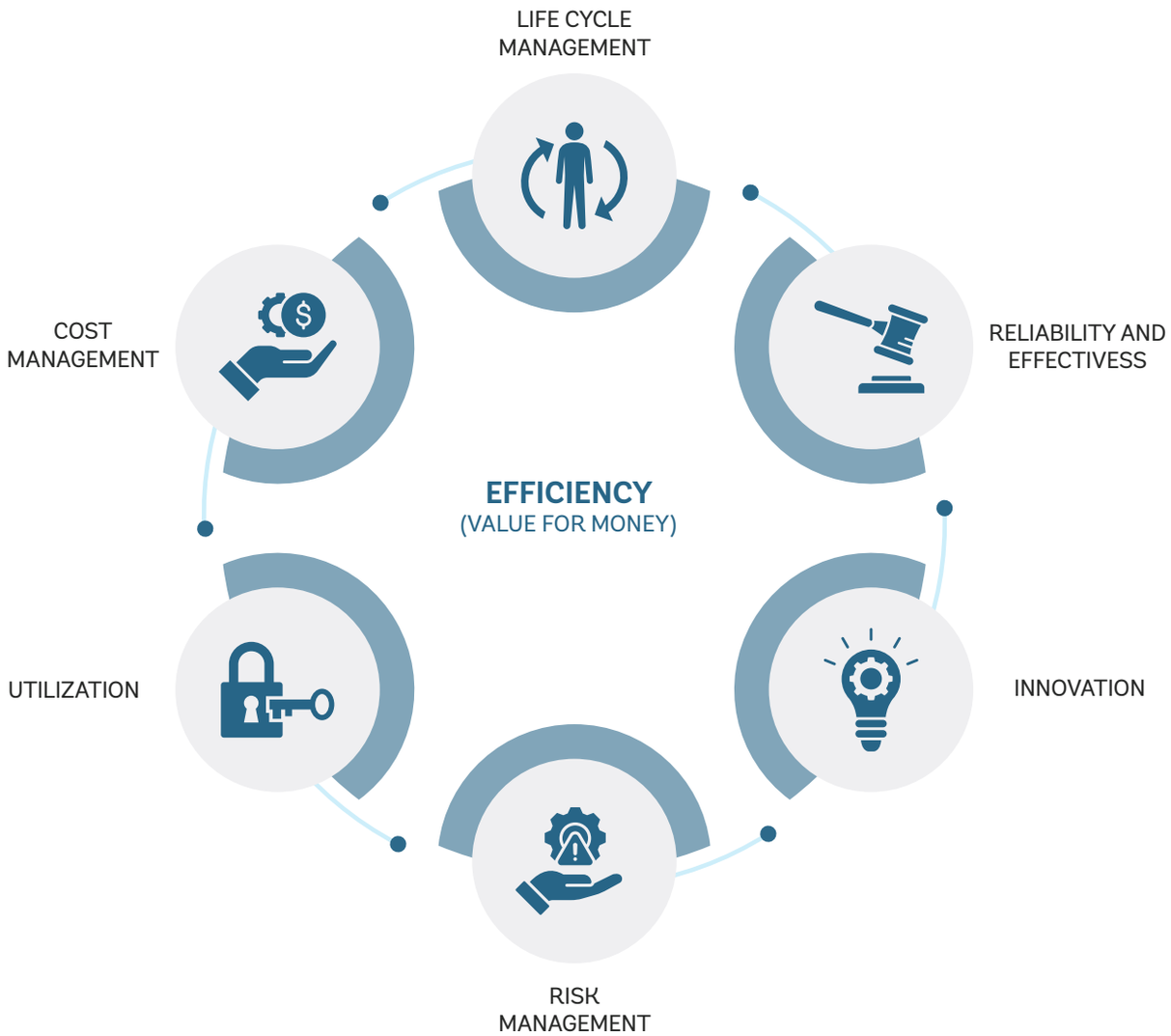
It is at this point that the project needs to be tested as a PPP so as to determine if PPP delivery will provide additional efficiency rather than reduced efficiency (due to costs increases or lower benefits). This assessment is done through the Value for Money exercise that is extensively explained in Chapter 4.

Some authors and texts differentiate between three types of efficiency: allocational efficiency (theoretically related to the original decision as to whether the project or service should be delivered), technical effiiciency, and X-efficiency.[39] See Figure 1.7.

[39] As suggested in OECD (2008), in terms of economic theory, a distinction should be made between three kinds of efficiency: allocative efficiency (that is, the use of resources so as to maximize profit and utility), technical efficiency (that is, minimum inputs and maximum outputs), and X-efficiency (that is, preventing the wasteful use of inputs) (Fourie and Burger 2000:697). The decision by a government to deliver a service in the first place, irrespective of whether this is done through traditional procurement or a public-private partnership, involves allocative efficiency. Once a decision about delivery is made, the government must decide on the mode of delivery: to deliver it either through traditional procurement or through a PPP. The choice largely involves considerations about technical and X-efficiency.

This PPP Guide focuses on explaining the "factors for incremental efficiency in a PPP." It is acknowledged that some factors pertain to a potential increase in allocative efficiency (by maximizing the anticipated benefits of the project). However, the majority of efficiency gains through PPP primarily relate to risk management, cost management (including life-cycle management), and innovation. These factors are highly interrelated, making it impossible to explain one without considering the others.

Figure 1.7. Summarizing factors of efficiency in a PPP



5.2.1. Cost management: higher flexibility to manage costs and "for profit" nature

The private sector enjoys a different business framework that allows for higher flexibility, in terms of cost management, through flexible negotiations with subcontractors (in contracts not subject to public procurement rules) and/or a more flexible labor framework. In this context, the private sector is not subject to the same level of social or political pressure with respect to staff numbers and employment conditions (such as salaries, rostering, and shifts).

Naturally, cost-efficiency in PPPs is also driven by other factors explained below (innovation capacity, risks management and their bundled-obligation nature — construction together with maintenance), all of which are related to the "for profit" nature of the private business (as opposed to the non-profit nature of the government).

5.2.2. Life-cycle cost management

In a private finance PPP, the private partner is not paid during construction of the infrastructure but is compensated for the capital expenditure (capex) investment over the operational period (see Figure 1.8). This is done either by means of user charges or by government payments (which will be subject to deductions for poor performance/quality of the asset and service). The private partner must assume maintenance risks (both ordinary and extraordinary maintenance, including renovations that meet hand-back conditions), so as to meet the performance/quality standards. Hence, the private partner has a natural incentive to design and construct the infrastructure in a resilient manner that reduces maintenance and renewal risks and maximizes returns while complying with its contractual obligations, desired outcomes, and meeting KPIs.

There are other forms of procurement (including some regarded as PPPs with no private finance), such as DBOM contracts, in which the contractor is responsible for both construction and maintenance. However, under a DBOM, the contractor does not necessarily have the same incentive to look for savings in the overall life cycle cost as it has with a PPP. As previously suggested, there may be a perverse incentive for the DBOM contractor to reduce the costs of construction to increase margin, as it will be paid for construction works separately and usually as work progresses.

5.2.3. Risk transfer

The private sector is usually considered to be more efficient in managing certain risks (with a lower cost) through better risk assessment and better management of risk events (mitigating the probability and/or consequences of the risk or transferring them to a third party at an efficient cost). As a result, the private sector will require a lower risk premium than the likely cost to the government if it does not transfer the risk. PPPs transfer significant risks to the contractor, and hence offer greater opportunities to reduce the risk premium included in the cost of the infrastructure. In addition, private sector investors and financiers with capital and funds at risk in the project will perform their own due diligence, providing an additional layer of risk oversight.

Time risk (the reliability of having the infrastructure available for service in time as scheduled) is also transferred to the private partner by means of the payment mechanism: most, if not all the payments will be only granted once the asset is constructed and commissioned (see Figure 1.8). However, in some cases VGF payments can be made against construction milestones that would lower the capital cost to the government.

Risk transfer will never be fully effective if there is no capital at risk. If a risk that has been transferred to the private sector materializes, a contractor that does not have capital at risk can potentially walk away from the project with a minimal loss rather than resolve the issue, whereas a contractor with capital at risk in a well-structured PPP cannot do so.

Risk transfer lies at the heart of incremental efficiency, and it is usually the most important driver of VfM. However, it should be nuanced: a PPP project with low or marginal risk transfer will not allow the private partner to provide incremental efficiency through better risk management and should therefore be procured by conventional means.[40] However, transferring too much risk may also spoil Value for Money (Chapter 5 provides reflections on how to find the optimal risk allocation, retaining or taking back and/or sharing some risks).

5.2.4. Innovation

The performance-oriented nature of PPP contracts as well as the use of output specifications helps to encourage innovation. When the requirements in a contract are properly focused on performance and outputs, it is possible to grant the contractor a certain degree of flexibility to structure and organize its own means and methods. Therefore, the private sector's ability to innovate will provide an additional source of savings and efficiency. Provided the contract is performance based (that is, there is a prescription of the output, through output or service specifications or requirements, rather than a prescription of the inputs or means), there will be room and incentives for the private sector to apply innovative techniques and methods. These are more likely to be cost-effective in meeting the required level of service performance. The way to capture these efficiencies for the benefit of the public authority and taxpayers is through the tender and evaluation process, which should have a significant focus on price and cost drivers.

PPP innovation related to mitigating the impacts of climate change should receive considerable attention. These include efforts to identify opportunities to implement emission reductions through the use of innovative materials, energy efficiency measures, renewable energy resources, and new technological and nature-based approaches. Similarly, innovative PPP projects can put a focus on advancing gender equality, for example by identifying opportunities to integrate training programs for women to facilitate their participation in the PPP project or by prioritizing the accessibility and safety of females in the design of infrastructure facilities and services.

[40] For example, in the case of Trencin water system in the Slovak Republic (case 8 in "Resource Book on PPP Case Studies", European Commission 2004) there was no performance risk transfer. A revenue mechanism based on a cost-plus approach, that is, guaranteeing contractually that the private partner will achieve a certain profit on costs (as they are incurred) and with no deductions or penalties for sub-performance, presents a lack of risk transfer and absence of incentives for performance.

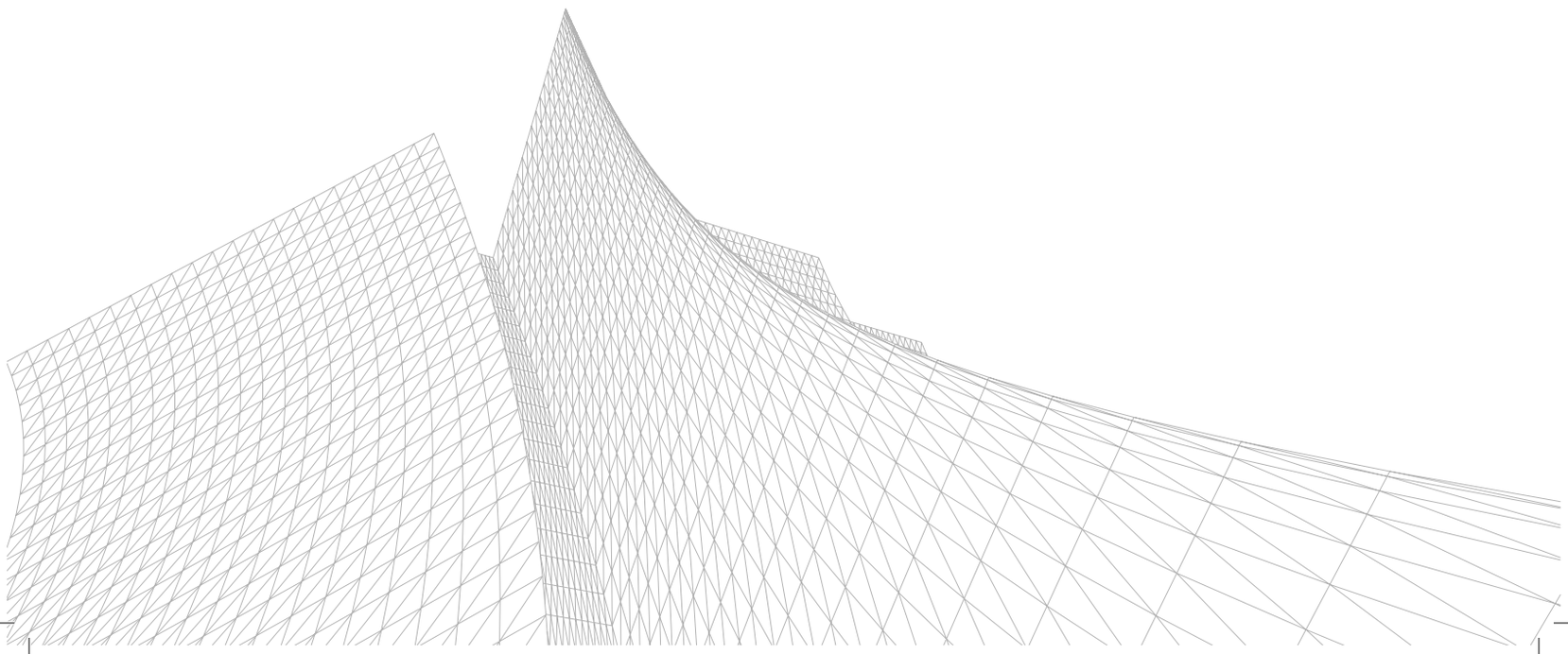
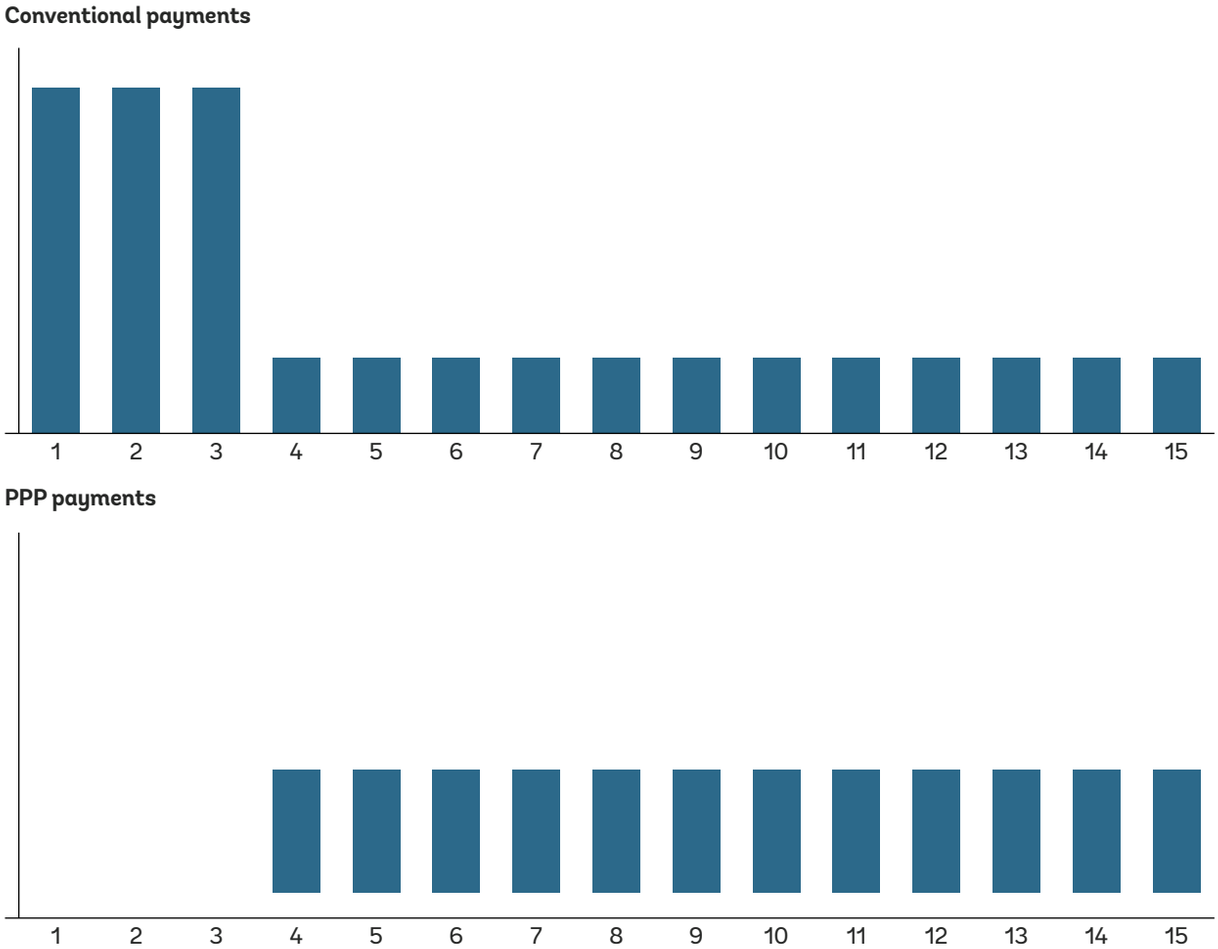


Figure 1.8. Public outflows comparative chart



In a PPP, government starts to pay only once the asset is in service, paying for the value of the construction and O&M costs all together. In this way it finances the construction while at the same time incentivises the contractor (the private partner) to construct as scheduled or sooner, and embed the payment for operations and maintenance with the compensation for the works constructed.

5.2.5. Reliability and Effectiveness

Efficiency is often measured in financial cost terms. At times, efficiency can cost more upfront. However, public policy decisions should also be taken into account considering costs and long-term benefits in social terms. Some costs should be monetized (when this is practical) and benefits should also be monetized or at least qualitatively assessed.[41]

The PPP approach might bring or capture incremental benefits, or it may provide savings in some social costs if these are properly incentivised in the contract (energy efficiency, reduced gas emissions, reduced noise pollution, and so on). A PPP can also improve the cost-benefit outcome by encouraging faster construction so that the infrastructure will be available and in service sooner, or by providing more certainty in the timing of the project (time reliability).

[41] Cost-benefit analysis (CBA) is the type of analysis that intends to capture the costs and benefits of a project solution, to confirm it offers net value to society, or to compare between project-options for selection or prioritization purposes. Chapter 2 of this PPP Guide explains more about the mechanics and use of CBA analysis.

The delivery of services at pre-agreed levels of quality is another important aspect of the benefits of the PPP model. The public sector's ability to maintain a reliable service level at the same quality can often be impeded by budgetary constraints, poor supply chain management and staff turnover. The linking of payment to performance levels provides an additional incentive in PPPs for the quality of service to be maintained.

In general terms, a PPP is able to provide additional reliability in the time (see Figure 1.8) and cost of meeting the objectives (for example, service levels required, that is, quality). As such, PPPs can provide benefits not only in terms of efficiency, but also in effectiveness.

5.2.6. Efficiency through maximization of use/better utilization of the asset

In projects that rely significantly on user payments, as well as other off-budget sources of revenue, higher-than-expected efficiencies may result in higher-than-expected revenues in addition to cost efficiencies (if the service may be provided to more people with the same or fewer resources).

In such PPP projects, the private sector has an incentive to increase public use of the infrastructure (higher traffic/use of a transport facility) and to increase its economic utilization or value. In some cases, this is done through commercial utilization of the space/sites for hotels, restaurants, leisure facilities, or other synergistic uses. This incentive leads to the private party proactively operating the asset and introducing innovative approaches and strategies.

This may produce a surplus of revenue for the public authority (which will be captured by charging a fee to the private partner)[42] and taxpayers or may lower the budgetary cost (since it will reduce the viability gap if this exists).

Some government-pays PPPs also provide incentives to maximize use or encourage alternative uses of the infrastructure (for instance, developing optical fiber in rail, exploiting commercial areas in all transportation schemes, and so on).

[42] Ways for capturing excess revenues are explained in Chapter 5.8, "Payments to the procuring authority".

Box 1.16. Are PPPs really more efficient?[43]

There are numerous analyses and reports developed by (or for) governments and National Audit Offices as to whether PPPs are in fact delivering VfM. The majority of the reports produced by (or for) governments and audit institutions conclude that PPPs do generate VfM.[44]

United Kingdom studies indicate that government departments that implemented PPPs registered cost savings of between 10 and 20 percent. According to the 2002 census of the United Kingdom National Audit Office (NAO), only 22 percent of PFI deals experienced cost overruns and 24 percent experienced delays, compared to 73 percent and 70 percent of projects undertaken by the public sector and reviewed in a NAO survey in 1999.

The HM Treasury reported in 2006 that, according to a study for the Scottish Executive by the Cambridge Economic Policy Associates (CEPA), 50 percent of authorities administering PPPs reported that they received good Value for Money, with 28 percent reporting satisfactory Value for Money.

Australia's National PPP Forum (representing Australia's National, State and Territory governments) commissioned The University of Melbourne in 2008 to compare 25 Australian PPP projects with 42 traditionally procured projects. The study found that traditionally procured projects had a median cost overrun of 10.1 percent, whereas PPP projects had a median cost overrun of 0.7 percent. Traditionally procured projects had a median time overrun of 10.9 percent, whereas PPP projects had a median time overrun of 5.6 percent.

However, a note of caution is in order: the choice concerning the mode of procurement should be made on a project-by-project basis and, more specifically, on the basis of each project's merits (OECD 2008).

Sources: Adapted from OECD 2008; University of Melbourne 2008.

[43] The main reports cited are "PFI: Construction Performance. Report by the Comptroller and Auditor General, HC 371 Session 2002-2003: 5 February, Canberra (National Audit Office, 2003); "PFI: Strengthening Long-term Partnerships, The Stationery Office, London" (HM Treasury [2006]). "National PPP Forum – Benchmarking Study, Phase II: Report on the Performance of PPP Projects in Australia when Compared with a Representative Sample of Traditionally Procured infrastructure projects" (The University of Melbourne 2008). More research literature about the effective value added by PPPs include: Estache, A. And C. Philippe (2012), "The Impact of Private Participation on the Performance of Infrastructure in Developing Countries: Summary of the academic evidence," IFC Economics Notes, No. 2, April, Grimsey, D. and M.K. Lewis (2005), "Are Public Private Partnerships Value for Money? Evaluating Alternative Approaches and Comparing Academic and Practitioner Views", *Accounting Forum*, 29(4), 345-378, or Gassner, K., A. Popov, and N. Pushak (2009), Does Private Sector Participation Improve Performance in Electricity and Water Distribution? PPIAF Trends and Policy Options, No. 6, Washington, DC: World Bank.

[44] However, the academic community is not unanimous and there are some academic reports that supports the opposite conclusion, that is, a lack of evidence of the PPP as a facilitator or means of providing additional efficiency.

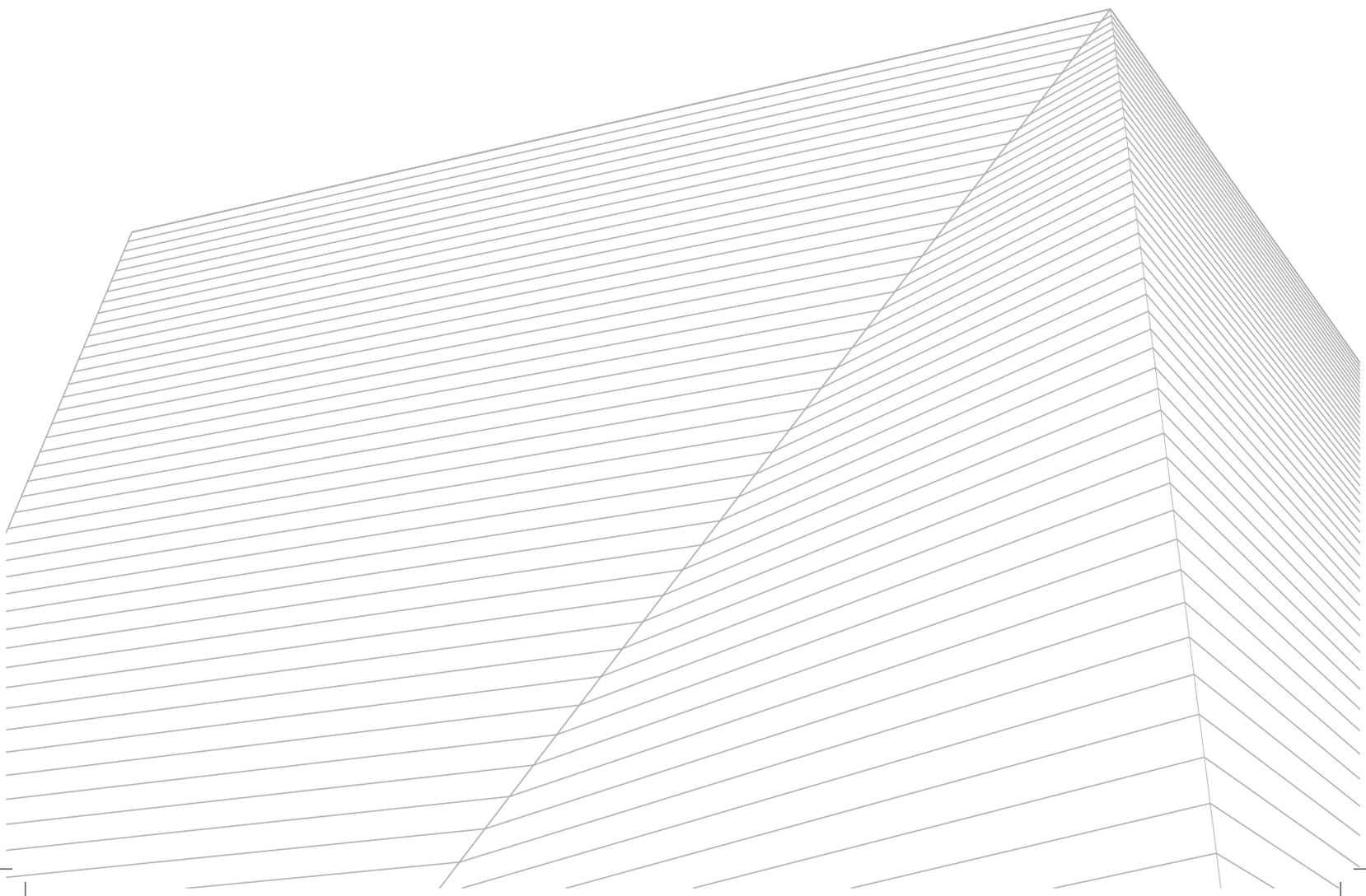
5.3. Other benefits related to overall efficiency for governments

PPPs can also deliver additional efficiency benefits as follows:

- PPPs ensure there is an up-front commitment of resources to maintenance and technical reliability: the private sector can improve the reliability of the infrastructure availability and quality by committing dedicated resources to the project in the long term. However, this advantage has to be qualified with the related pitfall of decreased flexibility in budget management;

- PPPs can deliver "demonstration effects": the private sector may introduce innovations that can then be adopted in other projects or in other government service delivery. For example, prison PPPs in Australia and New Zealand have provided opportunities for the private sector to innovate in prison management, and for the government to learn from them and implement similar innovations in government-run prisons (both non-PPP and DBFM models); and

- Transparency: PPPs can bring more transparency and assurance because of the many parties involved in the transaction (government/authority and its advisors, private investor, contractors, lenders, bid side advisors, and so on). See Box 1.17.



Box 1.17. Key points summary: Main PPP drivers for incremental efficiency and effectiveness in infrastructure procurement[45]

Cost Management (flexibility to negotiate)	Higher flexibility in contracting (through flexible negotiations with subcontractors and/or a more flexible labor framework) and the 'for profit' nature of the private sector.
Life-Cycle Cost Management	The private partner will assume the risk of cost overruns during the whole life of the contract. Therefore, it has the incentive to design and build the asset in a way that optimizes the overall cost of construction and maintenance over the life cycle of the asset.
Risk Transfer/Risk Management	Paying on the basis of outputs (availability or use) rather than on inputs and requiring the private partner to finance the investment on the basis of such revenues allows for significant risk transfer. Allocating or transferring risks to the private partner (those risks that are inherent in the scope of the contract and to the extent they are manageable by a competent manager) can generate Value for Money, as the private sector is more able to mitigate, assess, price and/or manage the consequences of most risks.
Innovation	Focusing the requirements on output specifications incentivizes innovation to design, construct and manage maintenance in a more cost-effective way.
Reliability	Results in terms of time for construction (time reliability) and achievement of results (technical or quality sustainability) are higher through the revenue regime of a PPP (linked to performance and based on results).
Incremental Asset Utilization	Under the appropriate incentives, the private partner will be interested in maximizing utilization (for instance, in payments by user or per user or through specific bonuses).
Upfront Commitment and Predictability and Other General Benefits	With the necessary caution in terms of exposure to liabilities, PPPs are helpful in organizing and distributing budgets to protect long-term quality standards in public infrastructure. PPPs may also provide demonstration effects and help in decreasing corruption by increasing transparency and assurance.

5.4. Disadvantages and pitfalls of the PPP option

In addition to offering benefits and advantages, PPPs as a procurement option also have weak spots and potential disadvantages.

- **PPPs are significantly more complex than traditional procurement methods.** Consequently, there is a significant risk in sinking resources into unworthy or unsuitable PPP projects that consume more resources than conventional and less complex procurement routes. PPP projects

[45] When most of these key drivers for efficiency are present in a project, or may be triggered and protected in the project if delivered as a PPP, it may be considered that the project is suitable as a PPP. For another description of signs of PPP suitability, see the "Green Book: Appraisal and Evaluation in Central Government" (HM Treasury UK 2003), box 23, "Considering private provision".

demand more highly specialized resources and attention by the government. The time needed for PPP project preparation is longer than for public works projects, and governments wanting quick results may be discouraged from following the PPP route. The complex nature of PPPs may be mitigated by sound and detailed guidelines for managing the PPP process, as well as realistic time frames and appropriate organization of resources and knowledge (for example, PPP units);

- **The PPP route has more visibility and political exposure.** After political change, new government administrations can perceive that they are now paying for an infrastructure project that generated political benefits to others (their predecessors) in the past. Worse, payments to the project may actually be reducing their ability to develop new projects. This negative perception of PPPs can be mitigated in several ways: proper communication policies, the search for political consensus on the use of the PPP model, and the establishment of a PPP program;

- **Public controversy may emerge due to the public belief that PPP implies privatization, a rise in charges, or the application of new user charges.** Both the public and unions may react and be opposed to PPPs, especially when they imply substitution for the direct provision of a public service. Again, communication is the essence of managing perception and contestation risks. Additionally, retrenchment is a specific matter that deserves careful attention and specific management;[46]

- **PPP procurement has significantly higher transaction costs, both for the public sector and the private sector/contractor community.** These higher costs are inherent in the higher complexity of the procurement, particularly during the tender process, but also in preparation/appraisal and monitoring resources. This disadvantage can be minimized if projects with only a certain significant capital size are procured. Provided a project is of a sufficient size, the PPP efficiencies are likely to outweigh the higher transaction costs;

- **PPPs produce a higher cost in terms of surveillance for governments, introducing higher performance monitoring to make sure that the efficiency and quality gains are actually delivered.** However, this higher cost is part of the price of a more reliable quality of service especially when it comes to increasing monitoring of ESG commitments. In traditionally delivered projects, the costs of ongoing quality monitoring are often less visible as they are seen as "business as usual" for the procuring authority, and therefore not costs of the project. Alternatively, monitoring does not occur at all, leading to a degradation in the quality of service;

- **The PPP route is more expensive in terms of financing.** The cost of private financing includes a risk premium in the form of a margin in interest rates and the equity Internal Rate of Return (IRR) requested by the private equity capital, which by definition is a more expensive financial instrument than the alternative of direct government financing. However, the government's cost of borrowing understates the true cost of financing as it does not remunerate the government for bearing risk in the project.
  This does not mean that the PPP option is by definition more expensive. However, if the project is unsuitable for a PPP solution, is poorly structured, or the procurement process or the contract is poorly managed, the use of expensive private finance is unlikely to be offset by other efficiencies. This creates an unexpected extra burden in terms of affordability that is not compensated for by the efficiency savings;

[46] For specific guidelines on retrenchment, see the International Finance Corporation's (IFC's) *Good Practice Note - Managing Retrenchment* (August 2005).

- **Fiscal risks.** Countries with less sophisticated accounting and fiscal monitoring regimes face a risk that PPPs will result in excessive budget commitments that threaten long-term fiscal sustainability. This is particularly true in the case of Unsolicited Proposals USPs. When a PPP is not recognized as contributing to public debt, there is a risk of ignoring/dismissing the long-term fiscal implications. Long-term budget sustainability may be endangered as a result. This may be offset with a robust appraisal (which is more demanding than in a normal procurement) and an appropriate policy framework in terms of controlling aggregated PPP commitments (see Chapter 2 for further information on this matter). Examples of excessive fiscal risks are discussed in *PPP Reference Guide, Version 3.0* (World Bank, 2017);

- **Budget management.** As a long-term contractual commitment for the public party, a PPP implies rigidity in budget management (potential renegotiations of a contract to decrease costs in an unforeseen economic downturn are costly). The only way to handle rigidity pitfalls is by controlling the aggregated exposure of PPPs and analyzing affordability carefully (Chapter 2.8.5 provides a description of the relevance of reporting and accounting); and

- **Lack of competition (post award).** After the signing of the contract, contract renegotiations are frequent. When this happens, being a monopolistic supplier, the private operator has an advantage in negotiating with the government compared to a supplier in a competitive market (OECD 2008). The only way to mitigate these risks is to build flexibility for change into the contract, together with clear boundaries. Chapters 7 and 8 deal extensively with contract change matters.

These features represent weak points, disadvantages and risks inherent in the PPP route. Therefore, the PPP option may not be the most appropriate for a specific project if these risks are not manageable by the government to substantially eliminate or mitigate them. Similarly, a PPP may not be appropriate if the government does not have mechanisms of control in place (for example, control of aggregated exposure and proper affordability analysis). Consequently, not all infrastructure projects are suitable to be delivered as a PPP.

Furthermore, a particular country may face additional challenges to developing PPPs as a result of macroeconomic conditions and the general framework for doing business in the specific country. This is explained below in section 5.6.

5.5. Conditions for accessing the benefits: Introducing the elements and phases of a proper PPP process, the need for project governance and the role of the PPP framework

The preceding sections explained how the PPP option may be a significant source of incremental efficiency and provide other benefits for better infrastructure management. It also has weak points and other issues that make it inappropriate for some projects.

Governments need to protect and maximize the potential benefits of the PPP procurement mechanism and mitigate its potential risks and pitfalls. If not, PPPs will create undue burdens to taxpayers rather than increase efficiency and reliability in public works and service delivery.

These benefits, especially those related to efficiency, will only be achieved if the project and contract meet the following conditions and the following actions are taken:

- There must be a demonstrated need for a project: A PPP will not make a good project out of a bad project (Chapter 3 explains the importance of how to identify projects and how to feed the PPP process cycle with PPP candidates from the pipeline of identified projects. It also introduces the need to test the project for economic soundness and feasibility);
- The project must be suitable for a PPP: PPP advantages will only be achieved in those projects that are suitable for PPP development (Chapter 3 explains how to screen a PPP project).
  The project must be properly prepared and appraised: In particular, it must be commercially and financially feasible, affordable and duly tested as a PPP (Chapter 4 explains how to test the PPP suitability through the VfM exercise, as well as test the commercial feasibility[47] and affordability. It also addresses risk mitigation and other threats over the project life cycle through a sound preparation);
- The project must be properly structured: The potential efficiencies of a PPP will only be achieved with a suitable contract structure in place that allows the value drivers to emerge and become sustainable (Chapter 5 deals with contract structuring and drafting);
- The project must be properly tendered: PPP efficiencies will be lost if there is an improper procurement process that does not generate competitive and reliable competition through a transparent tender process (see Box 1.18) (Chapter 5 describes how to structure a tender process, and Chapter 6 explains the tender process from a management point of view);
- The project must be proactively managed through the life of the contract: PPP efficiencies may be lost in the course of the contract life if there is improper contract management and accountability (Chapters 7 deal with contract management), and;
- Project sustainability risks especially regarding climate change and gender equality are an increasing focus of PPP benefit assessments (see Section 10.)

All of these actions are progressive and iterative in nature. They represent the process cycle of a PPP and are further explained in Chapters 3 to 7 of this PPP Guide. Section 10 of this chapter provides an introduction to this cycle and to the chapters of the PPP Guide related to the process cycle.

The first factor in achieving a successful PPP is to pay attention to the benefits and risks affecting the PPP method in order to apply the PPP procurement mechanism to the appropriate projects. Projects then have to be appraised and prepared meaningfully, including the proper structuring of risks and incentives. They also have to be tendered under a process that maximizes efficiency and transparency, and encourages sound competition among reliable bidders.

The conditions to be met for the project and the contract to be approved (investment decision and procurement decision) should be defined in a clear and understandable manner in the form of guidelines. There should be processes in place to ensure that these conditions are met. The project and the contract should be prepared so as to face risks in a flexible but predictable manner, providing the right incentives to the private partner and maximizing quality competition while avoiding and mitigating recklessness. Failure to do so will produce harmful consequences.

[47] This PPP Guide defines commercial feasibility as "the analysis conducted to check whether the project will effectively attract quality bidders, investors and lenders, as well as highlight the main conditions that must be met to do so". Commercial feasibility relates to adequate risk/return ratios for investors and bankability. See Chapter 4 for further information.

Box 1.18. The need for competition. How PPPs are procured[48]

Competition is one of the main drivers in maximizing VfM. Under direct negotiations, a government will most likely pay more than the fair price for the works and services received and they may be of lesser quality.

Competition is what brings innovation into the equation, as companies under competitive pressure have the incentive to innovate to be efficient, and proactively assess and manage the risks in the most efficient manner. Without competition, it is likely that the price of the same project with the same approach will be higher.

Direct awarding or direct negotiations may be appropriate only in very few circumstances. Most of the reasons commonly used to justify negotiating directly are considered spurious (PPP Reference guide 3.0 (World Bank, 2017)).

The few circumstances in which direct negotiations may be appropriate generally relate to situations when it is evident that only one company is prepared to deliver the project, or when there have been natural disasters or other emergencies that demand an expeditious process. In these circumstances, VfM may become a secondary factor.

Direct negotiations may not only harm VfM in an obvious manner but may also seriously harm the interest of the industry in the relevant PPP program and market. Indeed, transparency is of the essence in accessing stable and significant ongoing interest in PPPs from the bidding community.

For this reason, a proper procurement framework should clearly position direct negotiations as an exception, and explain that a country/government will use it as a process in very limited, if any, circumstances (ideally, where the need for such an approach is evident for the public and the industry). Good practice is represented by the many existing frameworks that set clear and limited conditions on the circumstances in which direct negotiations are allowed (for example, Puerto Rico´s PPP Law – Law 29 of 2009), with some jurisdictions going even further and forbidding direct negotiation processes (for example, Brazil´s Federal PPP Law of 2004).

[48] Examples of the risks and pitfalls surrounding direct negotiations and lack of competition are numerous. *Resource Book on PPP Case Studies* (European Commission 2004) case study 17 (page 83) illustrates the case of a waste management project, and the *PPP Reference guide 3.0* (World Bank, 2017) proposes an example of a directly negotiated IPP in Tanzania (page 197).

Box 1.18. The need for competition. How PPPs are procured (cont.)

One particular approach, which may be a valid exception (in some circumstances and under specific rules and conditions) to the competitive process approach, is the unsolicited proposal (or "privately initiated project"). This lies somewhere between direct negotiations and a competitive process. In an unsolicited proposal, a private party initiates the project, that is, acts as a promoter and proposes to the government the delivery of a project to solve a specific need. Unsolicited approaches may be handled in a manner similar to a direct awarding (that is, pure direct negotiations), with the government entering into negotiations with the private initiator if the project meets the government's investment and procurement conditions.

A better practice for procuring a USP is where competitive tension is introduced by submitting the project to competition, but granting some advantages to the original proposer. The degree of advantage offered may vary and thus encourages more or less competition. The competitive process should prevail as the standard or default approach to tender projects as it brings important benefits.[49] Privately initiated projects are discussed in Chapter 2.6.6.

This PPP Guide assumes that PPPs are procured under a competitive process in which there will be a tender to select an awardee among a number of candidates. Therefore, all the chapters dedicated to the PPP cycle are based on such a standard and transparent approach. The tender process should follow a published set of rules and procedures (the procurement framework). This will govern the management of the various options available to handle the different phases of the process, commonly including qualification, bid submission, evaluation, awarding, and contract signature.

There is a relatively long list of tender process types worldwide, but many of them contain the same basic features with small variations.

There are a number of key aspects that influence and define how the process will be designed and work, including:

- The approach to qualifications: The timing of the issue of the request for qualifications (in advance of issuing a request for proposals [RFP] or not) and whether to pre-select (shortlist) or adopt only apply pass/fail criteria.
- The approach to request for proposals: The timing of the finalization and issue of the RFP and contract (whether after a period of dialogue and interaction or allowing no interactions and dialogue, but only minor clarifications).
- The approach to bid submittal and evaluation: Whether negotiations are allowed or not, and whether iterative proposals are allowed or not.

[49] The sense of some unsolicited proposals is anchored in the innovation factor. For example, see Virginia Hot Lanes PPP project (described in the PPP Reference guide 3.0 (World Bank, 2017), page 40), based on an innovative approach proposed by the private initiator to manage traffic congestion and tolling (dynamic tolling and high occupancy tolls or HOTs).

Box 1.18. The need for competition. How PPPs are procured (cont.)

Different combinations of the elements of the procurement strategy produce the most common types or models of procurement process. These are introduced in section 10.

There is another key aspect that influences the selection process, which is the evaluation criteria (sole price or other financial criteria versus combined financial and technical or other qualitative criteria). Evaluation criteria are discussed in Chapter 5.

The design of the procurement process for the PPP project (preferably referred to as the tender process in this PPP Guide) is discussed in Chapter 5, and Chapter 6 describes the Tender Phase itself.

It must be pointed out that without there being transparency in the procurement process, it might be impossible for stakeholders to verify the competitiveness of a project procurement.

Improper project/process management (management of the PPP process cycle as previously described) will end up in project failure (see Section 8). Improper procurements may not only result in the government losing the benefits of the specific PPP project, but it may also affect the government's overall reputation as a fair PPP and infrastructure procurer — both with the public sector and the broader market.

Good management of the project procurement process requires significant capacity (technical expertise and significant resources) built into a sound project governance structure, and it should be wrapped in a rigorous and clear framework (see Section 9). Furthermore, a sound framework not only mitigates the risk of management failures and general potential pitfalls of PPPs, but also drives the PPP tool to a higher level, including the sustainable attraction of private funds (see Section 9.4).[50]

Many PPP project failures are ultimately due to the numerous challenges that a project manager (both in the public and private sector) must face, and these can only be handled if there is proper project governance in place. This should comprise the following:

- Sufficient resources in a project team (not too large nor too small), a full-time dedicated project manager, and adequate incorporation of advisors;
- Clear identification of a Project Owner and a Project Champion;
- Clear accountability;
- Existence of an advocate for the project outside the project team;

[50] An interesting question is when the framework should be created. Generally, a proper PPP framework should be in place before announcing and launching a PPP program. However, the definition might not be exhaustive in the first instance, allowing government to adapt the framework to the real experience of the initial projects. In any case, it is good practice to launch "pathfinder" projects so as to test the water before committing extensive resources and reputation when a market is not yet sufficiently mature in PPP terms.

- A clear decision framework (organized through project boards and linked to a program governance structure) and decision chain;

- Proper stakeholder management (who should be informed about and engaged with the project from its early stages); and

- Fluent and clear communication (including communication to the general public).

Chapter 3 provides an introduction to project management, stakeholder considerations, the relevance of communication and the need and role of advisors when managing PPP projects.[51]

Section 8.2 explains further risks and threats that may compromise successful process management. It also incorporates the role of the PPP framework in mitigating risks of failure, providing examples of project failures due to lack of preparation, improper appraisal and poor management (8.3).

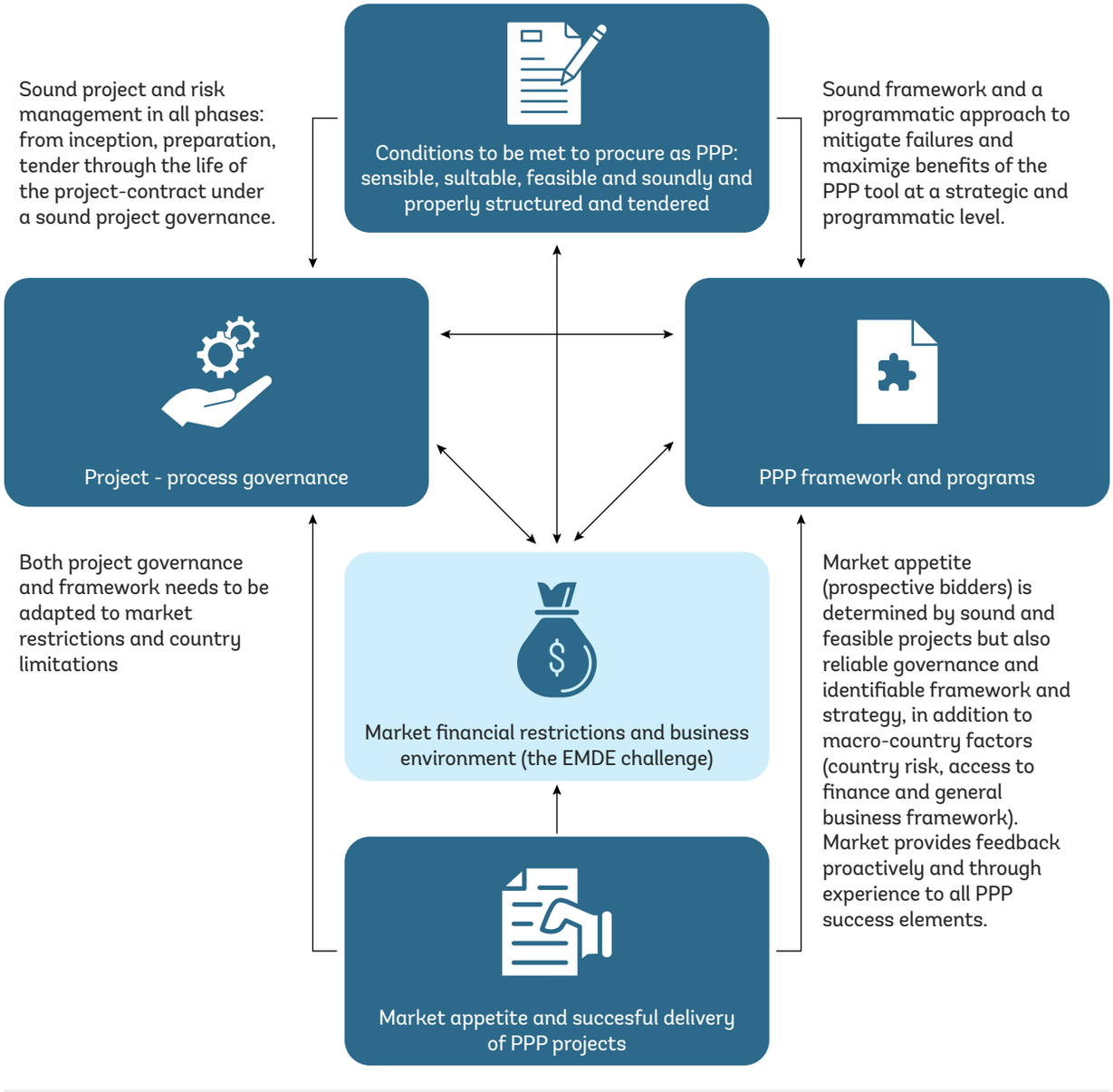
As explained in section 8, having a sound framework and approaching PPPs in a strategic and programmatic manner not only diminishes the risk of failures, but is the only way to maximize VFM. In other words, not only do projects need to be prepared and be ready to be launched and then properly managed, but governments themselves need to be ready to control the pitfalls and protect or maximize the value that private finance PPPs in particular, and PPPs in general, may bring.[52]

These considerations are valid regardless of whether the respective country or market has unrestricted access to long-term financing, and the stability of the country's political, legal and economic environment (even if country risk is perceived to be non-existent). If the country or market has significant restrictions in its access to long-term financing, or has an unstable political, legal or economic environment, these limitations have to be addressed or mitigated (through the PPP framework and contract structuring), or the PPP strategy of the country needs to be adapted (see Section 5.6).

[51] These features and roles in project governance are explained in World Bank - Farquharson, Torres de Mästle, and Yescombe, with Encinas (2011) pages 80-83. Detailed knowledge on project management and project governance is outside of the scope of this PPP Guide. However, robust project management and risk management processes should be applied throughout the whole project process (from identification through to contract finalization). For further information on project governance, see *Project Governance: A Guidance Note for Public Sector Projects* (HM Treasury UK 2007). For information on risk management of the PPP process, see *The Orange Book. Management of Risk – Principles and Concepts*. Additionally, in this PPP Guide, chapters 4 and section 5.5 deal with risk management from the financial perspective, identification and assessment through allocation and structuring. Chapters 6 and 7 discuss further risk management during the life of a contract

[52] Markets and countries with higher sophistication and capacity in planning and managing PPP programs are regarded as "mature PPP countries". The PPP maturity concept is proposed and explained by Deloitte, including the three stages of development, in *Closing the Infrastructure Gap: The Role of PPPs* (Eggers and Startup (2006), Deloitte).

Figure 1.9. The basic elements for PPP success



Note: EMDE=Emerging Market and Developing Economy; PPP=Public-Private Partnership.

5.6. The challenge for some EMDE[53] countries and especially least developed countries: The need to adapt the PPP approach to macroeconomic context and financial market restrictions

a) The challenge of the availability of long-term finance

Private finance PPPs require long-term finance, the majority of which should be in the form of debt so as to maximize financial efficiency through gearing[54] (see Section 7).

A sound financial structure requires that the debt is ideally denominated in the same currency as the revenues of the debtor (that is, the private partner or SPV). Therefore, when the PPP revenues are denominated in local currency, debt should be provided by local lenders if available (unless the currency of a country is a supranational currency, as in the case of the euro). Otherwise the project will be affected by one of the more severe and difficult to manage risks, that is foreign exchange risk (if the project is financed using a foreign currency and there is a devaluation of the local currency, this results in an increase in the amount of debt in local currency terms, which has to be repaid from the devalued revenues).

A country without a relatively developed domestic financial system — that is one able to lend significant amounts for long terms (e.g., above 10 years) — will have to rely on cross-border financing in hard currency, such as U.S. dollars or euros. However, it will only be able to do this if one of the following options is available and credible:

- Foreign exchange risk hedging mechanisms (such as Cross Currency Swaps [CCS], currency forwards, and so on) which are not usually available in undeveloped financial markets, but could be an option in some countries. This is an area where the multilateral development banks (MDBs) may play a relevant role by providing or participating in CCS structures;[55]

- Government insurance or guarantees against devaluation risks. This may be done to different degrees. At the highest degree, in government-pays PPPs, this is done by denominating the payment in a hard currency (for example, in some projects in Peru) or, more commonly, by providing protection to the debt (rather than including the equity) in the form of direct guarantees to the lenders. At a lower degree, it is done by contractual guarantees (that is, providing compensation to the private partner through the contract when devaluation reaches certain thresholds). For this solution to be effective, the guarantees provided by the procuring authority should be clearly enforceable (for example, irrevocable and unconditional), and the risk of breach of such an obligation must be acceptable for the lenders.

[53] IMF's World Economic Outlook (WEO) country classification system designates 34 member countries as advanced countries; the remaining 154 member countries are labeled "Emerging Markets and Developing Economies" (EMDEs). The EMDE category is not formally broken down into sub-groups of emerging markets (EMs) and non-EMs, although there is significant text discussion of the EM category and generally recognized EMs (for example, Brazil, Russia, India and China, the BRICS). See http://www.imf.org/external/np/pp/eng/2014/060314.pdf

[54] Gearing and leverage mean "the ratio of a company's loan capital (debt) to the value of its ordinary shares (equity)" (Oxford English Dictionary). The term "gearing" is used interchangeably with "leverage" in this PPP Guide.

[55] See case study 3, *Lekki Toll Road Concession* (WEF 2010, page 94). In this toll road project in Nigeria, awarded in 2006, the AfDB provided a significant portion of the debt in hard currency (US dollars) and helped to provide, with the commercial MLA, a swap that mitigated the currency risk of the concessionaire. Also, the Asian Development Bank (ADB) is allowed to raise rupee bonds and carry out CCS to support long-term debt in projects in India (WEF 2010).

However, in such circumstances, the lenders may require access to political risk guarantees (for example, insurance from an ECA) or the presence of a MDB as co-lender in an A/B loan structure (Section 7.2 provides more information about the role of MDBs and ECAs including an explanation of A/B loan structures).

- Significantly decrease the size of the private finance package, accepting that the government will have to directly finance a significant portion of the project capital expenditure (or do so indirectly through a public loan). This is in addition to other support-like guarantees or direct letters (Section 7.3 further explains the co-financing approach, and Chapter 5.4 provides further details of different forms of public financial support to increase commercial feasibility). For example, for the $150 million new national referral hospital in Lesotho, developed under an integrated PPP with an 18-year contract term, the government contributed 37 percent of the capital expenditure, and the debt was provided by the Development Bank of South Africa with a direct lender agreement signed by the government to improve the creditworthiness of the.[56]
  A less-effective technique to mitigate currency risk, only accessible in user-pays projects, is to transfer the risk to the user by allowing the private partner to increase tariffs according to the consumer price index (CPI) and the currency exchange rate. However, this protection is inefficient for material devaluations as they will heavily affect demand/use of the infrastructure or the increased charges will lead to significant public protests.

Governments should be aware that assuming foreign exchange risk may significantly increase their liabilities and should incorporate this risk in their VfM analysis.

When none of these strategies is workable or available, or the government does not find it efficient to assume such risks, some subsidiary strategies may be adopted:

- Concentrating or restricting private finance PPPs to projects that generate hard currency revenues (for example, ports, airports, and so on), so as to match the revenues with cross-border financing. For example, in Sub-Saharan Africa, from 1996 to 2007, the majority of the infrastructure projects with private participation were seaports (World Bank – Farquharson, Torres de Mästle, and Yescombe, with Encinas 2011); and

- Concentrating or restricting PPPs in general to those without private finance, so as to gain knowledge and maturity in managing the PPP model. This is done by extracting Value for Money through the PPP option in those projects and under those PPP schemes that are not dependent on long-term finance (for example, using DBOM instead of DBFOM, and applying the PPP concept only to service and management contracts).

b) Budgetary restrictions/financial capacity of the government

Regardless of whether projects in a country have access to long-term finance in local currency, PPP contracts have to be paid for (by the general public as taxpayers or by the direct users) and governments must acknowledge that infrastructure is a capital intensive business.

[56] See Health System Innovation in Lesotho prepared by UCSF Global Health Group and PwC, 2013.

Countries (and within the country, different levels of governments – see Box 1.19) with significant budgetary constraints and generally low levels of personal income known as Low Income Countries (LICs)[57] should carefully assess the financial impact of a PPP on the budget and, in the case of user-pays projects, on the individuals' affordability.[58] This includes harmonization with central government PFM policy by PPP project proponents. Financing charges due to the private finance nature of PPPs may be overwhelming for some countries, in which case it may be better to rely on conventional infrastructure delivery and public debt, including debt provided by development banks.

If there are budgetary restrictions but reasonable access to long-term finance in local currency, user-pays and private finance PPPs with strong revenue generation capacity (revenue makers) should still be possible, provided that willingness to pay is tested and the tolls are affordable for the population (that is, the government should be extremely cautious with socioeconomic appraisal in projects funded by tolls or tariffs).

A concentration on non-capital intensive PPPs and/or service PPPs is also an appropriate strategy.

Box 1.19. The local government challenge

Generally, small sub-sovereign governments and authorities find it harder to access private finance with reasonable conditions or to access it at all, especially in developing countries. This may happen at the level of states or regions, but especially at the level of local governments. This situation is exacerbated by a trend toward increasing decentralization of powers from central governments to municipalities/local governments.

The exercise of prudence and realism is even more necessary at local government levels. These governments should only assume long-term commitments commensurate with their revenue capacity. Furthermore, they should consider the appropriateness of tariff levels for municipal services and ensure that the necessary subsidization of certain public services is appropriately sized and structured.

Risk perception may overstate the real capacity of local governments. Central governments have mechanisms to subsidize the development of projects by regional and local governments, which is mandated in some sectors or specific projects.

For this reason, proper PPP policy management should include ways and routes of support at the central government level, and the development of PPPs by subnational governments (by co-financing through grants, public loans or credit wraps). At the same time, the framework should introduce control mechanisms so as to avoid excessive exposure by sub-sovereign authorities and/or the promotion of unfeasible projects.

[57] LIC countries is a subgroup of developing countries with the lowest gross national income (GNI) per capita. See http://data.worldbank.org/about/country-and-lending-groups

[58] For some specific projects in LDCs or targeting poor areas or poor communities, Output-Based Aid (OBA) has been used to increase the feasibility of a project, with the Global Partnership Output-Based Aid (see www.gpoba.org) providing subsidies to the project in the forms of grants. OBA financing and a case study (Improved Access to Water Service in the East Zone of Metro Manila, Philippines) is explained in World Bank - Farquharson, Torres de Mästle, and Yescombe, with Encinas (2011).

c) Country risk perception

Country risk represents the collection of risks associated with investing in a foreign country, including exchange risk, economic risks (GDP growth trends, inflation risk), transfer risks (the risk of an investor not being able to send payments offshore), political risks, social risks (including risks of strikes and riots), regulatory and legal risks (the risk of existing legal provisions affecting a foreign investor, or being more onerous than in the home country), corruption, and sovereign risk (the risk of default of financial obligations by the country).[59] Countries experiencing conflicts with their neighbors is an increasingly important factor that influences country risk perception.

The business climate in a country , including common or general legislation affecting a normal business (labor legislation, taxation, judicial system, and so on), the state of the infrastructure necessary for the business, development or restrictions in the supply market (especially the availability of a qualified workforce and solvent local subcontractors) may also be considered as part of the country risk assessment, or at any rate, distinctive factors for an investor to consider when approaching an emerging market.

It should be noted that some of the risks accepted as part or components of the "country risk" may overlap or be used differently by different stakeholders. For example, political risks are assumed by the insurance industry to include riots, strikes, civil disturbances, war and non-transferability or non-convertibility of the currency. Confiscation, nationalization or expropriation are also considered events included in political risks. Sovereign risk may be considered as a subset or potential concretion of political risk.[60]

Usually, high country risk perceptions and low credit ratings are correlated with a lack of financial market development and poor budgetary health. High country risk perception (especially high levels of corruption, high political and social instability, social conflicts, and so on) together with specifically poor credit worthiness (that is, high sovereign risk perception by foreign creditors) are significant obstacles for developing private finance PPPs.

In such countries, PPPs may still be a useful and valuable approach for non-capital-intensive projects and "service only" projects, and those should be the focus unless there is clear access to political risk insurance provided by MDBs or ECAs.

d) Conclusions

For countries with very low levels of income, high political and social instability, and limited local financial markets, using PPPs as an option to finance and manage new infrastructure has to be carefully considered. When setting the PPP strategy, an LDC needs to be realistic and prudent.

[59] According to a Multilateral Investment Guarantee Agency (MIGA)/ Economist Intelligence Unit (EIU) survey (World Investment and Political Risks, 2012 – www.miga.rg/documents/WIPR.pdf) as cited in the World Bank, January 2014 (*Overcoming Constraints for the Financing of Infrastructure*), regulatory failings represent the top concern of foreign direct investors. Also highlighted was "government behavior" such as historical handling of contract disputes, expropriations, and ruling of repatriation of capital.

[60] For the sake of doubt, this PPP Guide considers political risks as those risks related to government action that affect the private partner or its operations. These may include non-payment of the retributions, unfair termination of the contract, omission in executing other obligations which affect the contract, and discriminatory changes in law, amongst others.

A modest and realistic approach, adapting the PPP strategy of the government to the market restrictions and budgetary capacity of the country, has been implemented by some countries (a notable example being Bangladesh).[61]

5.7. Conclusions: Do's and Don'ts

Box 1.20 provides a summary of the main recommendations regarding PPPs as potential options to procure public Infrastructure.

Box 1.20. Do's and Dont's

Do	Don't
EMDEs, LDCs: Adapt the PPP strategy to the political, social and economic context under principles of realism and prudence.	EMDEs, LDCs: Do not plan and announce ambitious PPP programs which may be beyond the country's potential (in terms of affordability and access to international investment and finance). Don't define/select unrealistic projects, and in particular do not specify the use of unreliable or untested technology.
Select appropriate projects.	Do not use PPP for small projects (as a general rule). Try to bundle/group small projects (for example, a group of Wastewater Treatment Plants (WWTPs) rather than procuring them in separate processes.
Select appropriate PPP candidates. Look for the inherent efficiencies of PPPs, maximize and protect them.	Do not use PPP simply because it is not accounted for as public debt. Do not use PPP as an option unless the project is suitable to be procured as a PPP, that is, it is likely to capture the expected efficiencies (Chapter 3 provides information on how to screen a project as a suitable PPP candidate). Use PPP delivery when the project provides VfM, and the PPP option reinforces VfM (see Chapter 4 for more information on VfM analysis).
Acknowledge the highly demanding resource requirements of the PPP mechanism and PPP procurement process and be ready in terms of capabilities. PPPs require significant amounts of government participation during all stages of their life cycle.	Do not embark on a PPP process unless the special/specific capabilities and resources needed and the higher complexity of the process is understood. In many countries, institutions tasked with the development of PPPs face enormous restrictions and have large shortcomings. However, they are expected to produce programs and projects that demand a level of specialization and effort that is beyond their capabilities.

[61] See the information on the pipeline describing the profile of the PPP projects on the website of the PPP office of Bangladesh at http://www.pppo.gov.bd/projects.php.

Box 1.20. Do's and Dont's (cont.)

Do	Don't
Assess/appraise projects in detail to ensure feasibility.	Do not launch a PPP project unless there is some level of certainty as to its overall feasibility and PPP feasibility specifics, that is, the project is prepared and satisfactorily assessed in economic, financial, commercial, affordability and technical terms (Chapter 4 deals in its entirety with project appraisal needs and scope).
Dedicate resources to properly structure the tender and the contract, and to manage the process.	Do not believe that appraisal is everything. Inherent VfM may be lost through inadequate structuring and unclear design/drafting. The tender process should be designed to ensure the maximum effective competition within the qualification requirements (Chapter 5 deals with the need for structuring and proper design of the tender process and contract).
Allow enough time for the procurement (preparation, appraisal, structuring, and tender).	Do not rush. Do not set overly ambitious timelines; the private sector is less willing to bid for projects if they are not confident of the government's ability to meet its timetable.
Dedicate attention and resources to manage the contract beyond procurement.	Do not assume that the government has finished its job once the contract is signed. The government needs to proactively manage the contract throughout its life (Chapters 7 and 8 explain the contract management function).
Organize the government, institutional and policy frameworks to deal with the PPP tool in a programmatic way. Control the fiscal implications and evaluate projects and programs for permanent improvement.	Do not apply for PPPs as a policy strategy (at a programmatic level) unless the government is prepared and ready (section 9 introduces and discusses the role of PPP frameworks, and Chapter 2 explains what constitutes a proper PPP framework and the main features of PPP programs and frameworks).

6. Typical Basic Structure of a PPP Project

6.1. Introduction to the basic PPP project structure

This section explains further the basic structure of a private finance PPP, assuming the form (or the scope) of a DBFOM that was first introduced in section 4.

Figure 1.10 illustrates the basic structure of a common PPP (in which all of the equity in the SPV is provided by the private sector). This structure can be used for both user-pays and government-pays PPPs. The structure in figure 1.10 does not include "payments to the government" which could be

the case in some over-feasible, user-pays projects. This and other potential variations are discussed when explaining the main relationship and cash flows inherent to the structure.

Broadly speaking, the project structure refers to the architecture of contract relationships and cash flows that govern the development and life of the project.

The main relationship and core element of the project structure is the PPP agreement or PPP contract[62] (also referred to as the "upstream contract") between the authority and the private partner. It is developed by the authority and regulates the rights and obligations of the private partner to whom the development and management of the infrastructure will be delegated or contracted out. As the contract is the main or core element of the project structure, the PPP project structure and PPP project contract may be used interchangeably by this PPP Guide.

The PPP project structure will therefore be primarily based on the scope of the contract (which delineates the scope of responsibilities of the private partner), noting that the scope and structure may vary amongst projects of the same sector and type of infrastructure (see examples in section 6.3).

The project structure will also reflect the financial structure (how the private party will be compensated or paid for the works and services) and the risk structure of the PPP contract (that is, how the scope of responsibilities is qualified in terms of risks), as well as other provisions. Chapter 5 deals in detail with the structuring of the PPP contract. The payment mechanism is at the heart of the financial and risk structure and is introduced in section 6.2.

As described below (see Box 1.21), the private partner will usually be in the form of a Special Purpose Vehicle (SPV), that is, a project company created to develop and manage the project.

The SPV will "pass through" most of the rights and obligations to a downstream structure of contracts,[63] allocating responsibilities, obligations, risks, and cash flows from the SPV to the different private actors through different agreements.

- Shareholders agreements (especially with financial investors);
- Financial or debt agreements;
- Construction/Engineering, Procurement and Construction (EPC) contracts and the like;
- O&M contract or contracts; and
- Insurance contracts and guarantees

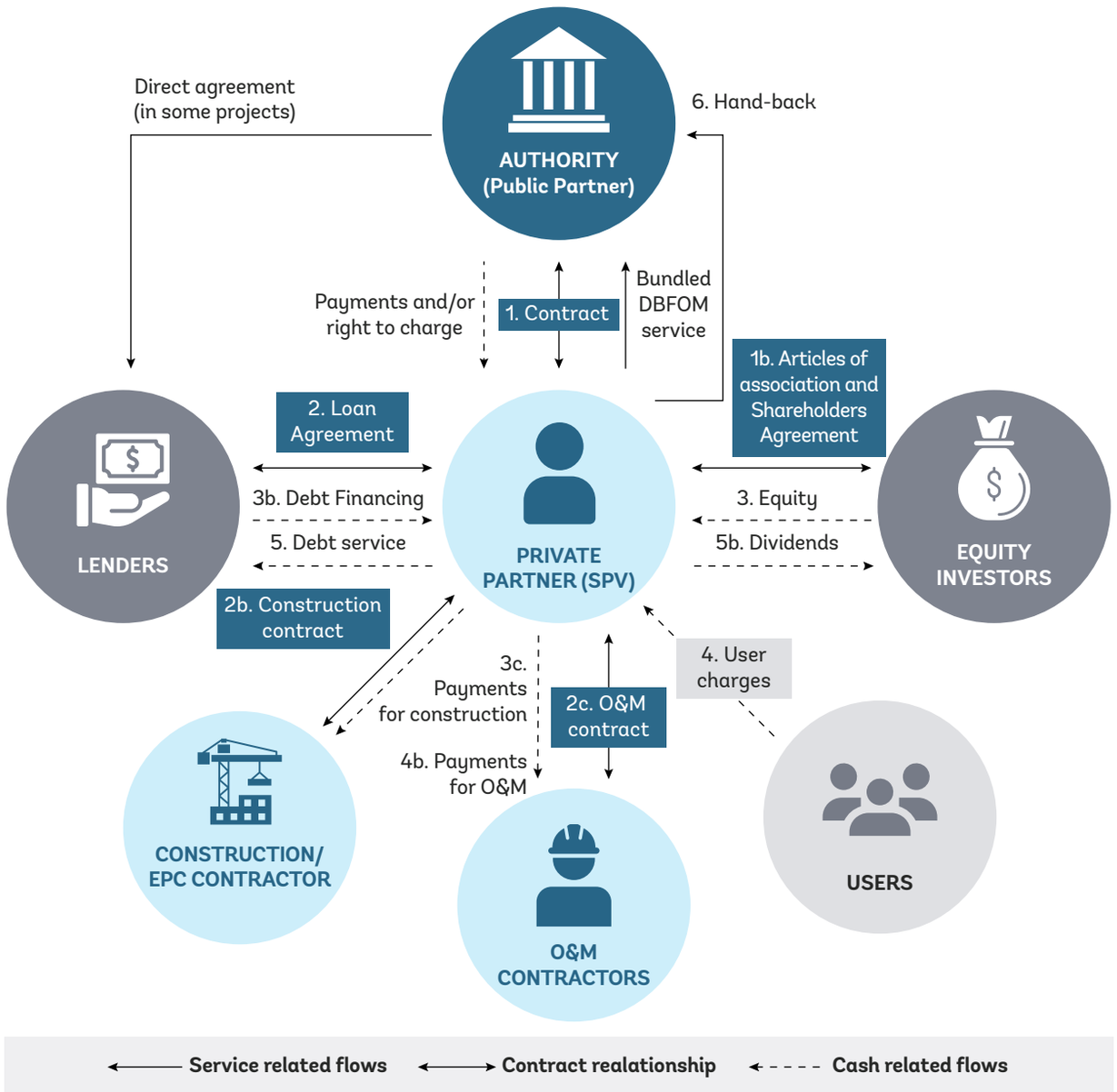
[62] While the contract will normally consist of one single document and its attachments detailing certain matters (such as the technical requirements and payment mechanism), this PPP Guide uses the term "contract" in a broad sense, so as to potentially include other agreements that may link the private partner with other public sector parties rather than the procuring authority (for example, in the case of off take agreements with a third party authority or body). The PPP contract may also be referred to as the PPP agreement.

[63] The downstream structure of project contracts is handled by the private partner and relates to transferring and allocating risks among different agents. These downstream contracts are often referred to as "back-to-back contracts" as they are intended to mirror the obligations and risks included in the PPP contract. Appendix A to chapter 6 describes this and other matters related to the preparation by the private partner to bid, develop, and handle the asset.

The Construction/EPC and O&M contractors, or related investment companies, are also often shareholders of the SPV. There may be other shareholders that are, in essence, financial investors with no role in the project other than acting as equity providers. It is not generally necessary to be a shareholder in order to act as a contractor (although some governments may require this in some projects).

The following paragraphs relate to figure 1.10 and are intended to sequentially describe the most important contractual relationships and flows of obligations and funds.

Figure 1.10. PPP project structure



Note: DBFOM=Design-Build-Finance-Operate-Maintain; EPC=Engineering, Procurement, Construction; O&M=Operation and Maintenance; SPV=Special Purpose Vehicle.

6.1.1. The consortium constitutes the SPV, which signs the contract

The government (the procuring authority) is contracting with a private agent for the DBFOM of a new (or upgraded) infrastructure.

Typically, the government will award the contract to a company or group of companies (consortium). After awarding the contract, the consortium will typically establish a specific company[64] (the Special Purpose Vehicle, SPV) to develop the project in accordance with the relevant legislation governing the formation of companies. The SPV will sign the contract with the procuring authority (this milestone is also referred to as "commercial closing"),[65] and the consortium members will execute the shareholders agreement (#1b).

By the contract signature, the private partner assumes the obligations described in the contract as follows.

- To finalize the design of the infrastructure, construct or develop the infrastructure asset (including obtaining all permits necessary if obliged to do so);
- To finance the works and other development costs (the full costs, or a relevant portion if the contract has a co-finance structure with grant financing from the government); and
- To operate and maintain the asset (after commissioning the asset and obtaining approvals and authorizations).

6.1.2. The SPV executes financial agreements and implements its contract structure (downstream project contracts)

After contract signature, the SPV will do the following.

- Enter into the guarantee agreements for the performance bond;
- Enter into the insurance agreements and policies;[66]
- Enter into the financing agreements, that is, the loan agreements,[67] also commonly referred to as "financial close" (#2); and
- Enter into the "downstream" contracts, i.e., the contracts with the construction or EPC contractors, and O&M contracts with the O&M contractors. (#2b and #2c)[68]

[64] In the variation of JV or empresas mixtas, the SPV may already be a publicly owned existing company, or the public party will participate as shareholder in the constitution of the project company.
[65] Contract signature may be also referred to as commercial close or contract "execution", referring to the act by which the specific contract becomes valid and enforceable.
[66] The role of insurance policies and performance bonds are explained in Chapter 5.9.5.
[67] Sometimes (e.g. in certain countries) financial agreements will be executed the very same day as contract signature. In other situations, it may be possible to defer the fund raising and, as a result, the construction initiation will also be deferred by several months. The most common instrument for debt finance is debt loan agreements. However, in some markets, and depending on the risk profile of the project, project bonds (i.e. bond issuance to capture finance in the capital markets) may be also used. Section 7 explains the debt options for the project finance structure.
[68] Even if O&M will not start after construction is completed, O&M contracts have to be duly executed (signed) at least at financial close, as both lenders and investors require certainty regarding cost and risk transfer to the O&M contractor.

In some projects, the authority will enter into a direct agreement with lenders (see Section 7.5).

Through the downstream contracts, the private partner is delegating responsibilities and transferring the risks to third parties in exchange for a price (noting that those third parties may belong to the same group of companies, as a shareholder of the SPV).

In most situations, there will only be one construction contract with a single contractor or with a group of contractors acting as a joint venture. However, in more complex projects, there may be several contracts for specific parts of the construction work.

For example, a light rail project may involve supply, installation and construction works. The SPV may enter into a single contract with a group of companies that will divide the works amongst themselves. Alternatively, the SPV may enter into separate contracts with different groups of contractors for the specific elements of the rail system development: civil works, tracks, systems (electrical, signaling and communications), and rolling stock. In the former case, the risk of proper integration of all the elements of the system is transferred to the contractor group and in the later it is retained by the SPV.

6.1.3. Construction works are executed, and funds (the proceeds of debt loans and equity contributions) are disbursed (#3 and #3b). The SPV pays the construction contractors (#3c)

Construction will typically start when the procuring authority gives the construction order. This occurs once final project design is approved and other preset conditions are met. Some of the preset conditions may be the procuring authority's responsibility (for example, to provide the right of way or the land), and some others may be requirements of the lenders (such as final clearance of some permits). These preset conditions are commonly referred to as conditions precedent or CPs.

In some countries, bank practice may be that the shareholders of the SPV have to invest the equity commitment prior to making drawdowns of the loan amounts granted by the lenders. In other countries, the loan drawdowns will occur in parallel with equity investment, in fixed percentages.[69]

The contractor is paid the price of its construction contract in a progressive manner as agreed in the contract. In some projects, it may receive an advance payment for collecting materials, machinery and equipment, and in other projects, it may receive a relevant portion of the price at completion of the works.

However, the most common approach is monthly progressive payments against the successive and partial invoicing of the works executed. The works will commonly be reviewed by technical advisors appointed by the lenders.

To guarantee appropriate construction performance to the SPV and lenders, the construction contract will require the construction contractor to provide security, such as bank guarantees and/or parent company guarantees.

[69] A variation of the *pari passu* approach is that the lenders sometimes ask for a letter of credit or other standby guarantee to back the availability of the equity funding in advance.

In the typical PPP as illustrated in figure 1.10, with total finance coming from the private sector (by means of equity and debt), the private partner will not receive any payment from the government or from users until the works are finalized and commissioned. However, if a specific government-pays project includes several facilities, the government may make partial payments starting when each facility becomes operational, but only making full payments once all facilities are operational. In addition, as explained in section 2, there are variations of PPPs that mix public and private financing (that is, "co-financing schemes"), where the public partner will provide payments during or at the completion of construction.

6.1.4. Operations commence (#4) and the SPV starts receiving payments from the government and/or users (#4b). The SPV pays the O&M contractors (#4c)

In most projects, the procuring authority only authorizes the commencement of operations once construction is completed and the works are commissioned. When the contract is of a user-pays type, the SPV will be allowed to start charging users (with some projects involving upgrades to existing transport infrastructure, charges to users may occur during construction). When the contract is of a government-pays type, the SPV will be allowed to start invoicing the procuring authority at the frequency established in the contract (for example, monthly) and according to the payment mechanism defined in the contract. These will be up to an amount equal to the payment offered, minus payment deductions or abatements (see Box 1.21 below).

With the funds collected, the SPV will first offset the O&M costs which typically correspond to payments due to O&M contractors. Secondly, the SPV will pay the taxes and set aside the prescribed reserves required by law and by the contract. The remaining funds will be used to pay interest and repay debt, as well as make distributions to the equity holders. These is commonly referred to as a cashflow waterfall.

O&M fees to be paid to O&M contractors may be for a fixed yearly amount or may be variable (as a percentage of revenues, especially when the revenue stream of the project company is based on demand or volume). These fees will usually be subject to the same deductions and/or liquidated damages that affect the original revenue of the SPV, partially or totally transferring the O&M performance risks to the O&M contractors.

During the Operations Phase, there will be a number of investments to be made (renewals or reinvestments, also referred to sometimes as "major maintenance" or "life-cycle costs") so as to keep the asset in appropriate condition during the entire life of the contract. These works are usually done by the O&M contractors under the O&M contracts, but they might be handled and contracted separately under a specific contract for renewals.

6.1.5. Paying back the loan (#5) and equity distributions

The repayment profile is usually defined in advance in the financial agreements, and it is constructed or sculptured to meet the Debt Service Cover Ratio.

Revenues may be paid to equity holders in the form of dividends only when O&M costs, taxes and debt obligations are paid as scheduled and reserves are duly funded. The financial agreements usually include additional restrictions on payments to equity holders.

The bottom line is that the majority of the return to the shareholders (in the form of dividends (#5b)) will only come into place in the later stages of the contract.[70]

6.1.6. Hand-back

Unless an early termination event occurs (that is, the contract is terminated before the original term expires due to a serious default by either the private partner or the public partner, a force majeure event occurs, or there is a unilateral decision by the procuring authority), the contract will expire in accordance with its terms and period of performance.

At that point, the infrastructure will return to the hands of the government, which may re-tender the management of the asset in a new contract, contract the O&M of the asset in shorter-term contracts, or choose to directly manage the asset itself.

The handover of the asset to public hands is also commonly referred to as "hand-back." It is good practice to require the private partner to hand back the infrastructure in a specified condition. To meet these requirements, the private party will have to make some investments prior to hand-back. This is typically done during the last years (one to three years) prior to the contract expiration date. It is critically important that the public partner completes a condition assessment to ensure the asset is in a good condition when handed back.

[70] Unless one of the following actions take place: (i) re-financing the project, so equity diminishes against additional debt; or (ii) equity transfer, selling all or part to a new equity holder, which will also be subject to certain restrictions by the contract.

Box 1.21. Special Purpose Vehicle (SPV) as a common feature of PPPs

A SPV is a company created specifically to enter into the respective PPP contract. The successful bidder (usually a consortium of companies) will constitute the SPV after being awarded the contract, but before signing it. The consortium members will subscribe for pre-agreed percentages of the shares in the company (as committed at bid submission). It will be the SPV that signs the contract with the procuring authority.

In some countries it is not compulsory for a consortium to create an SPV to enter into the contract. However, this PPP Guide considers that it is good practice to do so.

Creating a SPV brings the following benefits for the parties:

- An SPV is a usual requirement by lenders in order to provide finance through project finance techniques, as this allows for better control of the credit risks. Project finance techniques allow equity investors to limit their exposure to risk, and they provide high leverage without the need for investors to (generally) provide corporate guarantees. Furthermore, the finance is commonly regarded as "off balance sheet" from the holding perspective of the equity investors (see "introduction to project finance" in appendix A).

- The public party also benefits from the existence of a SPV, as it means that the public party's partner will only be dedicated to the specific PPP contract. It is common for both the public party (through the Request for Proposals and the contract) and lenders to prohibit the SPV from developing other projects so that its only object is the delivery of the PPP works and services.

For the latter reason, it is not uncommon that the RFP requires the creation of a SPV. While this requirement is not universal, it is regarded by this PPP Guide as good practice unless there are concrete reasons for not doing so. This may be the case in small projects that do not require project finance techniques (so as not to impose unnecessary transaction costs to the PPP project), or when the company that signs the contract is an existing company (government owned) that will be transformed to *empresa mixta* through the PPP joint venture structure.

6.2. PPP contract structure (upstream) and introduction to payment Mechanisms

The PPP contract structure (upstream) is defined by the public authority.

As Chapter 5 explains in detail, the structuring of the contract has a number of aspects: scope and responsibilities, financial structure, and risk structure. It defines the commercial terms of the contract, fundamentally those related to financial terms or the "financial structure of the PPP contract" (how the private partner will be paid) and risk allocation terms or "risk structure of the PPP contract" (how risks are allocated to each party to the contract). In government-pays projects, the payment mechanism is at the heart of the financial and risk structure, and it is introduced in this section.

The financial structure compensates the private partner for its investment and ongoing costs. In government-pays PPPs, the majority of the revenues should be linked to performance, and the means to compensate the private partner is generally called a payment mechanism.

The payment mechanism is the major source of revenue for the private partner for the works and services that it performs (design, construction and other development works), life-cycle management (major maintenance), operations and ordinary maintenance), servicing of debt (principal and interest) and payment of dividends (returns on equity). Other potential revenue may be in the form of direct payments or grants for the construction works, operating grants or subsidies, the right to collect fees from users, or revenue from the operation of collateral business (for example, hotels, gas stations, and so on).

The right to charge users in user-pays PPPs is also sometimes referred to as a form of payment mechanism.[71] However, this PPP Guide considers it more accurate to use the term payment mechanism only in the context of government-pays PPPs or user-pays PPPs where there is a clear component of public payments.

In a government-pays PPP, the design of the payment mechanism is essential for a number of reasons; these are related to the need for alignment of interests between the two parties and the effective transfer of risk;

- A PPP transfers construction risks, including time for construction. Payments should only be made once the asset is operational, that is, in service, as it is only from that moment that the infrastructure asset (as a public investment) is generating value for the user (the user being the general public or the government as public service provider, for example, in social infrastructure); and

- PPPs, especially government-pays projects, are about service. Payments should be made only to the extent that the asset is operational, or, for example, when the service rendered by the private partner to users is available (when a public service is included in the scope of the contract). The infrastructure should not simply be constructed, but maintained in a constant technical state to deliver the requisite level of service. The service rendered therefore has to meet the "performance requirements."

Also, payments should compensate in an integrated way not only for O&M costs and renewals, but also for the original capital investment. This means that the investment (and therefore the construction) is at risk of performance variance or quality of the service.

- In PPPs, payments are for results (outcomes) and not for means (inputs). This also can relate to the level of innovation needed to provide an optimal service in the most cost-effective way. Therefore, payments are not granted as the private partner incurs costs but depending on whether it meets the "output specifications" (which is another term used for performance requirements in the PPP context).

[71] Some guides and papers may regard as part of the payment mechanism all kinds of payments and compensations granted to the private partner (including grant payments) and also the penalties or LDs stablished for contract breaches. This PPP Guide considers the former an element of the financial structure and the latter a system with its own sense and purpose, the penalty system (see Chapter 4).

There are two main types of payment mechanisms (with a number of variations and combinations):

- **Availability payments:** Payment is granted as long as the asset is available, and depending on the availability, deductions or abatements will take place. Available may have two meanings: availability to use or deemed availability. The former refers to the actual ability of a user to use the asset (e.g., the road may be used under reasonable safety conditions), and the latter refers to the accomplishment of the level of service established in the contract (e.g., the road has no more than one carriageway or one lane out of 3 lanes closed in one section). Payments may also be linked to the achievement of quality requirements. In some projects, the quality concerns can be covered under the availability concept. In others, the quality requirements are separate from the availability requirements. It is good practice in all availability-payment PPPs for the government to carefully consider whether there are quality elements that should be incorporated into the payment mechanism. This can be done either by deeming failures to meet quality standards as "unavailability," or by using a separate basis by which deductions can be made from payments.
- **Volume payments:** Payment is linked to number of users (for example, a shadow toll payment in a toll-free highway) or to other outputs measured by volume (for example, cubic meters of water treated in a wastewater treatment plant).

As the payment mechanism should protect and even maximize the alignment of interests, the type of payment mechanism has to be carefully considered. For example, in a hospital PPP the government should not be interested in higher demand by the public for the clinical services rendered within the hospital, but in the hospital facility guaranteeing an adequate standard of availability or functionality under comfort, space, safety, cleanliness and other quality parameters.

Volume linked payments are sensible when there is a government objective to maximize the utilization of the asset (for example, public transportation). In some projects, quality concerns and risk allocation considerations may make it advisable to apply availability or quality-based payment mechanisms together with more limited payments linked to volume.

For user-pays PPPs, the fact that the private party receives revenue from public use of the infrastructure provides a strong incentive to ensure the infrastructure is available. However, there is less of an incentive for the private party to ensure quality outcomes when these do not materially affect demand for use of the infrastructure. For example, in a toll road PPP the private party may not have an incentive to keep the road reasonably free of litter, or to prevent drainage from the road flooding surrounding properties. To address such issues, some user-pays PPPs include minimum service or quality requirements, with the private party required to pay penalties or liquidated damages to the public party or to users (for example, in the form of discounts to user fees) if the requirements are not met. Regarding catastrophic events that damage infrastructure and prevent use of the facility it is becoming increasingly important that force majeure considerations are considered.

Further explanations of potential misalignments and other more specialized features to consider when designing a payment mechanism are provided in Chapter 5.

6.3. Examples of different scopes and structures

The contract scope and therefore the structure may vary significantly within projects related to the same sector. The following illustrates the main variations in three sectors which are paradigmatic in this sense.

- **Rail:** The PPP scope may include the following:
  - Only the infrastructure (the government retaining the operations through a public state-owned enterprise, such as high-speed rail [HSR] PPPs in France) or contracting operations out to a different private partner;
  - The delivery of the infrastructure, and rolling stock and operations (for example, all metro and light metro PPPs in Spain),[72] in an integrated manner; and
  - Only rolling stock supply and maintenance, just service operations (with or without rolling stock provision and finance), or only certain systems or elements of the infrastructure (for example, HSR PPPs in Spain for electrification versus signaling and telecommunications).
- **Water:** A water PPP may relate to one of the following:
  - Only a plant or group of plants to treat water, under off-take agreements with a regional or municipal water utility;
  - The upgrading and O&M of an entire system, which includes the building and O&M of all plants, the maintenance of the water network (pipelines, pump stations), and the operation of the service to homes (water supply); and
  - Only management services to support the provision of water supply service (for example, managing tariff collection).[73]
- **Health:** A health PPP may include the following:
  - The integrated delivery of the infrastructure (the hospital facility), the facility management and also the clinical services;
  - Only the infrastructure provision and maintenance, but leaving the clinical services in the hands of the public health agency (this is the predominant model in Canada, South Africa, Spain, and the United Kingdom, among others);

[72] See *Experiencia Española en Concesiones y APPs: Rails and Light Rails*. A. Rebollo commissioned by IDB, 2009.

[73] Handshake (the International Finance Corporation's quarterly journal on PPPs) discusses water PPPs in its issue #1 (May 2012 reprinted), and includes some interesting examples of different project types. Resource Book on PPP Case Studies (European Commission, 2004) analyses the application of PPPs around Europe, including 10 case studies of water and wastewater treatment projects.

- Only clinical service provision; and
- Only medical equipment. A notable example of an all-inclusive/vertically integrated health PPP in a least developed country is the Masero hospital PPP in Lesotho.[74]

7. How a Private Finance PPP Project is Financed: Where the Money to Pay Construction Costs Comes From

Box 1.22. An initial clarification: Funding versus financing

Financing is defined in this PPP Guide as the source of money required up-front to meet the costs of constructing infrastructure. Financing is typically sourced by the government through surpluses or government borrowing (for traditional infrastructure procurement) or by the private sector raising debt and equity finance (for PPPs).

Funding generally refers to the source of money required to meet payment obligations. In a PPP context, it refers to the source of money over the long-term to pay the PPP private partner for the investments, operating costs, and maintenance costs of the project. Funding is typically sourced from taxes (in government-pays PPPs) or from user charges (in user-pays PPPs). Governments may also utilize more specific sources of funds, one of the most relevant being "land value capture"[75]

The private partner is responsible for raising and providing the funds to develop the asset (that is, for design and construction through to completion of the asset), except to the extent that the government provides part of the finance if the PPP is a co-financed scheme. As a private finance procurement method, all (or a significant portion) of the resources for financing the capital investment comes from the private sector. See Box 1.22.

[74] See *Health System Innovation in Lesotho* prepared by the University of California, San Francisco's Global Health Group and PwC, 2013. *Handshake* issue #3 (October 2011) discusses the role PPPs and other private involvement in the health sector. *A Preliminary Reflection on the Best Practice in PPP Health Sector: A Review of Different PPP Case Studies and Experiences* (The United Nations Economic Commission for Europe (UNECE), World Health Organization (WHO) and the Asian Development Bank (ADB), in draft version 2012) include several case studies on the various scopes and structures in health PPPs. The South Africa PPP Unit of the National Treasury provides for three cases studies of PPP health projects developed in the country in *Case Studies on the Public Private Partnerships at Humansdorp District Hospital Universitas, Pelonomi Hospitals and Inkosi Albert Luthuli Central Hospital* (National Treasury PPP Unit South Africa 2013). http://www.ppp.gov.za/Legal%20Aspects/Case%20Studies/Humansdorp%20Overall%20findings.pdf.

[75] Land value capture responds to the fact that in many infrastructure projects (notably transportation), the value of the private real estate properties surrounding the infrastructure is increased by the improvement of the connectivity or directly for the urban regeneration in some projects. This approach is implicit in Transit Oriented Development Projects (TOD), such as the Hyderabad Metro Rail project procured by the government of Andhra Pradesh, India. Land value capture mechanisms intend to retain or capture part of the increased value to offset part of the costs of the infrastructure development; this is achieved by different means such as taxes on land value, "betterment taxes", or "development impact fees". In some projects, the authority and/or other governments in JV (for example, municipal governments in a heavy rail development connection with a city) may themselves undertake real estate developments on public land (for example, ADIF, the High-Speed Rail public operator in Spain). These and other concepts about land value capture are explained in *Accelerating Infrastructure Delivery* (WEF, 2014) in section 3.

As explained, PPPs commonly require the creation by the successful bidder of an autonomous specific project company (SPV) to deliver the project (that is, constructing, financing, and O&M). The SPV signs the contract, so all rights and obligations are assumed by the SPV. Consequently, all cash flows inherent to the project are channeled through the SPV and assets and liabilities related to the project are recorded in its balance sheet. This is commonly referred to as "ring-fencing" the cash flows.

As for any private company, the funds to be applied to develop the investment (that is, to finance the project) will usually be a mix of debt and equity, which provide tax efficiency (by the creation of the "tax shield") and overall efficiency as it diminishes the overall cost of all the financial resources (the weighted average cost of capital, WACC).

The most frequent and efficient method of financing is to use the "project finance technique." Project finance provides a number of advantages, notably higher control of the project governance and performance by the lenders, and the ability of sponsors to raise third party funds without being directly liable vis-a-vis the lenders. But a project needs to meet some conditions to access this type of finance (these include specific lender requests that relate to bankability — see below — and reasonable size so as to offset the higher transaction costs of the mechanism). High transaction costs are a major challenge in the emerging market of small-scale PPPs.

Therefore, some projects are financed through "corporate loans" or "corporate finance"; this means that the financing raised in the form of debt by the SPV is fully guaranteed by the sponsor (the equity investor), or funds are raised at the corporate level and passed through to the project entirely as equity (combining equity shares and subordinated sponsor loans – See Section 7.2).

This section will explain the following:

- How gearing is paramount for the cost-efficiency of the project, and the most frequent financing structure in PPP projects is based on the project finance technique (section 7.1). This section will also introduce how the procuring authority has to care about "commercial feasibility", including the ease of access that the private sponsor has to debt (that is, bankability) when assessing and preparing the project;

- The different categories of funds (debt and equity) and the subcategories or instruments that are typically seen in a PPP project. The potential fund providers for each category, and the role of MDBs and ECAs in financing projects (section 7.2);

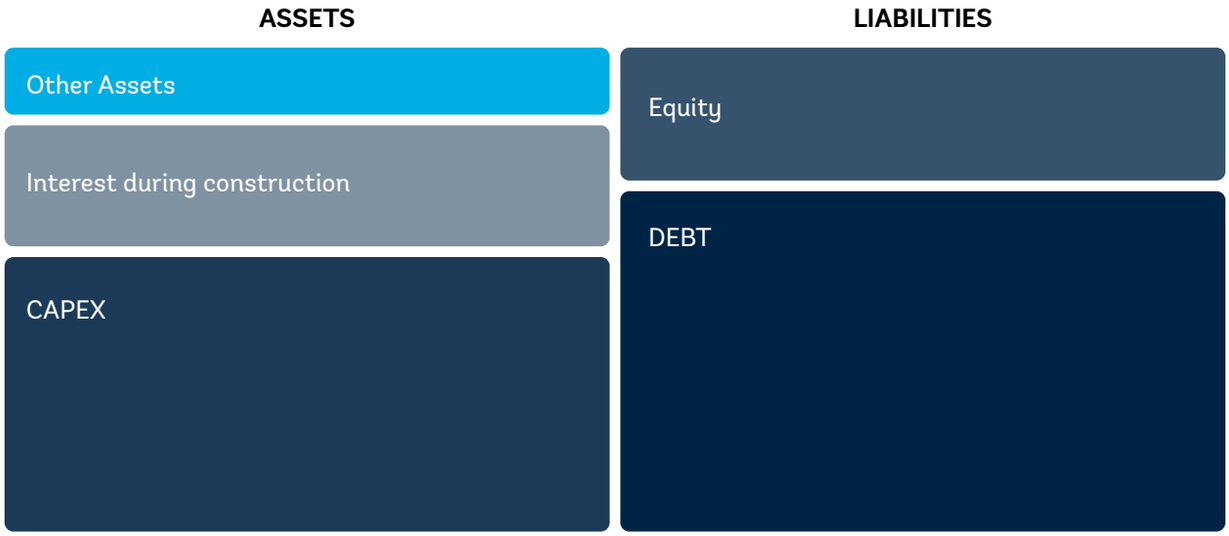
- How governments are concerned about the private finance structure in addition to caring about bankability (section 7.3);

- How and why governments may provide part of the financing, alongside private sector debt and equity investment, in the form of grants (that is, co-financing in strict terms) (section 7.4); and

- How a procuring authority can influence the project finance structure (in addition to participating through capital grants), and why it should do so in order to protect or further increase the "commercial feasibility" of the project by means of explicit measures (or to increase affordability) (section 7.5).

Figure 1.11 illustrates the basic composition of a PPP project company balance sheet at the completion of construction and commencement of operations.

Figure 1.11. Simplified Balance Sheet — Assets and Liabilities in a PPP Project Company



Note: CAPEX=Capital Expenditures.

7.1. Private finance and project finance[76]

As a private-financed procurement method, all (or most) of the resources for financing the capital investment comes from the private sector.

The PPP structure assigns to a private agent, through a contract, the development and business operation or exploitation of a public asset (under certain rules and conditions). The private partner will commonly create an SPV, usually in the form of a limited liability company. The specific purpose of the SPV is to develop and then operate the specific infrastructure business, using the infrastructure asset.

The private partner is responsible for providing the funds to develop the business (that is, for design and construction through to completion of the asset), except to the extent that the government is acting as co-lender or equity partner or, more commonly, provides part of the funds if the PPP is a co-financed project (in the form of public grant financing).

As in any capital-intensive business, the sponsor will use debt to leverage the investment. This is due to the scale of the investment and the cost-efficiency of debt when available at proper rates and conditions.

[76] For more on "project finance", apart from appendix A to this chapter, the following readings are useful: *Guide to Guidance – How to Prepare, Procure, and Deliver PPP Projects* (EPEC 2012) which provides a useful summary on project finance in the context of PPP in its annex 1; *PPP: principles of policy and finance*" (E. R. Yescombe 2007) chapters 8–12; and *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets* (World Bank - Farquharson, Torres de Mästle, and Yescombe, with Encinas 2011) chapter 5.

Normally, the debt finance is provided using the "project finance" technique. Project finance is a non-recourse financing technique in which project lenders can be paid only from the SPV's revenues without recourse to the equity investors.[77] The project's company obligations are ring-fenced from those of the equity investors, and debt is secured on the cash flows of the project. The financing will be a combination of equity (provided by the shareholders of the project company, which are in turn the members of the successful bidding consortium) and debt (provided by lenders such as commercial banks or other lending agents).[78] Equity will always bear project losses ahead of debt, as payments to equity are always subordinated to the service of debt. Debt service is fixed in a debt program with a contractual payment schedule comprising principal and interest. Therefore, equity requires a higher price (return) than debt (see cash flow cascade in Appendix A).

As a technique based on the reliability of future cash flows, the requirement by lenders of a material equity investment is a paramount condition to drawdown the debt facility, in addition to meeting standard covenants related to minimum cover ratios (Loan Life Cover Ratio – LLCR[79] and especially Debt Service Covered Ratio – DSCR).[80]

The typical financial structure has a debt-to-equity ratio of between 60:40 and 80:20, with some projects having more (or less) aggressive financial structures as explained below.

Debt generally requires lower returns than equity in the form of interest. From a public sector/government perspective, leverage is positive since the mix of financial costs (the WACC)[81] is lower. Therefore, the payments required from the government to make the project commercially feasible are lower. Or, in user-pays PPPs, the likelihood of the project being self-sustainable is higher.

Project finance provides some important benefits.

- The authority will benefit from the lender's oversight of the project governance and performance, which is inherent in the technique. Cash flow reliability is at the heart of project finance as project cash flows are the sole basis to recover the loan. Lenders will therefore add an additional layer of due diligence to the government appraisal and the bidders' own due diligence of the project; and

- Project finance allows the sponsors to raise third party funds without being directly liable to the lenders. Therefore, this frees higher equity capacity to invest in more projects while maintaining a healthy financial structure at the corporate/holding level.

[77] "Non-recourse" means the inability of the lender to claim against the shareholder of the company in case of default. However, pure non-recourse debt in the field of PPPs is generally not achieved, especially in less sophisticated markets. These are situations where the promoter/contractor is usually the most relevant if not the only equity holder, and where lenders usually establish recourse against the equity-holders (at least during construction period). For this reason, some practitioners also refer to the tool as "limited-recourse" financing.

[78] The most common form of project finance is a long-term project loan. However, financing may also be provided in the form of a project bond structure, or the loan may be a mini-term structure. This is explained in section 7.2.1 "sources of funds".

[79] LLCR assesses the ability of the project company to meet its (remaining) debt obligations by considering all the projected remaining cash flow before debt service (in Net Present Value, NPV, terms) compared to the outstanding debt of the particular year of the analysis.

[80] The DSCR assesses the ability of the project company to meet the debt service payment for each year, by dividing the projected operating cash flow, before debt service, by the debt service of the respective year. For example a ratio of 1.2 means that the available cash flow is 1.2 times the debt service of that particular year. This means that there is a cushion of 20 percent in net operating revenues, that is, these could be reduced by up to a 20 percent without affecting the ability of the company to pay the debt.

[81] The WACC is the average cost of all the private financing resources of the project. It is a weighted average of the cost of the equity resources and the cost of debt.

For these reasons, governments need to pay attention to bankability when appraising and structuring the PPP project. Bankability is an intrinsic element of commercial feasibility (commercial feasibility tests, including bankability assessment, are a part of the appraisal exercise and, as such, are discussed in Chapter 4).

Bankability of a project may be defined as the level of willingness of prospective lenders to finance the project, that is, what amount and under what conditions. Higher bankability means access to more funding and/or better conditions in terms of the amount of debt (leverage), the loan term, and the loan costs. Debt amounts and therefore gearing will depend on the projected cash available each year for debt service (therefore on the amount of revenue projected and reviewed by lenders and/or its advisors under a due diligence process) and its reliability. If prospective lenders consider the project to have an unacceptable level of risk and uncertainty they will not provide finance and the project will not be bankable.[82] Perceptions of project feasibility and risk also play an important role when determining the bankability of projects. For a wider explanation of lender´s concerns when assessing a project see Box 1.23.

Box 1.23. Major concerns of project lenders

- Certainty about the project cash flows needed to meet debt service requirements.
- Sufficiency of the project cash flows for making the expected (or a reasonable) profit for the equity investor.
- Creditworthiness of the public sector (in terms of meeting its obligations).
- Soundness and stability of the legal framework for PPPs.
- Effectiveness and enforceability of the PPP contract and related agreements.
- Confidence in the regulatory regime.
- Right to step in if a project fails, and availability of alternative contractors.
- Ability of contractors to perform and the quality of their management.
- Creditworthiness of the contractors and the quality of their guarantees.
- Risks must be understandable, controllable, finite, and appropriately allocated.
- Acceptability of the termination regime (providing sufficient protection to the debt).
- Reputation impact of the project (environmental and social).[83]
- Availability and effectiveness of insurance coverage. Increasingly insurability of projects is being tied to climate change challenges.

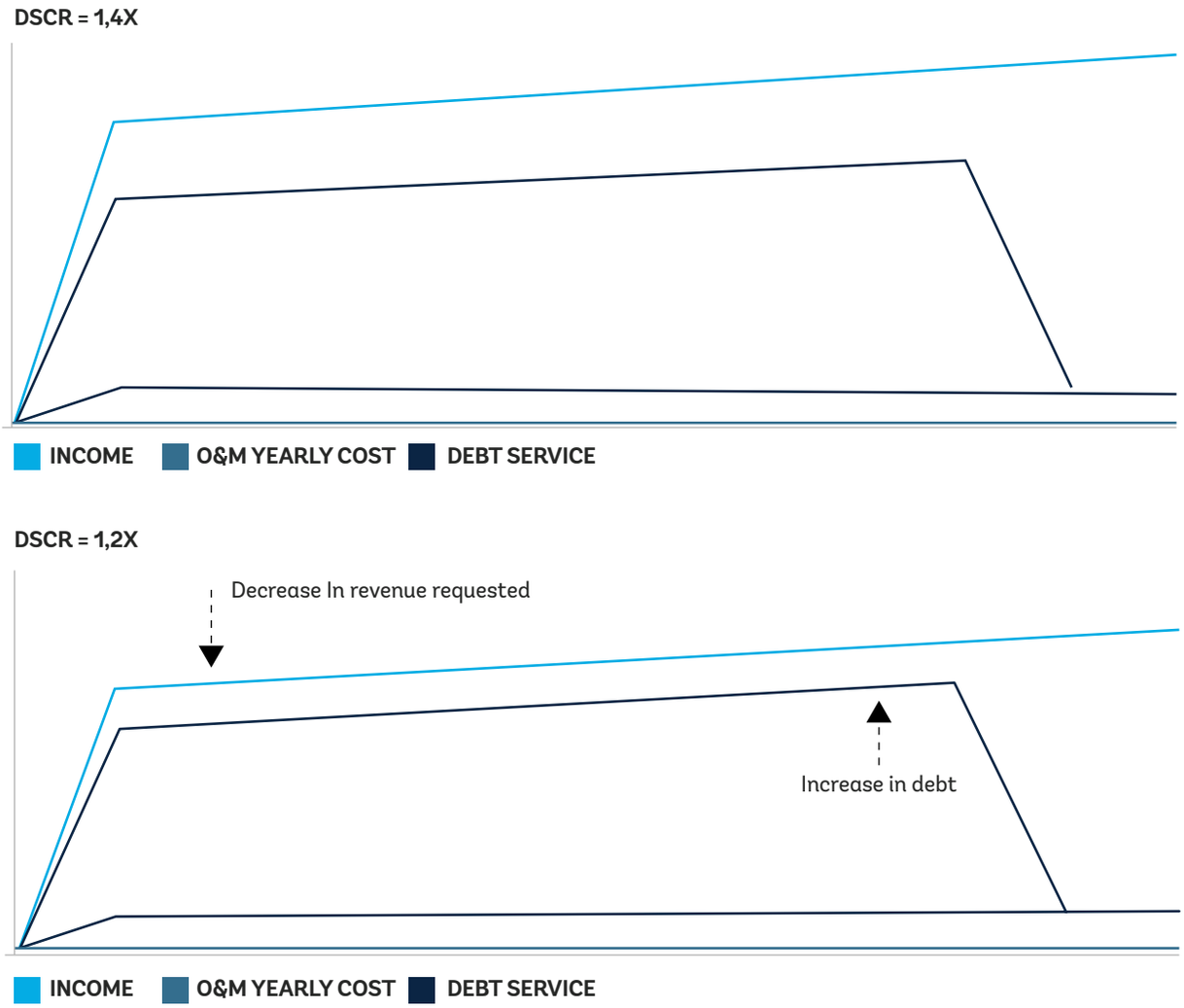
Source: Adapted from World Bank - Farquharson, Torres de Mästle, and Yescombe, with Encinas (2011).

[82] The issue of project finance and loans based on project risks has other consequences in the future contract beyond risk structure and financial feasibility: caring about "lender´s rights" so as to be able to step into the project is explained later in this section.

[83] Many commercial lenders and all MDBs will assess the compliance of the project with the Equator Principles. See http://www.equator-principles.com/index.php/about-ep

Higher debt levels or higher leverage will be possible (from a lending perspective) as long as the predictability and stability of the cash flows is higher and the risks are lower. In that sense, government-pays PPPs, especially those based on availability payments, will usually benefit from higher level of debts/leveraging which are due to the lower covenants required in terms of DSCR (see Figure 1.12).

Figure 1.12. The debt service cover ratio



A DSCR of 1,2 will free cash flow, allowing for an increase in the volume of debt, therefore an increase in leverage and a higher equity IRR, which in turn allows the prospective bidder for a decrease in the revenue requested.

However, excessive leverage may endanger the financial sustainability and solidness of the PPP project, increasing the probability that the SPV becomes insolvent and potentially bankrupt. For that reason, PPP contracts usually require a minimum level of equity or a set maximum degree of leverage (see Section 7.3).

The financial package for a PPP will therefore be a combination of equity and debt with high levels of leverage. Some projects in developed countries can show very high leverage (up to or around 90 percent) or lower levels (60 percent), depending on the risk profile of the project in a specific country. Generally, projects with significant demand risk and hence less predictable cash flows will show lower leverage, whereas availability payment PPPs with low risks and hence very stable cash flows will show high levels of leverage. This range slips to 50–80 percent in EMDE markets.

The next section explains the different forms of debt and briefly introduces financial structuring strategies used by the private sector to increase efficiency. It also explains sources of funds and different instruments for the equity investment.

Box 1.24. Key considerations regarding the financial structure of the PPP project

- A typical financial structure is based on non-recourse/limited recourse project finance techniques, limiting the risk exposure of the investor/promoter of the project, and adding some due diligence and control by lenders.
- The SPV will finance the project (the asset) by a mix of debt and equity.
- PPP project companies (SPVs) usually enjoy higher levels of gearing than other companies. This is due to the higher predictability of their revenues and the other business protections inherent in the PPP business.
- A higher level of debt provides higher efficiency in terms of the cost of capital. This increases the capacity of promoters to expand their businesses and invest in more projects (within a limit).
- Bankability is one of the cornerstone issues of feasibility within the PPP procurement context. The contract structure needs to protect bankability, otherwise Value for Money will be lost. However, excessive levels of debt might endanger the long-term sustainability of a project contract, unless the project cash flows are very stable.

7.2. Financial structure: Categories, Instruments and Sources (fund suppliers) — Financial Strategy of the Sponsor/Private Partner[84]

7.2.1. Sources of funds

The two main types of funds raised by a project company, as in any corporate finance structure, are debt and equity.

Debt may be in the form of loans or bonds. Equity may be take the form of pure equity or capital shares, and quasi-equity products (junior or subordinated debt, mezzanine debt, and so on); these are senior to the equity shares, but subordinated to the (senior) debt or main debt.

There are multiple sources and sub-categories for both the main categories of funds. The main ones are explained on the following pages.

Table 1.6. Sources of Funds and Fund Providers

Main Category/Instrument	Fund Providers and Main Features
Equity	
Capital shares	Typically, a contractor/industrial developer with an interest in construction and/or the O&M aspect of the asset. Sometimes a financial investor (that is, not an industrial partner), usually as co-investor. These are typically infrastructure funds or other risk capital investors (in some cases, an institutional investor will directly invest in the project). (see the brief description, in Box 1.25 of the role of infrastructure funds and other financial investors). On some occasions, the government may invest in equity shares in the SPV, acting as a financial partner, with the investment coming directly from the procuring authority, or through the structured funds of a trustee or by "strategic investment funds" (see Chapter 5.5) In some highly sophisticated markets, retail investors are becoming common, entering into the project structure through Initial Public Offerings (IPOs).[85]
Junior or subordinated debt, mezzanine debt	Typically provided by industrial developer/contractor shareholders for tax efficiency purposes. May be provided by third party financial investors (including government on some occasions as described above) to provide higher protection, but still higher returns than conventional debt.

[84] Additional information on this topic is provided in appendix A to chapter 5.
[85] See Section 3.4. (*Tapping the Retail Investor*) in *Paving the Way: Maximizing the Value of Private Finance in Infrastructure* (WEF, 2010), page 69.

Main Category/Instrument	Fund Providers and Main Features
Debt (senior debt)	
Loans – bridging loans/ short-term or miniperms, long-term loans	Commercial banks and investment banks are the most usual debt providers. Others include the following. • **MDBs:** Multilateral/regional development banks (World Bank, International Finance Corporation, Inter-American Development Bank, CAF Bank, Asian Development Bank, African Development Bank, and so on). See Section 7.2.3 below. • **ECAs:** Export Credit Agencies and/or Bilateral Development Banks. See Box 1.26. • **National Development Banks (NDBs):** National development banks or national financial agencies (for example, Banobras in Mexico, Brazilian Development Bank (BNDES) in Brazil, Instituto de Credito Oficial in Spain, and so on). See Section 7.4.1. It should be noted that MDBs and ECAs in particular, but also NDBs, may either provide finance or facilitate access to finance by means of guarantees (and sometimes credit risk insurance in the case of some ECAs). • **Institutional investors:** More recently and in sophisticated markets, institutional investors (such as pension funds, insurance companies and sovereign funds) are providing debt to PPPs, usually through project bonds under a private placement scheme as explained below. • **Shadow lenders and debt funds:** Some specialized infrastructure funds may also provide debt to PPPs (i.e., impact investors). The most conventional scheme for project loans (the loan subscribed by the SPV) is a long-term loan. However, the private partner may, in some projects, opt for short-term loans with the aim of refinancing it at term (or the private partner may be forced to do so, depending on the ability of the respective market to provide long-term loans from the outset). Refinancing term's conditions need to be cleared with government partners. Short-term loans or loans aimed to be refinanced are called mini-perms when they are structured under project finance (that is, on the basis of the project creditworthiness) rather than being a loan fully guaranteed by the sponsor (which is conventionally referred to as a bridge loan).[86]

[86] Mini-terms may be referred to as "soft" or "hard". In a soft mini-term, when the date for full repayment is reached without a refinancing having occurred, the loan will be extended under a "full cash sweep" mechanism (that is, all the available cash flow after costs is applied to loan amortizations until the full amortization of the loan). In a hard mini-term, such flexibility is not contemplated. Therefore, the borrower is in default if a refinancing has not occurred on or before the date for full repayment of the original loan.

Main Category/Instrument	Fund Providers and Main Features
Bonds or project bonds[87]	Bonds as an instrument for debt come primarily from "capital markets", i.e., institutional investors (pension and annuation funds, insurance companies, and sovereign funds), wealthy and superwealthy investors (directly or through "family offices"), through an IPO or through "direct placements." In some markets and for some projects, the bonds may also raise funds from retail investors. Some emerging markets (such as Chile, Mexico and more recently Perú, amongst others in Latin America) are relying increasingly on project bonds as a way to finance infrastructure, relying either on the local institutional investors or on international investors.[88] Also, some multilaterals and national agencies may act as buyers/ investors to boost the infrastructure capital markets.
Other debt structures	PPP projects may include other financing instruments and structures (especially in PPPs where the main Capex relates to equipment and supplies) such as leasing (operational or financial), supplier credits, supplier financing (when the supplier of equipment accepts a deferred payment, usually structured in promissory notes, that may be discounted with or without recourse – forfeiting – to a third party), or Islamic finance structures.

Note: Shadow lending is a term used to mean loans provided by "shadow banks" which includes all entities outside of the regulated banking system that perform the core banking function, and credit intermediation (taking money from savers and lending it to borrowers). Money market mutual funds that pool investors' funds to purchase commercial paper (corporate IOUs) or mortgage-backed securities are also considered shadow banks (IMF, Finance & Development, http://www.imf.org/external/pubs/ft/fandd/2013/06/basics.htm).

[87] A bond is a tradeable debt investment in which an investor loans money to the private partner for a defined period of time at a variable or fixed interest rate for the development of a project. In a bond financing, the debtor issues the debt which is acquired by one or more investors (including retail investors when the issuance of the debt to capture funds is in the form of an IPO). Bond finance is also referred to as a form of "disintermediation", meaning that there is no intermediary (such as a bank) between the borrower and the end investor.

[88] The more significant case, with a decent history going back to the end of the past century, is Chile. One of the most paradigmatic project cases is the highway "Costanera Norte" where the structure included a credit wrap from IDB, co-guaranteeing the debt with the monoline insurer Ambac. These and other features regarding project bonds and the role of institutional investors are covered in the paper *Mejores Prácticas en el financiamiento de Asociaciones Público Privadas en America Latina* (*Best Practice in PPP Finance in Latin America*) which reproduces the outcome of a Conference held in May 2011 in Washington and is commissioned by World Bank Institute, PPIAF with the support of the Government of Spain and BBVA.

Box 1.25. Infrastructure Funds and Financial Partners[89]

For new projects in developing countries, the main equity provider is usually the contractor. Most of the construction groups have a dedicated arm or subsidiary to manage their PPP business and to invest equity in the SPVs for their projects.

However, a pure financial investor (that is, one with no interest in the PPP project other than equity investment) may also be an equity partner.

The most common kind of financial investor is an "infrastructure fund." Such funds are structured similarly to any other investment fund (for example, a private equity fund). These are funds in which a number of original investors contribute their money (acting as "limited partners" or LPs), and a "management company" is in charge of managing those funds, investing them on behalf of the LPs, and overseeing the assets during the life of the fund.

The typical investor in a fund (LP) is an institutional investor (pension funds, sovereign funds, and insurance companies), but the LPs may also include family offices, high net worth individuals, and even banks. Some LPs are increasingly investing directly in the projects through their own platforms (but usually only in larger projects).

Financial investors in PPPs and infrastructure, including infrastructure funds, are more interested in projects that are already operational (so as to avoid the construction risk and enjoy a more immediate access to the "yield", that is, to the distributions from the project company). Their investment in the assets when they are in their operating period is also good for the developer industry, as this will help developers to recycle capital and have cash available to invest in new projects. However, participation of the investor industry in greenfield projects (newly tendered DBFOMs) should be promoted by governments so as to increase the capacity of the developer market in a particular PPP program.

Specialized financial investors should be considered positively and approached by governments when promoting their PPP programs. Contracts should be carefully structured so as to facilitate the participation of this kind of equity investor (for example, to attract these investors the PPP contract should allow reasonable flexibility regarding equity share transfers).

7.2.2. Introduction to financial structuring and financial strategy

Financial structuring (from the private sector/sponsor point of view) refers to the art of designing the mix of funds to be used to finance the project, especially with respect to how much debt to raise and with what repayment profile. This maximizes the private partner's equity IRR (or for the same targeted IRR, to be more competitive in the price submitted in the bid).

[89] More information on this matter may be found in the following readings: *Pension Funds Investment in Infrastructure – A Survey* (OECD, September 2011); *Institutional Investment in Infrastructure in Emerging Markets and Developing Economies* (PPIAF, 2014); *Where Next on the Road Ahead? Deloitte Infrastructure Investors' Survey 2013; What are Infrastructure Funds?* (Kelly DePonte, Probitas Partners, 2009).

It includes the analysis and decisions regarding debt instruments, when more than one is available (for example, loans versus bonds), and also the potential definition of different tranches or different loan agreements (for example, whether or not to raise subordinated debt which is more expensive but more flexible than the senior debt).

At a more defined level, financial structuring must also determine several factors: the order and timing of drawdowns, the repayment profile of the different sources of finance, and the required financial support (for example, parent guarantees, bank guarantees) from sponsors and key sub-contractors.

Equity funds are always committed (or underwritten) before bid submission. By definition, the submission of an offer requires a firm commitment by the bidder to invest the capital as requested in the Request for Proposal or as committed in the submitted financial plan.

Debt may be also committed before bid submission when the tender process requires it. This requirement is common in dialogue and other interactive processes,[90] and in some processes that pre-select a shortlist of bidders. In open tender models, the common approach worldwide is to request "sufficient" evidence regarding the availability of the finance.[91] This is further discussed in section 7.3.

The prospective bidder will analyze the options and investigate the availability of different sources of finance during bid preparation (or in an earlier stage when conducting a preliminary assessment of the opportunity, before deciding to invest significant resources in assembling the proposal). The bidder will incorporate these options and approaches into a financial structure so as to define its financial base case.

Financial strategy is a term that may be confusing as it overlaps with financial structuring. For the purpose of this PPP Guide, financial strategy refers to the decision as to how and when to approach funders, especially lenders (for example, when the financial package is not required to be fully committed at bid submission).[92] Financial strategy includes the analysis of two potential options regarding the debt raising and structuring.

- Short-term loans assuming the risk of refinancing the loan, usually after construction. These can also be called a bridging loan strategy or a mini-perm (when the short-term loan is arranged on a project finance basis). This provides access to the potential upside[93] of de-risking the project scheme after construction and a greater ability to switch between debt and capital markets, or to capture falls in general interest rates; and

[90] Section 10 ("Overview of the PPP process cycle") in this Chapter provides an introduction to different tender processes, and Appendix A to Section 3 describe this matter in further detail.

[91] Not requiring bidders to arrange financial packages in advance to bid submission is also appropriate in markets with a small number of financial institutions available to fund the project on a long-term basis. In these circumstances, government may prefer to provide flexibility to the awardee to secure lenders after being nominated preferred bidder, at which time it will have access to all of the available lenders in the market.

[92] In that context, a bidder may select the lenders in advance (appointing a mandated lead arranger, or even obtaining full debt commitments) or may base its financial bid on indicative letters of support from different banks, with no exclusivity arrangements, so as to open the loan to competition after award. Section 7.5 explains these issues in further detail. Appendix 1 to Section 5 analyses the overall issue of bid preparation and fund raising.

[93] The upside of refinancing may be partially captured by mechanisms for sharing refinancing gains. See *Guidance Note: Calculation of the Authority's Share of a Refinancing Gain* (HM Treasury UK, 2008).

- A long-term project finance loan from the outset. This introduces less flexibility related to interest rate swaps (the most extended scheme to minimize interest risks and usually a requirement by lenders) but offers higher certainty and less risk. When the project finance scheme relies on issuing bonds in the capital markets, the financial package implementation is more complex. Disintermediation or fundraising through capital markets is only an option for countries with active national institutional investors (pension funds, insurance companies) or with access to global institutional investors which will usually require a credit rating provided by a rating agency.[94]

From the public sector standpoint, availability of finance is one of the key elements for the success of a PPP, and it is a pre-condition that must be met if the government is to move ahead with a PPP scheme.

As discussed in section 5.6 (#a, the financial challenge), in countries where there is in sufficient availability of finance (a minimum number of lenders and capacity to lend for the long term, for example, more than 10-year terms) and a poorly developed domestic banking system, PPPs may not work. In some limited circumstances, governments may help to fill the potential gap of availability (in terms of volume of debt accessible in the respective market) by providing a portion of the debt through a national bank or national agency (see next heading). Governments can also assume or share foreign exchange risks to facilitate access to cross border financing for projects. In other cases, financial support by Multilateral Development Banks is paramount.

But even in cases where the financial market is sufficiently capable of absorbing significant debt levels, there will be projects that will not be accepted by the lending market because the risk profile (even when properly structured) may not be acceptable, or there may occasionally be projects that are so large that they exceed the size of the financial market. This is explained in sections 7.3 and 7.4.

Financial structuring and strategy are the responsibility of the private investor. Therefore, the government should not create restrictions as to where the private investor should raise the finance from (for example, by insisting on local banks), or what instruments or structure should be negotiated, other than setting up maximum leverage, or insisting on a lending competition (when appropriate) – See Section 7.5.

Appendix 6A includes a deeper description of financial structuring and the fundraising process.

7.2.3. The role of the Multilateral Development Banks (MDBs)[95]

When dealing with PPPs in EMDE countries, a significant role is played by MDBs, such as the World Bank Group (usually under the International Finance Corporation, IFC), the Inter-American Development Bank (directly or through the Inter-American Investment Corporation, IIC), the Asian

[94] Project bond financing is a common option for countries with well-developed capital markets, but it is more commonly applied as a re-financing solution (through "bridge to bonds" loans), not as a financing mechanism for construction. It provides access to wider resources for long-term finance, usually enjoying longer debt terms, but it is a less flexible financial solution (as funds often may not be drawn down progressively). Recently however, in highly-developed countries and sophisticated markets, deferred drawdowns are becoming practicable. Readers can find additional discussion on project bonds as an alternative for project debt in appendix 6A. For information on the credit ratings process and methodology applied by the credit rating agencies, see the respective credit rating web pages.

[95] These and other roles of MDBs are discussed in *Investment Financing in the Wake of the Crisis: The Role of Multilateral Development Banks* (Chelsky and others, 2013). See also *Paving the way* (WEF 2010) section 2.3, and *Multilateral Banks: building skills and markets*" page 41 and following.

Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB),[96] the African Development Bank (AfDB) and the Islamic Development Bank (IsDB). Other agencies with a more regional focus are the CAF Bank for the Andean region or the Banco Centroamericano de Integración Económica (BCIE) for Central America, among others.

MDBs provide financing for projects (PPP and other public or private projects) — most frequently in hard currency — for long terms. These are usually longer terms than commercial lenders who may not offer sufficient length or amount to the project finance structure. The presence of these institutions provides protection to the commercial lenders under A/B loan structures due to the preferred creditor status of most of the MDBs. An A loan is one provided by the MDB, and the B loan is a commercial loan syndicated to the commercial lenders which is protected indirectly by a cross-default clause. The presence of the MDB may be paramount for those international commercial banks assuming project risks in an emerging market and agreeing to provide cross-border finance.

In addition, an MDB may provide guarantee facilities (partial risk and partial guarantees), or specific guarantees against political risks both to the commercial banks and investors (for example, the Multilateral Investment Guarantee Agency [MIGA], as part of the World Bank Group, provides such guarantees). Examples of partial guarantees are numerous.

One interesting example is the participation by the IDB in the IIRSA project in Perú. IIRSA Amazonas Norte is a 960-kilometer (km) network of toll roads located in northern Peru, which link the Amazonian region in the eastern interior of the country with its Pacific coast. The project was financed with a project bond issued under 144-A for an amount of $224 million, based on Recognition Certificates of the Annual Payment for Work (CRPAOs) committed to by the government, which also had a partial guarantee by IDB for $60 million. This example is interesting as it illustrates how MDBs may support the development of sophisticated financial solutions in EMDE countries.

More recently, these institutions have begun developing their own infrastructure funds (IFC launched in 2011 a $1 billion infrastructure fund)[97] or are providing funds to privately managed infrastructure funds as another LP.

However, the support of MDBs in the PPP context goes beyond the finance provision, and includes the following:

- Support in identification and selection of projects;
- Support in PPP structuring, acting as advisors to governments or providing funding for hiring advisors to obtain a better structure and design for the PPP; and
- Policy advice to strengthen the policy and PPP framework.

[96] EIB is clearly an International Financial Institution (IFI) but is also regarded by some practitioners as an MDB. EIB includes lending to projects in EMDE countries in its strategy and portfolio, however the bulk of its operations remain within the scope of the EU.

[97] The fund was closed in 2013 with the participation of 11 investors: IFC and a Singapore sovereign wealth fund; GIC (Government of Singapore Investment Corporation, the Singapore sovereign fund) as anchor investors; and 9 sovereign and pension fund investors from Asia, the Middle East, Europe and North America. See *IFC Global Infrastructure Fund Completes $1.2 Billion Fundraising* at http://ifcext.ifc.org/ifcext/Pressroom/IFCPressRoom.nsf

- MDBs have identified the need for climate considerations in their strategy and therefore often link concessional funding to the systematic integration of climate change mitigation and adaptation elements in PPPs.

PPP projects with a strong climate adaptation and/or mitigation component may qualify for the use of concessional climate finance through specialized climate funds, which can alleviate financing pressure. The PPP procuring authority should carefully identify and select funding opportunities as the application process can be complex and time consuming. Applications must include comprehensive research and evidence, including technical analyses, to justify the necessity of funding.[98]

Box 1.26. Bilateral Financial Support: The Role of ECAs

MDBs are not the only international players in the financing of international projects. Most countries (developed and some developing) have established "Export Credit Agencies" (ECAs). These are financial (or insurance) institutions that provide financial support to projects developed by their national companies abroad.

This support is more usual in export contracts, providing financial facilities to the foreign buyer, public or private. However, ECAs also play a role in project finance structures, including PPP projects.

Their participation is obviously linked to the participation of a bidder from the ECA's country, which may be in the form of finance to the project but is most frequently the provision of guarantees (to the lenders to the project and also, in some cases, to the equity investors). Some country's ECAs provide both forms of support, and some others provide only guarantees or insurance against credit risks (including political risk). Some notable examples are the Export-Import Bank (EXIM) and the Overseas Private Investment Corporation (OPIC) (US), CESCE (Spain), Hermes (Germany), SACE (Italy), the Japan Bank for International Cooperation (JBIC) (Japan), and the Export-Import Bank of Korea (KEXIM) (Republic of Korea).

The provision of that support is subject to the conditions settled by the "OECD Consensus" whose aim is to regulate the conditions to avoid the financial dumping competition among countries by controlling the potential subsidization of the financing.

MDB Hybrid PPP Models

Despite the need to leverage private capital to meet infrastructure needs, affordability and bankability constraints can inhibit the uptake of PPPs, even when projects demonstrate economic viability. Some countries have developed financial viability support mechanisms to address affordability and bankability constraints through hybrid PPP structures that combine concessionary public and private financing. This public contribution can be in the form of institutional mechanisms

[98] The World Bank Group, for example, has implemented a Climate Change Action Plan 2021–2025, which seeks to "advance the climate change aspects of the WBG's Green, Resilient, and Inclusive Development (GRID) approach, which pursues poverty eradication and shared prosperity with a sustainability lens. World Bank Group Climate Change Action Plan 2021–2025: Supporting Green, Resilient, and Inclusive Development. World Bank, Washington, DC. http://hdl.handle.net/10986/35799)

(such as Viability Gap Facilities) or project-level solutions such as the Hybrid Annuity Model (HAM) in India. However, the availability and provision of such public support remains the exception rather than the rule.

Given limited availability of government budgets to fulfil the public contribution, increasingly MDBs are looking toward hybrid PPP models where the public contribution is provided, either totally or partially, through MDB financing. The precise structure of the hybrid PPP, and the precise contribution provided by the MDB, is determined based on the specifics of the project based on due diligence and structuring that allocates risks to the parties best placed to bear them. These hybrid PPPs can therefore help to address affordability and bankability issues by using MDB financing to crowd in private capital for economically viable PPPs.

The range of potential hybrid PPP models is extremely broad based on the unique characteristics of each project. Nevertheless, the majority of hybrid PPPs can fit into the three models described below or may also blend one or more of these models within the same project.

Hybrid Model 1: CAPEX VGF

Under this model, the private partner is responsible for all components of the project and delivers the project in an integrated fashion (construction and O&M). However, due to the cost of the project, the project would either not be bankable to the private sector or pose affordability challenges to the population and/or to the government if the private partner were to assume the risk of financing the entire project.

To overcome these affordability and bankability challenges, the government contributes public funds (provided by one or more MDBs, depending on the size of the project) to buy down some or all of the capital cost of the project. These payments can be structured and sequenced in a number of ways, but they are typically structured as output-based payments tied to construction milestones.

Hybrid Model 2: OPEX VGF

Under this model, as with Model 1, the private partner is responsible for all components of the project and delivers the project in an integrated fashion (construction and O&M). The difference in this output-based model is that the private partner finances the full capital costs of the project. The hybrid nature of this model therefore begins in the operations phase where the private partner receives public funds (provided by one or more MDBs, depending on the size of the project) toward the project's operating expenditures or as performance-based revenue payments to subsidize services. Dependent on the nature of the project, output-based subsidies might take the form of payments to top up tariffs or to subsidize services for certain categories of the population.

Hybrid Model 3: Build-Concession

Under this model, and unlike Models 1 and 2, the PPP project is divided into discrete components typically separated by the construction and operations phases. The responsibility for financing and constructing these components of the PPP are split between the government and the private sector where the government is responsible for procuring and financing the construction of the project (comprising the major infrastructural works) and a separate contract is then awarded to the private

sector for operations, (which may include equipment such as rolling stock, dependent on the project/sector). For example, in a hospital project, the government would finance and construct the civil works (the "Build" component), and would then award a contract (the "Concession" component) to a private partner to provide specialist hospital equipment and O&M. In a bus rapid transit project (BRT), the government would finance the civil works and BRT infrastructure, and would then award a contract to a private partner to provide rolling stock and O&M. The objective of such parallel projects is to lower capital expenditures through the government's ability to borrow at a lower cost with the public contribution provided wholly or partially by MDBs. In this structure, risks linked with civil works are allocated to the public sector, but the interface risk still needs to be detailed and managed under the concession agreement.

7.2.4. Islamic finance particularities

In Islamic countries, financing has a series of particularities that relate to religion. Banks and lenders in general are required to operate in accordance with Sharia (the Islamic law). Sharia law influences the types of investments that are permissible and influences the way in which a financial transaction is handled. For example, interest payments are not permitted, but there may be a legitimate bank profit based on the bank sharing the profit and loss of the enterprise to which it is lending.[99]

Appendix B to this chapter provides information on this special subject.

7.3. Co-financing as a mix of public traditional finance/procurement and private finance

The government may seek to financially support a project when it is an economically viable user-pays project, but the projected revenue on the basis of use is not enough for the project to be commercially viable. Another reason is to keep the price of services provided by the assets at a level socially/politically acceptable for the population. This is referred to as Viability Gap Funding, and it has been explained in section 2.2.

However, regardless of the revenue regime and PPP type (user-pays or government-pays), the government may still decide to provide financial support to a PPP project for several reasons.

- There is a structural or temporary lack of available private lending;
- The project is too large or too risky, and commercial feasibility and bankability are threatened; and
- The aim is to decrease the WACC of the project and make the scheme more affordable.

When availability of private finance is doubtful, even with financial support, the wisdom of pursuing the PPP route should be considered carefully (not least because there is the risk of lack of competition in the bidding process). But in any circumstances, direct or indirect financial participation or support (including the de-risking approaches explained in next heading) has to be assessed with care to avoid spoiling the Value for Money benefits of the PPP method.

[99] To read more on mobilizing Islamic Finance for PPPs, refer to the following resource - https://ppp.worldbank.org/public-private-partnership/library/mobilizing-islamic-finance-infrastructure-ppps

This subsection will introduce the concept of co-financing as a common variation of PPPs (very common in mega-projects). This is where public financing (strictly speaking) and private financing are mixed together. The following section will explain other financial means to participate in finance provisions and other approaches to increase commercial feasibility and bankability.

There may be a scarcity of long-term finance available in some local markets hosting the infrastructure project. The scarcity may be due to an overall lack of capacity in the local financial market, or it may be a temporary circumstance due to short-term market conditions. The scarcity may make it necessary, especially for larger projects and in the context of ambitious PPP programs,[100] for governments to supplement the financing available in the market.

Governments may decide to supplement the financing required for the project, releasing the private partner from a part of capital needs. In these cases, the government will provide public finance for part of the project's initial investment needs, creating a hybrid scheme (co-financed PPPs). These schemes will ideally retain all the typical features of a normal PPP with the difference that some level of compensation during construction should exist, which will then pay for a fixed portion of the cost of works.

Pure co-financing is represented by the provision of grant financing, that is, the provision of payments during construction that partially compensate for the work costs (monthly or quarterly as work is progressing, or on the basis of specific milestones during or at the end of the construction period).

A variation is for the grant payments to accrue, based on the achievement of specific milestones during or at the end of the construction period, but for the payments to be deferred. The government then makes the payments during the Operations Phase of the PPP; the payments are not subject to any reduction related to the operational performance of the project. These payments are usually unconditional and irrevocable (for example, Recognition Certificates of the Annual Payment for Work (CRPAO) structures in Perú or Pagos Diferidos (PDIFs)[101] in Spain regarding high-speed rail (HSR) PPPs). This may be also regarded as a de-risking technique as explained in section 7.4.1.

This latter case represents a solution when the public sector wants to co-finance a portion of the project but does not have sufficient liquidity. The SPV will raise the funds related to the grant, but the financial facility to "pre-finance" the public deferred committed funds will be much easier to negotiate.

In any case, grant amounts will normally be fixed at the PPP signing. They will accrue as a percentage of the work in progress completed (or by meeting the specific milestones) whether it is effectively paid during construction or on a deferred basis.

[100] The local financial market may have enough capacity to finance a large project or a number of smaller projects, but when a PPP program is in development and concentrating on many projects in a short period of time, problems of availability of finance may emerge. This should be duly planned in advance.

[101] PDIFs (Pagos Diferidos) represent an irrevocable and unconditional payment obligation which is accrued as long as construction progresses and is certified. This and other schemes are explained further in section 4.5.

7.3.1. VfM considerations

The amount of co-financing within the PPP should not spoil the VfM by diminishing the alignment of interest associated with the PPP's deferred performance-linked compensation scheme. Too much public financing will reduce the risks and motivations for the private partner to properly operate the project, which may be converted to a normal procurement in terms of risk allocation and incentives.

Co-financing may affect the accounting treatment of the project. It may even result in the private finance being reported as public debt (Chapter 4.12 provides more information on PPP national accounting issues).

The decision to co-finance and the amount of co-financing is a structuring matter (financial structuring) and is explained in greater detail in Chapter 5.5.2. It must be noted that co-financing of PPP projects by a government should not diminish the autonomy of the SPV.

7.4. Other forms of public participation in the financial scheme or intervening in commercial feasibility[102]

Grant financing (or pure co-financing) is not the only way to increase affordability and/or the commercial feasibility and bankability in PPP projects. There are other instruments (such as public loans or "co-lending") and techniques (which may be referred to as de-risking or as credit enhancement).[103] The former may help to fill a gap in the availability of finance while the latter may increase the accessibility to market finance.

All of these forms of financial support are used in both developed and developing countries. They have an essential role in the case of EMDEs due to the usual scarcity or limitations in the availability of long-term finance.

The following headings explain both public financial support and de-risking techniques respectively.

Box 1.27 includes a description of how Latin America has approached the challenge of long-term finance and introduces some instruments and techniques which have been applied recently in the region.

[102] An interesting read to learn more about how intervention measures may help PPPs in times of economic or financial crisis is *The Financial Crisis and the PPP Market – Remedial Actions* (EPEC, 2009), and *The U.K. Treasury Infrastructure Finance Unit: Supporting PPP Financing During the Global Liquidity Crisis* (Farquharson and Encinas; http://siteresources.worldbank.org/WBI/Resources/213798-1259011531325/6598384-1268250365374/PPP_Solutions_01.pdf).

[103] The distinction between de-risking and credit enhancement is really subtle, as a de-risking approach will favorably affect the credit rating and increase bankability. This PPP Guide defines credit enhancement as "instruments which are structured mainly to provide a higher degree of protection to lenders, thus increasing the credit rating of the debt". Generally speaking, de-risking techniques are embedded in the contract and form part of the payment mechanism or the risk structure, while credit enhancements are explicit instruments which do not form part of the contract (or when mentioned usually create a commitment to the lenders but not to the private partner).

7.4.1. Other ways to fill financial market deficiencies or increase affordability

Apart from grants, there are other more sophisticated ways to inject funds, support viability or to increase affordability. As opposed to grant financing, they may not be regarded as public financing (in the sense of public conventional financing, affecting the investment budget of the public sector), but it does mean that the government is acting like a market lender or investor.

As alternatives to grants, these schemes are forms of support, where, the finance financing provided will need to be rapaid. Sometimes it is provided on market conditions at a market price, and in other cases it is provided on favorable terms, "soft conditions", or "concessional conditions." The latter case is usually a response to affordability difficulties, whereas funding at market conditions is usually a solution to fund availability (for example due to a financial crisis such the 2008–2010 global financial crisis) or market appetite.

Chapter 5.5 provides a deeper explanation of these financial structuring techniques, many of which may be summarized as follows.

- **Public long-term loans (soft or not soft):** By a public/national financial agency, for example, BNDES in Brazil, the Treasury Infrastructure Funding Unit (TIFU) in the United Kingdom, Banobras in Mexico – usually accompanying private lenders under market conditions), other institutions, or even a specific budget fund (Transportation Infrastructure Finance and Innovation Act [TIFIA] in US – always accompanying private lenders and accepting a subordination in guarantees and term). See Chapter 5 for details;

- **Public subordinated debt:** Usually on soft terms (for example, participative loans in Spain for unfeasible road toll projects). See Chapter 5 for details for details;

- **Equity:** Investment through specific public infrastructure funds or "strategic funds" such as Fonadin in Mexico – usually at market conditions and managed independently by a management company; and

- **Ad-hoc public equity investment for the project:** These can be proposed in the RFP. Some potential pitfalls of this approach are discussed below. Section 5.5.5 provides additional and more detailed information.

When the motivation is to increase affordability, as in the case of grants, governments should take care to avoid the risk of spoiling VfM as the co-financing can decrease the effectiveness of the risk transfer.

Government as an Equity Partner

Section 2 explained how there are PPP structures in which public and private parties participate jointly in the equity. In these cases, the public partner commonly holds the majority or a significant portion of the shares, and it either participates actively in the management of the project company or reserves certain control rights for itself on strategic decisions.

These structures may be given a variety of names, including joint ventures, mixed equity companies or institutionalized PPPs.

However, the public partner may also participate in the equity of the PPP company, acting only as a financial investor, in order to support the commercial feasibility of the PPP project (by decreasing the amount of equity to be invested by the private equity investor) or as a way to decrease the net cost (and improve affordability) by having access to a portion of the equity cash flows. These cases will not be regarded by this PPP Guide as joint ventures or institutional PPPs, but as a mere financial variation of a conventional PPP.

Being an equity partner should not give the government the right to interfere in the running of the SPV. In some of these cases, the motivation for a government to act as a co-investor may be to increase its control of the project by enjoying direct access to the day-to-day management issues of the project-company and full access to the project information. This is done with the intention to transfer the full scope of risks and responsibilities to the private partner. This motivation should be considered with extreme caution, as it can deter potential investors worried about political interference. It also implies a risk that the government unduly intervenes in the private sector's responsibilities and ability to manage the project, limiting the ability of the project to deliver efficiency gains.[104]

If the equity investment gives the government the right to be represented on the board of the SPV, this will be a potential source of conflict. Therefore, it is desirable that the investment is managed by a specific body or unit rather than by the procurement agency itself.[105]

Governments should acknowledge that the investment of equity means that it is taking back more risk than if it invests an equivalent amount as debt.

Chapter 5.4.5 further explains the implications and features of a PPP structure with equity participation by the government.

7.4.2. De-risking approaches, credit enhancement and other risk mitigation techniques

The government has to pay attention to commercial feasibility right from the inception of the project (preparation and structuring), including bankability. An unfeasible project will not become feasible just by injecting public finance into the mix. The risk structure/allocation needs to be acceptable to the private sector (both investors and lenders).

However, there may be specific situations where a significant number of risks (or some risks with significant potential impact) may not be absorbed by the private sector, but the government still considers that PPP is a valuable option. There may also be projects tendered in the context of

[104] The presence of the procuring authority or government as a shareholder in the project company may have benefits for the management of the project (as it will give both parties the ability to handle, in advance, any disputes or controversies in the area of PPP company governance). However, when the intention is to retain greater control over the private partner operations but enjoy the experience and capabilities of the private sector, or other strategic reasons (for example, to help the public partner to gain experience in running the service in question in the future), rights of control should be clearly set out from the outset in the RFP documents. These rights should not divert materially from the usual step-in rights. The rights of the private partner should be clearly protected so as to avoid undue interference in the operations, including the implementation of back-to-back sub-contracts so as to transfer the material responsibilities and rights that are intended to be managed by the private partner.

[105] Further reflections on this matter may be found in *A New Approach to Public Private Partnerships: Consultation on the Terms of Public Sector Equity Participation in PF2 projects* (HM Treasury 2012).

difficult financial market situations such as a bank crisis, or when a government wants to boost the development of a market (for example, capital markets in emerging economies). In these circumstances, the government may design a de-risked scheme to facilitate debt raising.

Examples of de-risking approaches include the following:

- Direct guarantees to the lenders (unconditional and irrevocable), which are provided by National Development Banks (NDBs) (for example, Banobras in Mexico) or directly by the treasury (for example, in the United Kingdom, during construction, assuming the possibility that project construction risks might materialize);

- Guaranteed portion of service payments (that is, limiting the deductions due because of potential under performance, for example, by 20 percent);

- Fixed deferred payments, unconditional and irrevocable (like in high-speed rail (HSR) PPPs in France and Spain, or like the CRPAO in Perú), which have been discussed in the previous section may be considered either co-financing by means of deferred grant financing or a de-risking technique;

- "Guarantee funds" to provide security for government payment obligations under the PPP contract;

- Escrow accounts and trustee structures (for example, payments from a water authority for a water plant that are backed by a portion of the tariff paid by final users, which is reserved and allocated in specific accounts managed by a trustee);

- Contingent or contractual guarantees aimed to protect the project company (for example, minimum traffic guarantees in user-pays road projects) or lenders (for example, guaranteeing all or a certain percentage of the outstanding debt in case of early termination, including termination by default of the private partner. This is sometimes referred to as "debt underpinning" – World Bank – Farquharson, Torres de Mästle, and Yescombe, with Encinas 2011), and;

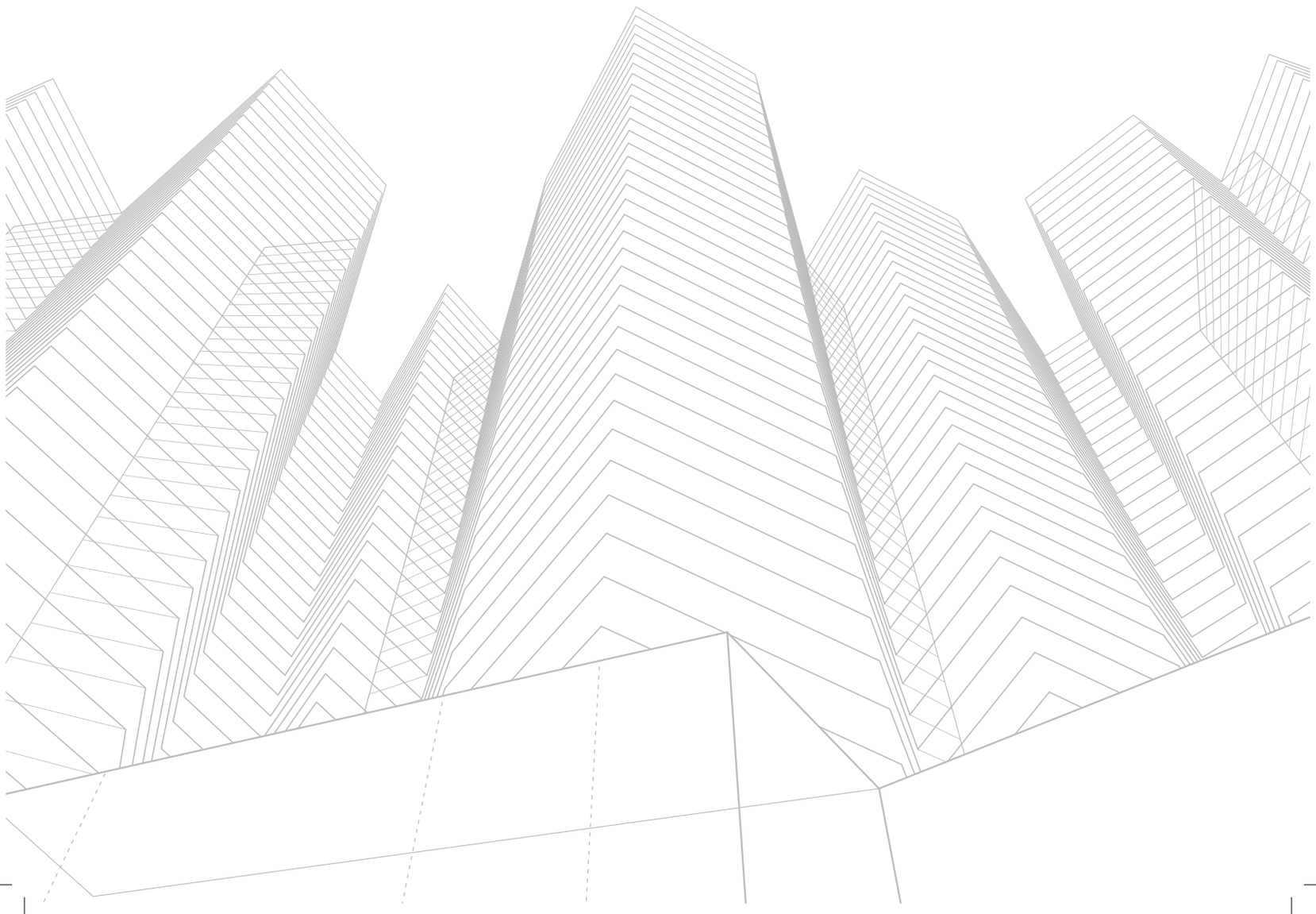
- Partial Risk Guarantees or Political Risk Insurance provided by MDB's to mitigate the counterparty risk.

In the context of insufficient availability of local finance, when it is necessary to mitigate Forex risk so as to help projects to access cross-border finance, specific guarantees or mechanisms to mitigate such risk become necessary. This may be solved using contractual guarantees (for example, in user-pays schemes allowing for a revision of the tariff according to currency exchange movements or being treated as a compensation event giving the right to receive direct compensation for part or all of the loss suffered by a devaluation beyond an exchange rate threshold). Alternatively, it may be handled through direct guarantees from the government to the lenders, or even by using a hard currency to make the payments in government-pays PPPs. This has been explained in Chapter 5 where section 4.6 provides additional examples of this kind of mechanism.

Credit Enhancement

There are some instruments to provide public finance that may not necessarily provide soft terms and that may decrease the average cost of capital of the project directly. Instead, or in addition, these credit enhancement instruments are structured mainly to provide a higher protection to lenders, thus increasing the credit rating of the debt. This may be the case of the Transportation Infrastructure Finance and Innovation Act (TIFIA) loans in the United States (Chapter 5 provides a sample/case study about the TIFIA), or more recently the Project Bonds Credit Enhancement (PBCE) mechanism structured by the EU commission and managed by the EIB to provide credit enhancement, specifically to projects financed through capital markets by means of project bonds.

Under the PBCE tool, the EIB provides a subordinated loan or a guarantee which covers the first loss of the project (typically up to 20 percent of the capital cost). Therefore, this increases the rating of the project, allowing it to access capital markets under better terms — or even enabling it to access the markets at all.



Box 1.27. Practices regarding Financial Support to PPP Private Finance in Latin America

- Institutional investors in the region (especially pension funds) could be bigger providers of financial support to PPPs than they are today if a number of constraining factors are solved or mitigated. These include the need for a more rigorous preparation process for the PPP projects themselves and the specific collaboration of the MDBs in promoting pension fund participation. Nevertheless, the de-risking approaches implemented in some countries have played a role in attracting institutional investors.
- Some countries have developed "guarantee funds" (for example, Brazil), but their value is not clear compared to other mitigation techniques and they have not been properly promoted. An example is the FGP (Fondo Grarantidor de PPP), which was created in 2005 with $3 billion, and is managed by Banco do Brazil, which acts as trustee.
- The use of financial guarantees has been limited, despite efforts in some countries. For instance, in 2008, Mexico put financial guarantee lines in place that acted as credit wraps (these were partial guarantees and payment guarantees to back the payment credit risk in PPPs promoted by states and local governments).
- Contractual guarantees have been extensively used with good results in Chile, Colombia and Perú (a noteworthy case is the Chilean scheme for minimum revenue guarantee in real toll road PPPs).
- Mexico created a Strategic Investment Fund (SIF) called FONADIN, in 2008, on the basis of the former Infrastructure Investment Fund (FINFRA) and Highways PPP Trust (FARAC) (the latter being a budgetary fund only, intended to provide non-revolving finance). FONADIN can provide grant finance where agreed by the government, and it can be involved in equity (equity shares and junior debt) as well as provide guarantees.[106]
- In addition, some more sophisticated de-risking approaches have been successfully implemented, such as Recognition Certificates of the Annual Payment for Work (CRPAO) in Perú and Development Capital Certificates (CKD) in Mexico — though the latter was a response to a regulatory change intended to boost institutional investment projects, rather than as an instrument or de-risking scheme.[107]

Source: The contents of this box are a free summary of the paper "Mejores Prácticas en el financiamiento de Asociaciones Público Privadas en America Latina" (Best Practice in PPP Finance in Latin America) (World Bank Institute, 2011).

[106] http://www.fonadin.gob.mx/wb/fni/quienes_somos

[107] These legal structures are conceived to channel funds from institutional investors through trust structures that are to be listed in the stock market. See a paper from Deloitte for more information (in Spanish): http://www2.deloitte.com/content/dam/Deloitte/mx/Documents/bienes-raices/Certificados_Capital_CKDes_210610.pdf

7.5. Other considerations regarding the project company's financial structure that influence the PPP project-contract

In addition to basic concerns about "bankability," governments have other points of concern regarding the private financial package that will influence the project contract structure. These have specific implications in the tender process regulations (RFP) and more especially in the contract drafting.

Some of these concerns relate to bankability in a more subtle manner beyond the need for an appropriate risk structure that is acceptable to lenders, and the need for sufficient revenue to cover debt service. It needs to be recognized that lenders will demand certain rights to enable them to influence the management of the private partner, especially in cases of under-performance or in situations where there is a risk of default ("lender's rights").

Other concerns for government include the need to balance the competing objectives of boosting access to more efficient financing on the one hand and having a financially reliable and resilient private partner that is truly committed on the other. See "limiting leverage and requesting minimum equity" and "transfer of shares and changes in control" below. Another concern is to consider the potential for undue windfalls obtainable by means of re-structuring finance (see "refinancing gains" below).

There is also a tension between maintaining competition and managing financial close risks. As a result, the considerations as to how and when the private partner should conduct financial close are common. In some jurisdictions, the government allows financing negotiations to take place after the bid award or even after contract signature, whereas other jurisdictions require finance to be fully arranged at bid submission (see "timing of financial close" below). More recently, some sophisticated markets have imposed carefully monitored "preferred bidder debt funding competitions."

7.5.1. Lenders' Rights

Beyond the need for a proper risk structure acceptable for lenders (and investors), lenders' rights are a paramount consideration in a well-designed PPP. The main guarantee (and after construction, the sole guarantee) for lenders consists of the economic rights included in the project contract, that is, the economic value of the business.

Both the legal framework and the contract should accommodate the ability for the private partner to pledge economic rights (revenues, shares, compensation) to lenders in the guarantee package of the loan agreements.

It is also good practice to allow lenders to "step in", that is, to take control of the project contract if and when the sponsor/investor is seriously underperforming and the financial sustainability of the project company is in danger, but before the government may need to exercise its right to terminate the contract.

In some jurisdictions, lenders will only be allowed to suggest a remedy plan before the authority declares the project terminated. This includes the ability to suggest a new contractor to operate the asset instead of the original private partner. However, this will only be possible (in many cases) under a public process to select the new partner and substitute the outgoing investor. Lender's rights need to be clearly articulated in project contracts.

7.5.2. Limiting leverage and requiring minimum equity commitments

As we have already seen, debt leverage provides efficiency to the financial structure (decreasing the weighted average cost of capital – WACC). Therefore, it increases affordability or decreases the overall payments to be made by the authority (in government-pays PPPs) or increases the net present value (NPV) of the equity cash flows (in user-pays PPPs). However, excessive leverage may endanger the sustainability and solidness of the PPP project, increasing the risk that the SPV will become insolvent.[108]

The public party also benefits from the sponsor/promoter being significantly at risk that is, being directly exposed in financial terms to project failure and to the performance of the project. To ensure there is sufficient equity at risk, governments often limit the level of debt in the contract and require a minimum equity commitment from the bidder/sponsor. For instance, in Spain it is common practice to require a minimum equity contribution from the sponsor of at least 15–20 percent, with the flexibility of reducing the amount and percentage two or three years after construction is completed and the project is in service or operation.

There are also jurisdictions that require a specific minimum level of equity involvement by the investor-contractor or any key partner. This is one who is bringing the capacity or experience to the project that forms the basis on which the consortium has been qualified (or shortlisted).

7.5.3. Transfer of shares and changes in control

Another government concern will be about the legal ability of the owners of the PPP Company (the original successful bidder) to sell their equity and move out of the project. There is a competing tension between the objective of commercial feasibility (the easier it is to sell shares, the more liquid and attractive the investment) and the logic of avoiding opportunistic behaviors (such as bidding and winning, but then selling on the right to develop the project). The need to regulate transfers of shares is also linked with transparency and fairness of the procurement, as the proposed ownership of the PPP Company is likely to have been considered in the evaluation of the bids.

It is common practice to prohibit the transfer of shares without the prior authorization by the authority when such a transfer results in a change of control (that is, the project company ceases to be controlled by the party that was selected in the tender process). Many contracts strictly prohibit such changes during the construction phase (unless exceptional circumstances occur, such as insolvency of the shareholders), but do permit transfers (provided government is notified) when they do not represent a change in control and do not materially affect the credit and capacity standing of the project company.[109] In some cases, governments may restrict the transfer of shares by key members of the consortium for several years after project commencement.

When authorization is required, this will be subject to requirements in the contract.
These requirements may set out the grounds on which the authority, acting reasonably, may refuse authorization. The private partner may need to satisfy the authority that the change in control will

[108] See "An Example of an Over-Leveraged PPP: Victoria Trams" in PPP Reference guide 3.0 (World Bank, 2017) page 55.

[109] Change in control should be defined clearly in the contract. There are different approaches in different jurisdictions and practices. Besides the effective control of the company, some PPP practices define a threshold for change in control other than 51 percent of the shares. For example, the contract may define a change in ownership of 20 percent of the shares to be a change in control.

not adversely affect its credit standing and technical capacity. In some jurisdictions, it is a sufficient condition that the incoming controlling shareholder meets the pass/fail requirements in the original request for qualification (RFQ).

Authorities shall be aware of the need to bring flexibility to the following:

- Changes in the ownership of the company so as to provide liquidity to the original investors; and
- Easing the conditions for transfer of shares without requesting previous authorization, unless there is a change in control (at least until after construction).

In this context, they should be very clear on conditions to be met for authorization to be granted.

7.5.4. Refinancing gains

In some jurisdictions, contracts include provisions for sharing certain refinancing gains. This may occur if there is re-negotiation of the debt terms (usually after some years of operations) or the substitution of the existing pool of banks and current loan agreement by another new agreement with more favorable terms or the possibility to increase leverage allowing investors to increase their return on equity.

Typically, the private partner must share with the public partner a percentage of the increase in the equity IRR resulting from the refinancing.[110] See Chapter 7 for further information on sharing of refinancing gains.

7.5.5. Requiring the financial package upfront or allowing for post-award negotiations. Risk of financial close

Assuming that the local financial market has, in general terms, enough capacity to finance the project (both in terms of volume and length of term), governments have a choice as to whether or not that financing is required at the time of bid submission.

The procuring authority is logically concerned about the ability of the project and sponsor to raise the necessary funding in the form of debt, especially when the project has a high-risk profile. However, to request that the financial package be arranged at bid submission or before contract signature may affect competition if there is insufficient capacity in the financial market to fully finance each bid.

According to the European PPP Expertise Centre (EPEC),[111] "in difficult financial market conditions (for example, reduced liquidity), fully committed financing packages may be difficult to obtain at the time of bidding. This may mean that the financing agreements will not be concluded immediately once the PPP contract is signed." Lenders will be reluctant or not able to provide a committed financial package upon bid submission. The uncertainty of not being selected does not outweigh the costs and efforts to undertake the necessary due diligence. This will be applicable to most financial

[110] Further reading on refinancing matters may be found in *Standardization of PF2 Contracts* (HM Treasury 2012).
[111] *Guide to Guidance* (EPEC, 2012), "Conclude the Financing Arrangements". http://www.eib.org/epec/g2g/iii-procurement/32/322/index.htm

markets in EMDE's. Also, "in the past, PPP financings for major transactions were usually provided through 'syndication' arrangements, whereby a small number of banks underwrote the financing of the project and 're-sold' it to a syndicate of banks after financial close. Most PPP projects are now funded through 'club deals': each bank assuming it will hold its stake of project debt to maturity. In some cases, these club arrangements can only be concluded after the appointment of the preferred bidder (the so-called 'post preferred bidder book-building'), under which the full lending group is assembled using lenders that may have supported unsuccessful bidders."

Requiring the financial package upfront also necessitates a longer time for bid submission. This is to permit the proper structuring and time for due diligence to be handled by the banks in advance of the bid deadline. Therefore, this approach is more common when the procurement route is based on a previous shortlisting (which by definition narrows the potential problem of lack of availability of lenders).

There is not a valid universal approach to this matter as it depends on the financial market of each country, as well as on the procurement route followed. In general terms, globally speaking, there are two types.

- Markets in which competitive dialogue (Chapter 5.8.3) and other interactive or negotiated process is standard, and the financial package is usually (but not always) arranged up front;

- Markets more accustomed to, or only procuring under, a one-stage approach (open tender with no shortlist). Here, the financial arrangements may be postponed until after commercial close or contract signature.

Good practice: In a market where there are signs of a scarcity of lenders or bank lending capacity to back more than a reasonable number of bidders (for example, three bidders), and the government is pursuing an open tender approach (that is, without a shortlist), it is good practice not to require bidders to provide financial arrangements at bid submission. However, the RFP should require reasonable evidence of availability of funding (that is, indicative letters of support from banks).

As opposed to "preferred bidder funding competitions" (explained below), in the conventional financial close process, the actual financial conditions negotiated at financial close (and therefore the conditions assumed at bid submission) are at the sole risk of the bidder. However, it is good practice to give relief to the private partner when an adverse and unexpected change in the financial market occurs (including the ability to withdraw the offer or renounce the contract). It is also becoming standard and regarded as good practice that the risk of the volatility in the price conditions of the financing (those which do not relate to the credit standing of the PPP project as offered by the successful bidder) is retained by the authority or shared: this refers to the "interest base rate" movements between bid submission and financial close (see Appendix 5A and Chapter 3.1).[112]

[112] The *Application Note — Interest-Rate and Inflation Risks in PFI Contracts* (HM treasury and Infrastructure UK, 2013) explains this issue and how to handle the neutralization of interest rate movements until financial close in its section 2.3.

7.5.6. Preferred bidder debt funding competitions[113]

In contrast to the situation described above (that is, when availability of finance is not an issue, the financial market is highly competitive and PPPs are a well-known asset for lenders), governments may seek to further control and take part of (if not all) the risk and reward related to the financial conditions obtainable at financial close.

In those circumstances, and particularly in large PPP projects,[114] the authority may seek to secure competitive financing terms by requiring the preferred bidder to conduct a debt funding competition (a competition among potential lenders in order to obtain the best financing terms possible). The authority will retain most or all of the benefits (and assume the related risks).

However, as stated by the EPEC guide, debt funding competitions may not be suitable for projects or in markets where financial innovation is expected to play a significant role in the competitive position of bidders. Moreover, it may not be suitable in conditions of limited financial liquidity.

Box 1.28. Key Points regarding Financing in a Private Finance PPP Contract

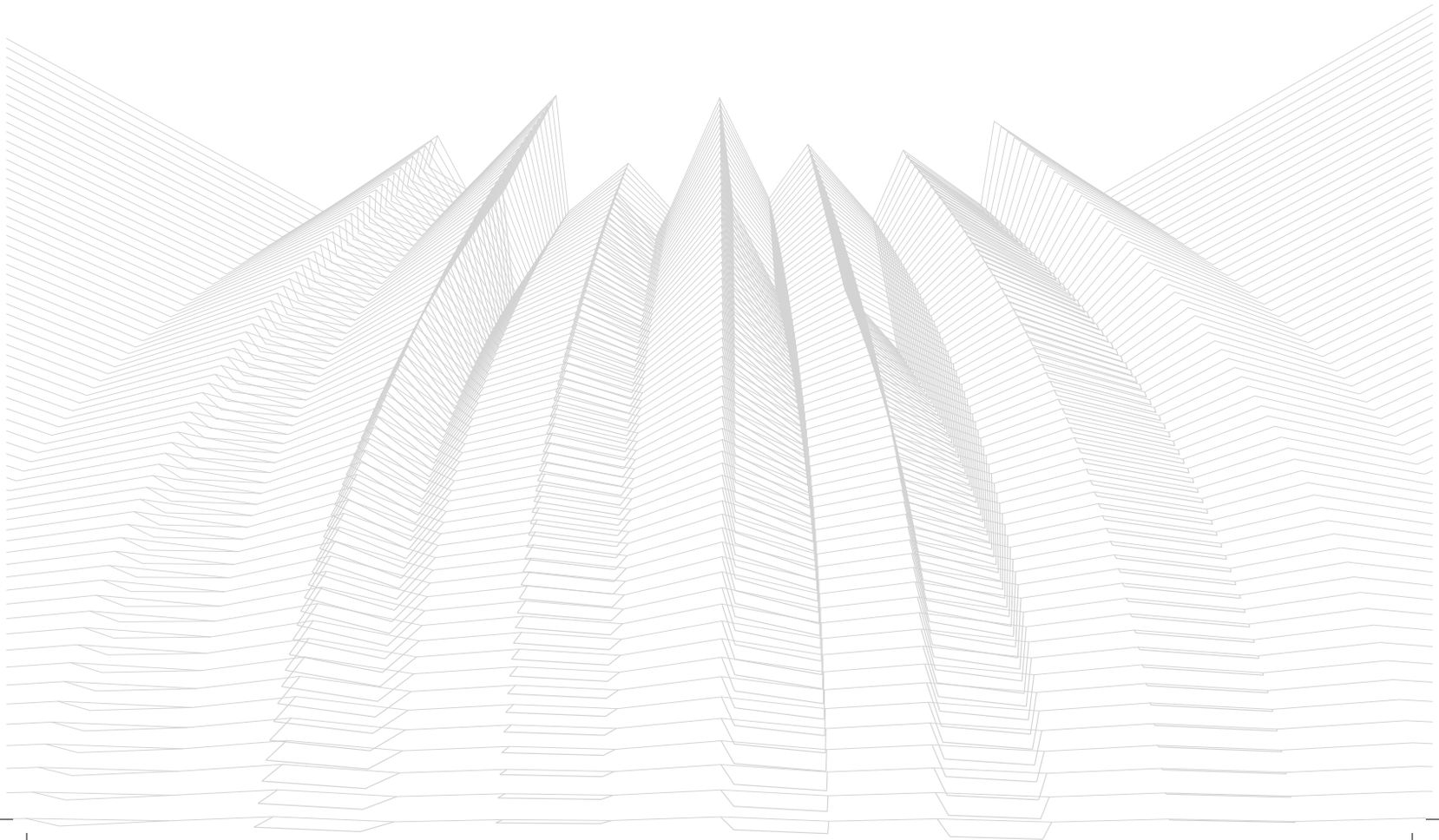
- Private finance is the financing provided by the private party (from its own funds or by raising funds from third party lenders) to finance all or part of the infrastructure development costs. The costs will be recouped by means of the revenue to be generated by the contract.
- Like any business operator, the PPP project company will have a mix of funds in the form of equity and debt.
- Though debt may be raised against corporate guarantees, the common practice is to structure the financial package on the basis of the project finance technique. Having debt funding in the mix of the project company's financial structure under the project finance technique will release capital capacity for the equity investor to invest in other projects. It also decreases the cost of the overall mix of funds (lower WACC), which is the concept of leverage.
- Project finance will usually be more expensive than corporate debt, but it provides a number of advantages both for the private and the public partners.
- Under the project finance technique, the public party has to pay attention not only to feasibility but also bankability. Therefore, the project structure (of revenues and especially in terms of risks) has to match common lender requirements in addition to those requirements from the private party as an equity investor.

[113] For a description of the approach suggested in the UK, see HM Treasury Preferred Bidder Debt Funding Competitions: Draft Outline Guidelines, August 2016.

[114] When a project is small, the costs of conducting the competition, including the cost of specialized advisors to oversight the process and additional time, may easily offset the benefits of the potential better financial conditions.

Box 1.28. Key Points regarding Financing in a Private Finance PPP Contract (cont.)

- Bankability lies at the heart of project appraisal and preparation, which is explained in detail in Chapter 4.
- There are multiple sources of funds for equity and debt, including pure financial investors to provide equity, institutional investors, development banks, and commercial banks.
- The public party (or the government in the general sense) may be a finance provider in many forms, including the provision of public financing in strict terms (grant financing), co-lending schemes, and equity, or it may support bankability in other ways (de-risking and credit enhancement).
- The government may act as a finance provider in user-pays projects where the project is economically viable but there is a viability gap that is filled by public finance (with an alternative approach being to provide deferred support in the way of a hybrid payment mechanism).
- The government may also act as a finance provider in all revenue regimes to mitigate financial market failures or imperfections, or simply to increase the affordability of the project in the long run.



8. Causes of Project Failure: The Need for Sound Process Management and Preparation of Projects

Section 5 (When to Use PPPs: Motivations and Caveats) described the features and value drivers of a PPP, that is, those characteristics that allow the government and the taxpayer to benefit from incremental efficiency when procuring suitable projects as PPPs. But the section also signals some conditions necessary to access those benefits, as well as some disadvantages and potential pitfalls.

A PPP project should only be procured when there is strong evidence that it is the right project. As in any procurement option, the project has to be technically feasible and the best economical option for the public need, affordable and feasible in commercial terms (there will need to be significant competition, with bankable offers). In addition, the PPP option should only be adopted when there is significant evidence that it will add incremental Value for Money (VfM) to the technical option or the project identified, compared to other procurement methods.

There are risks that VfM (and feasibility) may be improperly assessed (errors in estimating costs or assuming benefits, or indeed other mistakes in the whole assessment). Another risk is that the groundwork is poorly prepared, for example, risks and weaknesses are not detected and properly treated in advance. VfM may be lost through improper structuring or drafting, or poor management of the tender process and contract negotiations during its operational life.

VfM has to be protected and maximized through the preparation and implementation process, and throughout the life of the contract. This involves proper management of the planning and procurement process, with suitable capabilities and resources, as well as the need to follow standard approaches and good practices. These are the paramount conditions for a PPP to succeed (that is, to avoid project failures). Section 10 introduces the phases of a typical process, and Chapters 3 to 8 of the PPP Guide describe each of the phases of the PPP process cycle, providing intelligence and good practice regarding each of the phases.

Before the introductory description of the PPP process (section 10), this section will explain how improper and inadequate PPP process management, especially regarding appraisal and planning preparation, may end in a project failure. It will also provide examples of project failures that emerge at different stages of the project process cycle.

Section 9 will introduce the concept of a framework and its relevance for the success of PPP as a programmatic and strategic approach.

8.1. What is Project Failure? Types of Project Failures

For a PPP to be successful, the government must protect and maximize VfM throughout the planning, procurement, preparation, and implementation process and the life of the contract. A failure to achieve the expected VfM constitutes a project failure.

Success in managing the PPP process is achieved by avoiding project failure risks occurring or mitigating their consequences (that is, in essence, effective risk management). This means that:

- The project is the right project (that is, an optimal VfM project option is selected and is properly prioritized with respect to other possible projects);
- PPP is the right delivery model for the project (that is, the PPP process is likely to deliver a better VfM outcome than traditional procurement methods); and
- The project is appraised/prepared, structured and managed to minimize adverse impacts on cost, time, scope and quality. At times, an independent appraiser might need to be brought in to ensure objectivity.

The degree of project failure may be more or less severe depending on the moment of time it occurs and the severity and consequences of the failure.

The project (in the broad sense of the word) may fail within two main stages: before the contract is signed at commercial close (for example, the project is cancelled and not tendered out, or being tendered there are no responsive bids, or after being awarded the contract is not signed) and after the contract is signed (that is, during the life of the contract). Reaching the contract signature under conditions foreseen in the RFP does not automatically mean that the PPP has succeeded, as the project contract may fail during the course of its life.

There are two main categories of project failure (in terms of consequences) during preparation and tender.

- The project process is suspended and the project is re-defined (either in full, changing the project's scope and starting again on the appraisal process; or partially, refining some characteristics of the project in terms of scope or business terms/contract structure); and
- The project's process is definitively cancelled, at least as a PPP.

A decision part way through the process not to proceed with a project as a PPP is not a negative issue or decision, as this is precisely the purpose of a progressive appraisal and preparation.

The more advanced in the process, the higher the loss suffered. This is the ultimate reason for advocating a step-by-step, progressive process together with progressive approvals ("gateway process") as advised and described throughout this PPP Guide. The worst situation and highest impact (before contract signature) is the cancellation of a project after the tender has been launched; this will impact the PPP reputation of the procuring country/government in addition to the loss of time and resources.

After the parties have entered into the contract, there are also two grades of failure (in terms of consequences).

- Absolute contract failure: A situation in which the government has to rescue the contract or re-tender it. This may be for two main reasons, sometimes interconnected or possibly overlapping;
  - Contractor/private partner in serious default; and
  - Contractor/private partner (the project company or SPV) enter into bankruptcy.
- Relative project-failure: This refers to situations in which VfM is partially lost, and the project contract does not achieve the originally expected VfM.

This may occur in a number of circumstances: performance is below expectations and the contract is not capturing the loss of the value of the service, or the contract has provided an unexpected benefit to the private partner that should have been at least partially captured by government or users. There can also be unforeseen circumstances where government has to assume part or all of the loss, but the risk event is not properly provided for in the contract creating an unbalanced situation, or the government is not duly prepared (in budgetary terms) to afford the compensation due under thecontract.

At times, political support of the project can change under a new administration, which can seriously impede the perceived VfM of a project.

Box 1.29. Summary of types of project failures

Taking into account the time when it occurs and severity of the failure.

- During preparation, structuring, or during the tender.
  - The process is delayed as it has to be redefined and/or reassessed (and re-tendered if was already within the tender phase).
  - The project is definitively cancelled.
- During the life of the contract.
  - Early termination/cancellation of the contract.
  - Partial loss in VfM terms.

8.2. Threats to a Sound Process Management

A project may fail for many reasons. A good number of them are naturally related to the PPP characteristics and even to the essence of the project itself. Many risks which can affect a project are unavoidable (typically force majeure, and a broader category sometimes known as unforeseen circumstances). This is increasingly becoming a possibility under climate change pressures. But the contract should be ready to tackle those situations in the most effective and efficient manner. PPP as a procurement mechanism (or the PPP contract as defined or structured) fails when it does not properly allow the parties flexibility to deal with such circumstances; this creates unbalanced situations or produces early contract terminations that could otherwise have been avoided. Not all project failures are necessarily failures of PPP as a procurement mechanism – in fact, for some failures, the cause of the failure would have an equal or greater negative impact if the project was traditionally delivered than if it were a PPP. Because of this, there are increasing calls for contract flexibility to address unforeseen events.

Even the contract itself may be the source of risks or problematic situations. This is what it is sometimes defined as the "contract risk."

Many project failures have their ultimate origin in defects in the identification, assessment and preparation (appraisal) of the project, poor structuring and poor management of the tender process, or poor contract management (which is also related to preparation, as the contract management strategy has to be considered when the contract is drafted and appropriate provisions incorporated into the contract).

These reasons for project failure belong to or are identified with a potential lack of a proper PPP planning and procurement process management during the different stages of the process, from identification to tender, and contract management thereafter.

The ultimate cause of poor management of the process is often a lack of transaction management capacity, which in this case demands a number of highly specialized skills and capabilities that have to be balanced with the highly complex nature of this type of procurement. Experienced external advisors alone are not a solution (although their support is highly recommended for appraising, preparing, structuring and supporting the tender process – see Chapter 3.14). The government and its procuring authorities need to also develop in-house skills. Building up this capacity, maintaining it, taking advantage of the experience, and retaining the talent are all challenges for the government.[115] At times, the procuring body may need to consider hiring experienced external practitioners to support nascent in-house talent.

This and other risks threatening the success of the project are those typical of any project management process (see Box 1.30). They can only be avoided through sound project governance (as introduced in section 5.5).

[115] See *Paving the way* (WEF, 2010) section 2.2, and *The challenge of building and sustaining skills*.

Box 1.30. Common project management and governance factors that may compromise the project outcome in a PPP (as in any government project)

- Lack of management capacity and proper skills (lack of skilled resources and lack of funds to hire advisors).
- Lack of continuity/frequent changes in the project team – i.e., succession planning.
- Lack of clear project ownership and leadership.
- Failure in taking and managing decisions (insufficient delegation of powers, external interference).
- Lack/absence of a champion.
- Lack of an "independent" or unconflicted advocate.
- Lack of proper quality control mechanisms.
- Failures in stakeholder identification.
- Failure to communicate (inside, outside, to the public — raising acceptance and managing resistance, and to investors).
- Failure to ensure that the project matches the government´s strategic objectives or changes in the government objectives.
- Political rush and unrealistic time scales.
- Once-off procurements of extremely unique projects

It is difficult to provide a universally valid shortlist of the main sources of project failure. However, especially in the case of EMDEs, a common source of failures for PPP projects is the lack of time for a solid project preparation and analysis of risks. PPP projects occur in contexts that are typically full of political pressures with unrealistic expectations. In countries lacking experience with these projects, the presence of "players" who do not behave strictly according to the rules and who expect to get some advantage through influence and/or shortcuts is common, and this needs to be addressed to avoid the failure of projects; this is particularly common with USPs.

There are a number of additional factors that may exacerbate project failure risks. Most of them are related to the absence of a proper PPP framework, or relate to failures of governance, something which can be mitigated by developing and implementing a proper PPP Framework.

A list of risk factors related to failures of governance or an absence of a framework and its consequences are explained below.

- The lack of a standardized process (guidelines) for the identification and preparation of projects, as well as for structuring and launching them, under a "gateway process" will exacerbate the risk of project failure;
- A complex and unclear institutional framework will make stakeholder management difficult and may create contradictory directions and changes in decisions;
- The lack of an institutional organization with a strong mandate will make it more difficult to retain knowledge and experience, leading to a loss of talent;
- Absence of a fiscal management framework and long-term fiscal management approach (controlling a country's aggregated exposure to PPPs) may produce unexpected conflicts in project implementation and termination of a PPP process even after announced;
- Poor coordination with PFM laws and regulations that control budgetary discipline;
- The lack of clear strategic development policy guidelines regarding the objectives of PPPs may produce political conflicts and changes in decisions. This can destroy the perception of political commitment and the stability of the government's approach to PPPs;
- In the absence of an appropriate PPP framework, a ministry that believes that it can shift the costs to other sectors within the government may pursue PPP transactions in excess of what is affordable or what represents Value for Money. Similarly, a ministry that does not directly bear project-related risks may not be sufficiently diligent to ensure that the private sector bears an appropriate level of risk;
- In the absence of an appropriate PPP framework, individual agencies may operate within "silos", with little information sharing or co-operation with other stakeholder agencies. In a silo situation, agencies with related functions may not be able to coordinate their activities sufficiently to make PPPs happen;
- Without a proper framework that incorporates the appropriate information disclosure provisions,[116] transparency and competitivity will suffer and this will harm private interest, public acceptance, and political commitment. As a result, this may increase corruption and create a vicious circle;
- Without the mechanisms to audit the process (external quality controls and checks, audit of the tender process in terms of transparency and equality) and programs (including information disclosure but also ex-post audit mechanisms), the accountability of the government will not be traceable; and

[116] Information disclosure is a cross-cutting issue that affects the entire process cycle (pre- and post-procurement) and many aspects of the framework (for example, fiscal management, quality audit/ex-post audit). Disclosure also affects or is of interest to various stakeholders, such as the private sector, the general public, the legislature, and so on. Disclosure can be reactive and proactive, the latter being a significant challenge and the focus of improvement in mature PPP markets. Box 1.28 in chapter 1 includes an extensive summary of information disclosure frameworks. The *PPP Reference Guide* 3.0 also discusses this matter in section 2.5.1.

- In general terms, without a framework and a policy that incentivizes sound long-term planning and the creation of PPP programs, the government will not capture the full benefit of the PPP and will risk losing the interest of the PPP (see Section 9.4).

Section 9 introduces the rationale behind the framework concept, its main components and manifestations, and how a framework is necessary for proper management of the PPP tool as a strategic element of infrastructure policy. Chapter 2 is dedicated solely to discussing the matter of PPP frameworks and explains all the above-mentioned issues related to frameworks, programs, and more.

8.3. Examples of project cancellation due to improper process management[117]

8.3.1. Arising during pre-tender and tender phases

The following are common examples of poor management during the pre-signature phase of the project process that reflect errors and risks of project failure (to be regarded as a non-exhaustive list).

The appraisal may conclude that the project should be aborted as a PPP because it was not properly screened or its economic sense was poorly assessed.

Examples:

- The cost-benefit analysis (CBA) in the Appraisal Phase provides negative results or much poorer results than those in the Identification Phase because a CBA was not previously done or was done on the basis of overly optimistic assumptions; and
- The CBA results are poor due to a change in the project scope because it was not properly developed and confirmed in the Identification Phase.

A project is aborted/abandoned before launching the tender because it was not properly assessed during appraisal or it was not properly prepared.

Examples:

- Legal limitations or obstacles regarding land availability for a hospital were not properly assessed or detected in appraisal;
- Utility services in a tramline project were not properly assessed, and before launch there was evidence of a relevant lack of information availability;
- There is evidence that the project may not be affordable or is not feasible under the previously defined affordability assumptions; and
- Significant changes are made to the project scope, so the project costs assessment becomes invalid or too optimistic. This invalidates the financial feasibility, CBA, and affordability assessments.

[117] For case studies on real projects to illustrate further reasons for cancelling projects, mostly due to ineffective appraisal and preparation, please see *Public-Private Projects in India - Compendium of Case Studies* (Government of India and PPIAF, 2010). The paper describes the main lessons learned for a number of projects. http://toolkit.pppinindia.com/pdf/case_studies.pdf

The tender is cancelled or suspended (after launching the tender) because some due diligence issues were supposed to be solved during tender or before contract signature, but there is evidence they will not be. The tender is cancelled or suspended because the project-tender is challenged by the general public, civil organizations or political parties.

Examples:

- Utilities allocation information is poor and needs more time than expected;
- Agreements with other public administrations (for example, municipal government agreement within certain transportation sectors) cannot be finalized or are not sufficiently advanced;
- Stakeholder group (e.g. CSOs and the general public) strongly oppose the project;
- Project information was not made public in time to receive suggestions and comments; and
- Other risks or obstacles were not detected during appraisal.

There are no offers. No bidders submit a qualifying bid.

Examples:

- The project, or the contract as designed, was not financially or technically feasible;[118]
- The tender was launched without advanced notice of the project being provided to the market;
- The RFP response period was too short and/or the RFP response period would have required any bidders to work over a known holiday period; and
- The tender was launched at a time when there was a perception that the government was not complying with its obligations under other similar PPP contracts.

The project contract is awarded but is not executed (signed) because of a competitor challenge over the administrative decision, or the successful bidders refuse to sign the contract due to some lack of preparation of the project.

Financing is not closed due to unresolved problems of preparation.

Examples:

- One or more of the losing bidders may challenge the award process due to perceived or actual errors or omissions.
- Land a necessary right of way that was supposed to be available, but it is not and
- There is a risk that environmental permits will not be approved due to the procuring authority failing to manage the process properly.

[118] Optimism bias or simply a lack of appropriate analysis is one of the most common reasons for cancelling projects, including PPPs. See Cost Overruns and Demand Shortfalls in Urban Rail and Other Infrastructure, Bent Flyvberg, Transportation Planning and Technology, vol. 30, no. 1, February 2007, pp. 9-30.

8.3.2. Arising during the life of the contract

Construction is delayed because of a lack of due diligence preparation by the government concerning the risks and responsibilities it assumes under the contract.

Example:

- Extraordinary delay in construction due to lack of access to the land needed for the project or absence of availability of the right of way required for the project.

Contract default by the private partner because of a poor contract structure and/or tender management.

Examples:

- Contractual default because of a lack of capacity. The bidding consortium's capacity and experience was not properly assessed during the tender process;
- Default due to inability to perform because the winning consortium's bid was too aggressive. The tender was not properly structured to avoid or detect overly aggressive or overly optimistic offers;
- Default due to the private partner's inability to meet minimum performance service requirements as a result of the government setting unrealistic performance requirements; and
- Default due to the contract transferring risks to the private partner that they cannot manage.
- Bid bonds or delay LDs were also probably not overly stringent/punitive.

Contractor insolvency.

Example:

- The private party becomes insolvent as it finds the project is not feasible due to poor appraisal (for example, the traffic forecast was too optimistic).

Delays or termination for breach by the grantor/implenting agency.

Examples:

- The government cannot afford payments due to budgetary restrictions which were not properly considered when approving the project (affordability analysis);
- The government cannot afford contingency payments as these were not properly assessed in appraisal; and
- The government fails to adequately perform other works that interface with the private party's works under the PPP contract. For example, where the government is responsible for the civil works for a rail project, and the private sector under a PPP contract is responsible for the rail systems, rolling stock and operations.
- Governments deciding to terminate contracts at will due to unexpected events.

Other minor project failures/loss of VfM.

Examples:

- There may be project failures consisting of costly disputes originating from an unclear risk allocation; and
- Performance requirements in the PPP contract may be poorly developed and consequently impossible to measure or enforce in practice.

8.4. The Private sector's (prospective bidders') interest and concerns about the entire PPP process

PPPs require the existence of private agents willing to enter into a long-term contract assuming significant risks, as well as financial investors willing to invest equity (and sometimes debt) in the projects, and banks willing to lend to those projects.

The projects have to be commercially and economically feasible (and to be commercially feasible the project needs to be bankable). This is a necessary condition for developing a PPP contract, and it is as relevant as other conditions of feasibility (for example, economic feasibility, that is, the right project; the suitability of PPP procurement for the project; and affordability).

However, a private partner as a potential bidder is also concerned about all aspects of feasibility, including socioeconomic and affordability considerations.

- If a project has poor economic value or there is a higher risk of a lack of government commitment to the project, there will be a higher probability of termination or of a new government seeking to renegotiate; and
- A private partner will have a natural interest in the project being affordable for the government. This avoids the risk of a breach of contract by the government.

In addition, the private sector will also want a reliable timetable, that is, it will expect that the project process is handled in accordance with the announced timetable. More generally, the private sector's willingness to invest will be influenced by the collaborative overall management of the whole PPP process.

Table 1.7 presents a list of the main conditions that a project should meet to be acceptable to a prospective bidder, beyond the strict commercial feasibility. It assumes that the risk allocation is tolerable, that the project is bankable and financing is accessible, and that the payments ceiling is acceptable/feasible (that it provides a potential IRR commensurate to the risks).

Table 1.7. Requirements or conditions from the private sector and characteristics of an acceptable and attractive project

Each project must necessarily meet a number of conditions to be acceptable to the private sector.

The private sector's willingness to bid and invest rests on the commercial feasibility (adequate risk/return ratios). This embeds a number of feasibility concerns, largely in line with the concerns of government when procuring a PPP. The project and the contract must meet the following conditions.

Condition	Description
Economically feasible or sound	The project must be the most suitable solution for the need: a project which fails as an appropriate solution (for example, utilization is much below expectations) will produce a risk of diminishing commitment from the public sector, and may also compromise financial feasibility (for example, the case of demand/traffic-related projects).
Suitability as a PPP (PPP delivery will enhance VfM of the selected project)	If an unsuitable project is tendered as a PPP, it will have an artificial and inefficient risk structure that will likely result in no bids or failures in the later development of the project.
Technically feasible	From the perspective of a private partner, this means that commercial feasibility is not compromised by non-assumable technical risks.
Commercially feasible	This means that the upper limit for payments or the price of the contract is sufficient to cover all costs and those contingencies associated with the risk transfer structure including providing an adequate return to the private sector in line with their cost of capital.
Bankable	The lender community (and the investor community) must be willing to provide the finance required for the project.
Legally feasible	The contract solution or contract structure has to meet the legal framework requisites in a clear manner. This will avoid limitations on rights, creating grounds for nullifying the contract, or the likelihood of challenges by third parties. Unequivocable support from a government is also a concern.
Affordable	In a more subtle manner, a private bidder may be concerned about loose approval of projects by the government with a lack of realism in terms of real capacity to afford the project.
Properly prepared	Sufficient due diligence to identify and address all the material risks/obstacles has been applied. The government must be realistically capable of meeting its responsibilities (for example, acquisition of the right of way for a project). For those risks transferred to the private sector, information has to be consistent and available (environmental approval process, utilities allocation information, and so on).
Properly structured (contract) – inherent in the commercial feasibility	Risks assigned to the private sector have to be assumable and manageable by them, and they also have to be implemented in the contract in a clear and objective manner. Payment mechanisms and performance regimes must be clear, objective and achievable. The contract must provide protection against disputes and potential breaches from the public side.
Properly structured (tender process/RFP)	The project must be tendered on the basis of balanced capacity requirements and transparent selection criteria. Good/reputable players will demand high levels of capacity and project technical proposals so as to avoid unfair competition in the form of unrealistic and aggressive offers.

9. Introduction to the PPP Framework Concept and Initial Framework Considerations. Private Sector Concerns About Frameworks and Markets

Framework is defined by the Oxford English Dictionary as "a basic structure underlying a system, concept or text."

The Spanish dictionary defines framework as "limits or circumstances that surround an issue or a period of story."

PPPs involve complex process management on a number of fronts (political, fiscal, financial, and social) that require a programmatic approach in order to establish PPPs as a recurrent procurement option for appropriate projects. As in any programmatic action, or any action or approach that has a long-term aim, a framework is necessary.

This PPP Guide advocates a programmatic PPP approach to extract and protect overall VfM from the use of PPP as a strategic option to procure infrastructure. Most countries with a successful PPP programmatic approach have built that program on a sound PPP framework. As described by the PPP Reference guide 3.0 (World Bank, 2017), "establishing a clear PPP framework publicly communicates the government´s commitment to PPPs." It also defines how projects will be implemented, helping to ensure good governance of the PPP tool, that is, "promoting efficiency, accountability, transparency, decency, fairness, helping to generate private sector interest and public acceptance on PPPs."

The complexity of PPPs makes it highly advisable to standardize processes and documents through cohesive policy and guidelines, which will save time and effort in the preparation and implementing/structuring of tasks that for PPPs are extraordinarily demanding. It is also advisable to homogenize those processes as much as possible to ensure that the conditions to procure the PPP are met (for any PPP within a specific jurisdiction).

The nature of PPPs, in the sense of committing budget resources in the long-term (most of the time, beyond the term of a legislature) under the expectation of extracting higher efficiency in net terms, clearly requires a proper and specific governance approach as a responsibility of the government in managing public resources.

In addition, and especially when adopting (as advisable) a programmatic approach, it is paramount to attract and retain the interest of the private sector. This requires the existence of a proper and strong governance approach by means of a stable and durable framework.

The framework must be underpinned by official documents that bind the participants who will operate under the framework. Some authors even define the framework by describing the very documents and laws that de-limit and govern the framework.

Different countries have different approaches to framework documentation. The approach chosen will mainly depend on two factors: the legal system or legal tradition of the country (with the main difference consisting of countries with common law systems versus countries with civil code traditions), and the degree of development in terms of PPP experience and use (countries with a tradition in PPPs, usually in the context of concession-type projects versus countries with no tradition or previous experience).

The PPP framework is sometimes described as a group of sub-frameworks for specific elements surrounding the governance of PPPs. In this case, the PPP policy or PPP legal framework is another element of the framework. See also Box 1.31. It is also not uncommon to have sector-specific requirements defined in frameworks.

Box 1.31. What constitutes a framework according to other guides?[119]

- According to the WBG, the PPP framework is constituted by the policy and legal framework. There are three main components or areas of regulation: process and institutional responsibilities, public financial management, and PPP program governance.
- The guide *Attracting Investors to African PPPs* (World Bank, 2009) proposes four areas when describing what constitutes a PPP framework: PPP policy, legal framework, investment framework (including approval process), and operating framework (which deals with the management abilities and work through the whole process).

This PPP Guide uses the definition of a framework proposed by the Public-Private Partnerships PPP Reference guide 3.0 (World Bank, 2017): the "PPP framework means the policy, procedures, institutions, and rules that together define how PPPs will be implemented — that is, how they will be identified, assessed, selected, budgeted for, procured, monitored, and accounted for."

The following sections explain what constitutes the framework (section 9.1), reflecting on issues in the implementation and documentation of the framework (sections 9.2 and 9.3), and finally explaining the perspective of the private sector and how frameworks and programs are relevant to significantly engage the PPP industry in a competitive and stable manner.

What constitutes a framework for the purpose of this ppp guide? Contents or areas of a framework.

The framework that governs the PPP tool as a method for procuring and managing infrastructure has a number of elements which provide their own limits or rules.

The following elements are related to the main characteristics of the PPP as a procurement method.

- PPP procurement relates to public procurement and therefore may be limited by procurement rules;

[119] See "defining PPP framework" in the *World Bank PPP Reference Guide 3.0 Module 2* (pages 66-68) and "setting the framework" in *Attracting Investors to African PPP* (World Bank, 2014) (pages 13-18).

- A PPP as an option for delivering and managing public assets and public services will be governed by public contract rules;

- A PPP involves a private economic operator managing a business which will be subject to the same laws as any other private business;

- PPPs are an alternative procurement method that provide long-term financing for the government, substituting for the public sector and general budget as the provider of funds to meet the financial needs of the project. Therefore, the process has to be integrated into fiscal management, control rules, or policy measures;

- As a private finance area, it must meet private investor expectations throughout the process as well as from the framework perspective. This also implies the need for proper communication and public relations policies;

- PPPs pertain to the arena of project decisions and project management which require a process management framework or operational framework; and

- A PPP framework typically allocates responsibilities to different agents and departments within a government; therefore, it refers also to institutional architecture and organization.

Many of the elements and factors that influence the overall governance of PPPs overlap with each other, and some of them might be categorized in the same group.

To define in precise terms the components or elements of a PPP framework is an arbitrary thing. However, for the sake of a common ground for knowledge and understanding, this PPP Guide proposes the following main elements as those which in essence constitute the PPP framework. For a PPP framework to be legally defensible, it is important that it is harmonized with other government legislation such as national procurement and PFM laws.

A PPP framework "necessarily" includes the following elements:

1. A set of strategic and foundational outlines that will both rule and de-limit the overall use of the PPP as a procurement option. This includes the overall objectives for using the tool, the scope (which type of projects and which sectors), and the **"implementing principles"** (how PPPs may be implemented), including procurement/tender process regulations. Some countries opt for specific laws to set out these strategic and implementing principles (these are commonly referred to as PPP laws), whereas other countries opt for specific policy documents (these are commonly referred to as PPP policies). In some countries, no specific PPP law or policy is required. In all cases, there will be a broad range of laws that may have a practical influence on the use and control of the PPP option (for example, sectoral laws), and all of these laws together form the PPP legal framework. There may also be a broad range of government policies that affect the use of the PPP option, in addition to any specific PPP law or PPP policy document;

2. A set of rules and procedures to identify, prepare, and assess/appraise the projects, develop the PPP contract structure and RFP structure, as well as the management of the tender process and contract management. These rules and procedures are commonly referred to as the **operational**

framework or process management framework. Some elements of these rules and procedures may also be regarded as part of a **public investment framework or planning framework**, and other labels may also be applied. The rules and procedures are usually in the form of guidelines with different levels of enforceability;

3. A set of rules and/or procedures to guide the allocation of risk between the public and private sectors, including general parameters **risk management** within the PPP contract.

4. A set of rules and/or procedures to control aggregated exposure to PPPs (and also influence the investment process, in terms of approvals). These are commonly referred to as the **fiscal management framework**;

5. An architecture within the government (for example, including legislative power) that may affect the management and governance of the PPP option. This is commonly referred to as the **institutional framework**; and

6. A range of other rules, procedures and responsibilities regarding **other governance related matters**, such as overall quality assurance of the PPP policy and projects, transparency matters, and communication.

In some cases, certain elements of the framework are also referred to as the government's "PPP Program."

These areas or sub-frameworks overlap significantly. For example, there is a clear potential overlap between the overall policy framework and the role of the PPP legal framework itself. Similarly, the institutional framework influences the operational rules and procedures for managing the PPP process, and the institutional responsibilities and architecture affects the system or approach for managing and overseeing the fiscal consequences of the PPP tool. Additionally, fiscal management will have influence in the specific project process as well. It is also important that PPP units that have mandatory roles to play have their mission and purpose clearly demarcated in a PPP Law. PPP laws should also legitimize PPPs and institutions.

How to implant or document a framework. Different legal traditions.

Regardless of whether we talk specifically about the general policy framework or about the framework in overall terms, rules (as in a framework) and procedures have to be implanted in a document that is binding, either through legal enforceability or through robust and consistently applied government processes.

This PPP Guide is intended to provide a reasonable standard of knowledge of the PPP concept and subject matter, proposing valid concepts and knowledge foundations for any country, or in a global sense. It is also necessary to recognize that in many aspects of PPP there are significant differences between countries that cannot easily be changed, as they are imposed by other general laws or very well-established traditions. Therefore, it is also paramount to understand and appreciate how and why PPP frameworks may vary in different countries.

In this sense, the paramount factor that influences relevant differences, especially in terms of a PPP framework, is the legal tradition of the respective country.

This PPP Guide considers two main legal systems: those that are based on the common law tradition and those based on civil codes. In general and broad terms, when documenting PPP frameworks, the former type of jurisdictions relies more on "policy statements" or policy documents, whereas the latter relies significantly on laws.

Legal frameworks or frameworks based on laws are regarded as advantageous in terms of stability, although the converse of this is that they also introduce a negative factor — rigidity. These laws are often supplemented by a secondary level of legislation, which may include regulations, policies, guidelines, implementing rules, etc. At times supplemental subnational legislation may exist which must be considered.

According to some guides, we may find a third option which is to implant or construct the framework in documentary terms: in other words, provide definitive guidelines. However, it should be recognized that many such guidelines, particularly in civil code countries, are developed by relying on laws, being within the law, or being under a regulatory development of a law. In other cases, guidelines (in the form of "manuals" or "handbooks") will not be part of a law or constitute a law. These can be changed from time to time, although the existing version is currently binding on public officials and PPP practitioners.

Likewise, in many common law countries, the policy is supplemented by guidelines which are often considered to be binding on the public officials and PPP practitioners unless approval to depart from the guidelines is given through the PPP approval and governance process.

The framework is already there, but must be refined or adapted for PPPs.

To a significant extent, the basics of the framework are the same as other procurement methods, for example, any jurisdiction that has established reasonably stable rules to procure public works and services. They have environmental authorities to rule on and control environmental impacts of infrastructure development. They have fiscal authorities/responsible departments to participate in decisions and approvals that may constitute public expenditures that affect or commit budget resources.

There are PPP frameworks that are cohesively developed, in a specific and comprehensive law or a comprehensive policy document, which covers:

- What projects may be developed as PPPs;
- How the contract and procurement process will be implemented;
- What has to be done to prepare and appraise the project before launching; and
- Who has the power to decide on what matters within the decision and approval process and thereafter during the contract life.

At the other extreme, there are jurisdictions where PPPs are simply accommodated within the existing general procurement laws. In these countries, government-pays PPPs are usually a novelty and are embraced on the basis that they can be regulated through the same rules as traditional concessions (that is, user-pays). In these cases, procurement rules may be just those generally applicable for any procurement, with no specific conditions prescribed for PPPs, or there may be rules regarding procedures and processes to assess projects, which are regulated regardless of form. Either way, there are no specific rules regarding long-term fiscal management of PPPs, and so on.

Regardless of how the framework is documented, PPPs (as an alternative option to procure infrastructure and services) involve significant challenges that demand specific treatment in many areas, and to mitigate challenges they need to be harmonized with other relevant legislation.

Therefore, the framework must, in many areas (legal/procurement, process management, institutional issues, fiscal management), be adapted to specifically cover PPPs or to embrace PPP specifics (see Table 1.8 below).

Table 1.8 assumes that the existing framework allows the private sector to operate a public asset in some form, and that regulations exist on the transparent procurement of public works and services. The table explains the changes that may be necessary or useful in order to adapt the existing framework to accommodate PPPs.

The existence of a framework will not, in itself, ensure success, as the success of the PPP tool can only be measured through implemented projects. Governments should carefully consider when to develop a framework and announce a program because the development of a framework should be promptly followed by the launching of a project or the announcement of a selection of projects, those that may be regarded as the "pathfinders" or pilot projects. Examples of this approach and clear policy management can be found in India and Mexico.[120]

Table 1.8. Adapting Existing Frameworks to Enable PPPs – Either Recreating the Framework Document(s) or Amending Existing Diverse Legislation or Policies

Area	Changes and adaptations needed	Necessary or useful?
Legal framework procurement (allowed contract types and tender process)	Adapt the framework to embrace a contract form that encompasses multiple areas of obligations (DBFOM). This is more an issue for civil code countries rather than for common law countries. Specifically, cover or include a DBFOM type of contract where revenues are in the form of government payments for a service. In addition, it is good practice for the framework to include tender models based or centered on dialogue and interaction with the prospective bidders. This is important for complex projects that require a deeper interaction and feedback with a selected list of candidates.	Necessary.

[120] World Bank - Farquharson, Torres de Mästle, and Yescombe, with Encinas (2011) include a case study on the "Hospital del Bajío" (page 50), illustrating how the government developed the PPP policy for health projects, defined a PPP health program, and prepared the first health PPP so as to launch it promptly.

Area	Changes and adaptations needed	Necessary or useful?
Selection, preparation and/or appraisal	Guidelines to assess and select projects across the whole government and at all levels of administration (central, regional and/or local) are very useful, and those traditionally used or existing for any public procurement may be valid. However, PPPs will require specific guidelines so as to protect affordability, commercial feasibility and Value for Money. Importantly many government procurement rules mandate the appointment of the lowest cost bidder. However, in the context of PPPs, cost is not the only component of the bid that needs to be assessed and, as such, the lowest cost bidder may not necessarily provide the best overall VFM.	Necessary for proper governance and if using PPPs in a programmatic way.
Fiscal management (aggregated exposure of a PPP)	Pertains especially to government-pays PPPs. The government is committing long-term budgetary resources which may be a new issue in procuring public works. This requires some degree of discipline (governance) to control the aggregate exposure. Many countries only rely on public debt limits and/or public debt accountability, while accepting that some government-pays type of projects may be regarded as private financing (see previous heading). This approach may be misleading and ignore the fact that "government-pays" projects involve a long-term commitment of budgetary resources, regardless of whether liabilities in relation to the project are recognized as public debt. Appropriation: the long-term budgetary commitment may be a legal issue in some countries, as sometimes the budget may not be committed in advance (on a long-term basis).	Necessary for proper governance and if using PPPs in a programmatic way.

Area	Changes and adaptations needed	Necessary or useful?
Institutional framework and architecture	A PPP as a procurement model, even if it is under a programmatic /strategic approach, does NOT require new agents or positions within the administration. The main roles (procuring agency /promoter of the project, the treasury/ budget responsible, general attorney or similar figure) are the same as in any procurement. However, due to the complexity of the procurement method (especially in terms of the process to select, prepare/ appraise and implement the contract), it is useful and quite common (regarded as good practice) to create specialized bodies or agencies or at least teams inside the government architecture. Their purpose is to lead most of the assessment and preparation tasks or to support other bodies of the government in doing so.	Very useful for proper governance and if using PPPs in a programmatic way. The need will depend on the level of work/ relevance of PPPs as a procurement method and size of the potential pipeline of the specific government / administration.

Box 1.32. Key Ideas about PPP Frameworks and Programs

- The framework is about governance.
- The PPP framework has several dimensions: process management, general policy, fiscal management, and ex-post evaluation.
- The PPP framework diminishes the risks of improper decisions and poor management of projects.
- A proper framework also facilitates smooth processes, saving money and time.
- The framework relates to the need to attract investors and retain their interest in the long term (reliability and good practice).
- The foundations of a PPP framework — especially in terms of the legal and institutional framework — are originally the same as for any public procurement, but there is a need for significant adaptation.
- The development of a framework should be accompanied by the prompt launching of "pathfinder" projects (one or more initial projects undertaken to demonstrate the application of the framework).

Private sector/prospective bidders also care about the framework and programs.

As noted in section 8, the private sector is not only interested in the theoretical commercial feasibility of a single project (adequate risk/reward ratios and bankability), but it is also interested in and concerned about the entire PPP process in most if not all its dimensions.

Sound frameworks are the best way to ensure project success, so the private sector will also care about the existence of a proper framework. But to access the full benefit of the PPP option, it has to be addressed under a programmatic approach. Using PPP programs is not only directly beneficial from the perspective of general public management but is of paramount importance in accessing the PPP industry. The purpose is to generate the interest of as wide a number of prospective investors as possible, and especially the interest of and access to reputable and experienced PPP developers.[121]

The private sector (the PPP industry) is interested in markets rather than "projects", therefore the following points are important.

- Private developers are interested in markets that provide a viable project pipeline, that is, multiple opportunities that generate economies of scale in terms of bid preparation and management of tenders and projects;

- Consistency is important. A framework helps ensure that different projects are structured and managed in a consistent way, which lowers costs for the private sector and builds confidence in the market. In the absence of a robust framework, different ministries may act in inconsistent ways, which can be frustrating and result in the loss of some bidders;

- The private sector will be concerned about the government's ability to manage a pipeline in a programmatic manner. This is not just about the reliability of the specific project, but also about the reliability of the government as the manager of a pipeline and its use of PPPs as a strategic approach to addressing infrastructure needs over the long term; and

- The private sector will be concerned about such issues as long-term fiscal sustainability, political commitment to PPPs, social acceptance of PPPs, talent/experience retention within the PPP procuring authorities, and a minimum legal framework that supports the ability to procure PPPs. Many of these affect the feasibility and readiness of each specific project, but they also affect the sustainability and reliability of PPP and the existence of a proper pipeline.

The first three points relate to the concept of PPP programs.[122] In most countries, PPP programs make slower progress than they should, not due to a lack of finance or failure to meet commercial feasibility criteria, but because there is an insufficient quantity of suitable, well-prepared PPP projects. The number of projects often indicates the ability of a government to develop a comprehensive PPP program, which is also a consideration for interested private sector partners. Therefore, having such projects is of paramount importance to governments wishing to promote

[121] An example of a well-regarded program is the National Highways Development Program in India, which is described in World Bank - Farquharson, Torres de Mästle, and Yescombe, with Encinas (2011). A brief description of some relevant PPP programs may be found in WEF (2010), page 17 (Mexican real toll roads program), and page 18 (Chilean PPP road program). See also the already cited case study on the El Bajío Hospital which relates to the PPP health program in México.

[122] EPEC explains the relevance of the program approach and its main features. Examples of European PPP programs can be found in A Programme Approach to PPPs. Lessons from the European Experience (EPEC, 2015).

infrastructure development through PPPs, as the inability to attract world-class players will only make them look elsewhere for opportunities. The result is that these governments may end up with unwanted participants and/or with programs highly exposed to corruption and therefore, ultimately, with failed projects.

To consistently capture the private sector's long-term interest is paramount for the success of PPPs as a programmatic tool or route to boost infrastructure development. This demands a proper and clear PPP framework in all the main areas of PPP management.

The programmatic approach may create a virtuous circle based on one essential factor: a successful track record will increase the interest of the industry in projects, and more interest will provide more feedback that will help to improve the framework and PPP approach. Market sounding that considers the private sector's interests and concerns will also strengthen interest.

Table 1.9 presents a non-exhaustive list of conditions that a PPP framework and related programs should meet in order to gain the interest of the industry. This list assumes that the PPP program and the projects (and therefore the market) do not have material restrictions on access to long-term finance, and/or that country risk factors do not represent an unavoidable obstacle to attract foreign direct investment (FDI), or that program is adapted to the respective restrictions (as explained in section 5.6).

Table 1.9. Features Demanded by World-Class Private Sector Players Related to the PPP Framework, PPP Programs (and other characteristics of an attractive and well-regarded PPP market)[123]

Factors to succeed with a programmatic approach or strategic use of PPPs	Description	How the framework and policy may increase the attractiveness of the market
Relevant or significant (and identifiable) pipeline	There is market evidence of a significant pipeline or significant infrastructure needs/gap.	The framework and the policy can ensure there is a more structured and organized pipeline by establishing plans and/or PPP programs with a clear indication of the role of PPPs. This must also be proactively communicated to the industry (communication management is a paramount part of the operational or investment framework).
Track record	There is a successful history of PPP projects, evidencing clean and fair resolution of disputes and other crises.	A successful track record may only be built by means of a proper framework and optimum management of risks and crises. Beyond the project preparation, successful contract management requires a proactive attitude which should be institutionalized within the PPP framework (in the area of PPP process management). For new PPP entrants or countries starting to develop their PPP approach, it is paramount to be scrupulous in project selection and management of the preparation and procurement process so as to avoid failures. It is also critical to work within a robust framework.

[123] The "Infrascope" series produced by the Economist Intelligence Unit provides intelligence on factors and criteria for considering the capacity of a country to develop PPP projects and programs, not necessarily reflecting the private perspective but with a broader view. *Evaluating the Environment for PPPs in Latin America and the Caribbean* (February 2013), commissioned by FOMIN and sponsored by the Government of Spain, provides a general view on the evolution and degree of development of the countries of the region, comprised of around 19 indicators grouped in 6 categories. The series also includes analysis of the Asia-Pacific region and Eastern Europe and the Commonwealth of Independent States (CIS).

Factors to succeed with a programmatic approach or strategic use of PPPs	Description	How the framework and policy may increase the attractiveness of the market
Strong PPP process framework: quality in standards and approaches to feasibility and structuring, management capacity and reliability in time and decisions	The management of multiple PPPs and the successful development of a program requires a clear operational framework that smooths the process, diminishes the risk of failure, and especially (from the private point of view) reflects commercial feasibility and private sector concerns. Proper management of PPP projects will produce long-term confidence in the industry beyond the particular successful PPP project in process.	This is one of the essential parts of a PPP framework that relates especially to the pre-tender process and management of the tender. These should rely on consistently applied best practice guidelines and standards and be clearly identifiable by the private sector. It is also dependent upon the institutional architecture.
Clarity in/of the legal framework in terms of PPP legality, procurement transparency and enforceability[124]	• Transparency (access to reliable information, and transparent and equitable selection criteria and process). • Enforceable rights. • Dispute resolution process. • Appropriation risk.	Refers to the policy and legal framework, especially to procurement procedures, transparency and contract standards.
Strong political commitment and support	The presence of a "political champion" — a senior minister who strongly advocates the PPP program — matters to the PPP industry. Relevant and complex projects should show clear signs of commitment by means of clear risk retention and sharing positions, and/or the mobilization of institutional finance tools. The policy and the PPP framework and programs should be accepted politically as widely as possible to gain reliability (which usually also depends upon the public acceptance of PPP programs).	Political championship is a matter of good practice in managerial frameworks, which is only possible with clear and sound PPP process guidelines. General political support is only possible under a well explained and communicated PPP policy and programs. This should rely upon proper communication management, which is also a sub-element of the PPP framework.

[124] Regarding specifically the legal and regulatory framework of a country market, *How to Engage with the Private Sector in PPPs in Emerging Markets* (World Bank 2011) provides, on page 17, an extensive list of more concrete questions to be asked by investors and lenders.

Factors to succeed with a programmatic approach or strategic use of PPPs	Description	How the framework and policy may increase the attractiveness of the market
Public acceptability	International and local investors will show resistance to invest in PPPs in countries where there is still a negative perception of PPPs. This is apart from any particular concerns there may be about the acceptability of a specific project infrastructure.	Legal and/or policy frameworks in the sense of established and solid guidelines and a thoughtful approach to PPP requires public acceptance of the tool. PPP programs and specific projects may raise potential public opposition, which again is dealt with through proper communication management. Transparency and accountability are paramount factors to gain public confidence: application of public audits, disclosure of project performance information, and so on has to be facilitated or institutionalized within the PPP framework.
Fiscal sustainability and rational management of the tool	The private sector may be concerned about a relaxed attitude to long-term aggregate exposure to PPPs, especially as this will be a sign of projects that will be improperly selected and rushed. When assessing a government's credit rating, rating agencies will look at future liabilities under PPP contracts and factor these into their consideration. The government's credit rating in turn is considered by PPP investors and financiers when assessing their required equity return or interest rate. In some countries, governments have needed to renegotiate PPPs because they had committed to excessive aggregate exposures. This is not a desirable outcome as it creates uncertainty for the private sector as to whether they will obtain the deal that they negotiated.	This is in essence that part of the PPP framework related to long-term aggregated management of fiscal exposure.

10. An Overview of the PPP Process Cycle: How to Prepare, Structure and Manage a PPP Contract

This section describes the overview of the PPP project process which is then developed in detail — phase by phase — in Chapters 3 to 7 of this PPP Guide.

The intention of this description is to give the reader a general view of the whole process, providing a preliminary description of its main phases. It also illustrates how the process may differ in some countries, depending on the tender route or modality selected (when there is more than one available in a country). See Figure 1.13.

The process as described in this section and developed through the PPP Guide relates to the life cycle of a PPP project. Normally this process starts with project identification and selection, and the PPP Guide assumes that this occurs on a project-by-project basis.[125] However, when the government assumes a programmatic approach, project identification and selection, as well as the screening of projects as PPP candidates, will typically occur as part of the development of a PPP program.

The definition of each phase, including the name and the scope of each of them, is somewhat arbitrary. There is no universal consensus on what should be included in each phase or where each should start or end. Thus, there are differing views, for example, about how to define contract "structuring" and what exactly should be considered "structuring" or even "feasibility" of a project contract. Additionally, there are different views and approaches about what should be the final outcome of the appraisal activity; whether the appraisal of the project should be regarded as phase in itself and the investment decision taken before confirming the suitability and feasibility of the project as a PPP, or whether both activities and decisions can be better handled in the same phase (which is the approach assumed by this PPP Guide for convenience, as fitting with the context of EMDE countries). See Box 1.33 below.

Box 1.33. Considerations regarding appraisal and decisions assumed by this PPP Guide

The standard PPP process cycle described in this PPP Guide involves initial analysis of the project economics and PPP screening in the Identification and PPP Screening Phase, followed by detailed appraisal of the project both as a technical solution and as a PPP during the Appraisal and Preparation Phase. This sequence is well suited to PPP programs motivated by a desire to use PPPs as an alternative to public procurement/public finance, thus allowing for the acceleration of infrastructure development (see Section 5.1). In these circumstances, the investment decision (whether or not the project should proceed) is inter-related with the procurement decision (whether or not the project should be a PPP). If a project is not suitable to be a PPP, it may not be possible (due to fiscal constraints) to deliver it as a traditionally procured project. By screening the project for PPP potential at an early stage, the government can avoid wasting money on appraisal if the project is not suitable to be a PPP.

[125] The described PPP process does not include a task that is regarded as part of the project cycle in some guides: project ex-post evaluation is regarded as good management practice for PPP programs or when a country uses the PPP tool as a strategic tool in a programmatic way, and it is explained in Chapter 1 ("Establishing PPP framework") with other framework related matters.

Thus, since it is necessary to define a common ground in order to provide a proper explanation of the PPP process (as well as the different tasks to be undertaken and decisions made); this PPP Guide is necessarily adopting a flexible approach. The described process presented in figure 1.14 incorporates significant flexibility to reflect the main potential variations in the tasks, decisions and authorizations to be taken within each "phase."

As a practical matter, the analysis and tasks to be carried out in many phases will actually extend beyond the arbitrary limit of the respective phase. For instance, some of the analysis to be carried out as part of the appraisal may not be finished until subsequent phases, or it may be necessary to revisit this analysis at a later phase.

The work to be carried out in each phase is also influenced by the applicable policy and legal framework.

What is clear though is what has to be done to successfully develop a project as a PPP. Regardless of the order or timing of each of the tasks or the different names and concepts used in different regions and jurisdictions, a PPP procurement will necessary imply significant work under a phased approach. As described in section 5.5, a PPP project must:

- Be based on a need and appropriate or optimum technical solution or "project": this is usually referred to as identification;
- Be properly appraised to assess if it is feasible (both the technical solution and the delivery of the project as a PPP), that the PPP is the best procurement solution, and that it be properly prepared before tendering: this relates to appraisal and preparation;
- Ensure that project risks are clearly identified, quantified, allocated and mitigated;
- Have an appropriately structured PPP contract and a well-designed tender process: this will be referred in this PPP Guide as contract and tender structuring and drafting;
- Be competitively and transparently procured or tendered in accordance with the applicable legal and regulatory requirements: this may be referred to as the tender process itself (sometimes referred as "managing the transaction"); and
- Be managed during its contract life: this is called contract management.

Figure 1.13. The PPP Process Cycle as Considered in This PPP Guide

Figure 1.13 describes in further detail the process and main tasks commonly developed in each of the phases (as defined in the PPP Guide) noting the most common variations. Many of the tasks and sub-processes are progressive and iterative in nature: examples include appraisal and preparation, and contract and process design. The figure includes a description of how the process moves through to a final contract, and how decisions are also taken under a phased approach.

Project phase	Identifying projects and screening as a PPP	Appraising and preparing the project- contract	Structuring and drafting tender & contract	Tender - Award	Managing contract - developing & commissioning	Managing contract - Operating, maintaining and handing back
Tasks	• Identify/ select project solution • Assessing economically the project [socio-economic assessment by CBA in some countries • Scoping the PPP project • Screening project as PPP and pre-assessing financially	• Refine project scope and pre-design (detailed Project outline or preliminary design), test technical feasibility and assess environmental impact • Refine socio-economic feasibility/ assessment [conduct full CBA in some countries] • Assess PPP commercial feasibility and sound the market PSC analysis (in some countries and PPP affordability • Preparation and due diligence (assess risks and conduct due diligence) Pre-structuring • Define procurement route and plan	• Define final structure of project-contract (financial, risk, payment mechanism) Finalise due diligence and preparation (pending issues) • Reassess or confirm previous analysis if needed (economic, financial/ commercial, PSC and affordability) • Finalising reference design, technical requirements and output specs • Define other business terms and contract structure matters (especially implementing contract management strategy and tools) • Structuring and drafting RFP define proposal requirements and evaluation criteria • Finalise contract draft	• Launching the tender • Qualify bidders • Issue clarifications • [Dialogue, interact or negotiate contract - in interactive processes] • [Close RFP and contract in invite to propose - in interactive processes] • Evaluation proposals • [Negative proposals - in some processes] • Awarding the contract • [Negotiating or clarifying contract in some countries] • Calling for contract signature • Checking precedent conditions [Approving contract in some countries] and signing the contract • Closing finance	• Setting up contract management team and strategy • Oversight and approval of design • Site set up and permits [and complete RoW expropriation in some contracts], and start construction • Monitoring construction • Managing changes, claims and disputes • Commissioning /acceptance and start operations	• Monitoring performance • Managing changes, claim and diputes • Preparing for hand-back • Hand-back and Finalization

Project phase	Identifying projects and screening as a PPP	Appraising and preparing the project- contract	Structuring and drafting tender & contract	Tender - Award	Managing contract - developing & commissioning	Managing contract - Operating, maintaining and handing back
Outcomes and progress of contract and tender documents	• Outline of technical solution • [Economic analysis] • [Financial pre-analysis] PPP screening report project management plan	• Feasibility report (including affordability, commercial feasibility [and PSC in some countries] and go/no go recommendation (investment decision and procurement decision) • Project scope refined/project design • Preliminary PPP structure • Procurement plan & project management plan	• Final financial plan and ceiling definition • RFQ finalised • RFP finalization (subject to changes in some processes) • Contract drafted (subject to changes in some processes)	• Final RFP and final contract (in some processes - negotiated, dialogue or interactive type) • Award decision • Contract as signed (published in some countries)	• Potential changes to contract documents	• Potential changes to contract documents
Decision cycle	• Green light to move to full-scale appraisal	• Green light to move to structuring (green light to invest & procure in some countries)	• Green light for launching	• Award decision Contract signature	• Approving changes	• Approving changes

In addition to differences in the process flow, the terminology used to describe the phases and tasks differs from one jurisdiction to another. Box 1.34 illustrates the key names and concepts used in the PPP Guide, and common variations or alternative names.

Box 1.34. Terminology issues related to the PPP process and its related tasks. (Preferred terms in this PPP Guide compared with other terms)

Preferred terms	Other terms
Identification of the project	Selection of the project.
Cost-benefit analysis (CBA)	Economic feasibility, economic appraisal.
Screening of the project as a PPP	Pre-assessing the project as a PPP. Pre-feasibility is also used in some countries.
Appraising	Feasibility analyses of a project, assessment of a project, due dilligence (limited to some feasibility or assessment processes), assessing the project as a PPP (for the assessment of the PPP option as a procurement alternative for the project, rather than assessing the project itself as a technical solution), project preparation, business case development (in some countries the business case is progressively developed throughout the PPP cycle — appraising activities primarily occurs at the Outline Business Case stage).
Feasibility	Also named viability in any of its areas. (e.g., commercial or economic)
VfM analysis (of the PPP as a procurement option)	VfM under the Public Sector Comparator (PSC) method (used in some countries) to assess feasibility of PPP option. VfM it must be pointed out does not mean the cheapest price, but rather the best deliverable for the given price).
Structuring tender (EOI, RFQ and RFP)	Outlining or designing the procurement route or tender process.
Structuring the contract	Designing the contract.
Drafting (EOI, RFQ, RFP and contract)	Finalizing those documents. In some countries and guides, structuring plus drafting together may be referred to as implementing.
Tender process	Procurement process or procurement procedure.
Shortlisting	Select or pre-select preferred bidders.
PPP contract	PPP project, project agreement (more frequent in private investor context).

Each of the main phases of the process are analyzed in detail in the respective chapters of this PPP Guide (from Chapter 3 to Chapter 7).

The importance of Climate Change Resilience and gender considerations in the PPP Life Cycle.

Improving gender equality and addressing climate change are crucial for sustainable infrastructure development and is central to achieving the 2030 Agenda for Sustainable Development. Infrastructure projects, especially those involving public-private partnerships (PPPs), must be meticulously planned, designed, delivered, and managed to prevent negative impacts and maximize social, economic, and environmental benefits for all community members.

Climate change poses significant challenges globally, manifesting through sea-level rise, fires, floods, droughts, and hurricanes, which cause widespread destruction and loss of life. The increasing frequency and severity of climate events necessitate the integration of adaptation and resilience measures into infrastructure investments, particularly within Public-Private Partnerships (PPPs), to safeguard these assets and mitigate financial risks associated with unplanned repairs, service disruptions, and revenue losses. Ensuring the durability and functionality of public infrastructure under extreme climatic conditions requires systematic incorporation of mitigation and adaptation strategies aligned with the Paris Agreement. Failure to do so may render PPP projects uninsurable and financially unviable. Some jurisdictions are already adopting innovative insurance and blended finance tools to access international climate finance and develop low-carbon resilient (LCR) PPP projects, aligning with national commitments to combat climate change.[126]

Furthermore, contrary to common belief, PPP infrastructure projects are not "gender neutral." The development of power grids, roads, public transport, and essential services like water and sanitation can have varied implications for different genders. Women, in particular, may not fully benefit o may even face adverse effects if their specific needs are not considered throughout the PPP process. This disparity arises because men and women have distinct roles and responsibilities within households, communities, and markets, leading to different needs and concerns regarding infrastructure. Neglecting gender differences in the planning and design stages to project implementation can exacerbate gender inequalities in access to services, participation, economic opportunities, and risk exposure, negatively impacting PPP projects through reduced revenue or damaged reputations.

Conversely, systematically integrating gender equality considerations at each stage of the PPP process can make projects more inclusive, sustainable, and resilient, leading to better social and economic outcomes. Practitioners must move beyond superficial "ticking boxes" exercises and develop tailored "gender-friendly" approaches, requiring structured planning and collaboration among governments, the private sector, development partners, and other stakeholders. Emerging good practices, supported by case studies and toolkits, aim to ensure infrastructure projects

[126] The Intergovernmental Panel on Climate Change (IPCC) warns of an impending climate catastrophe unless all nations act together to avert global warming beyond the current 2 °C target. The risks associated with climate change call for effective, well-coordinated and proactive measures and mitigations that enable governments to deliver resilient and sustainable infrastructure as the cost of damages, infrastructure failures, and loss of assets has increased significantly over the past decade.2 The development of low-carbon and climate-resilient (LCR) infrastructure is critical to curb greenhouse gas (GHG) emissions and adapt to extreme weather events such as droughts and floods as well as slow-onset climate change such as sea-level rise and increasing average global temperatures. When climate-related disasters and adverse, extreme, or unusual weather events occur, they can negatively affect public and private sector operations in many ways. For instance, they can lead to fiscal revenue reductions due to lower tax collection due to economic disruptions and the need for additional government expenditure on post-disaster recovery and rebuilding efforts. While developed countries' economies are typically more resilient to the effects of changing climatic conditions, the populations and infrastructural assets of developing and emerging economies are often more vulnerable and thus, bear the brunt of these disasters and take much longer to recover.

promote gender equality and do not reinforce existing gender gaps. These practices focus on maximizing benefits for all genders while minimizing disproportionate risks. Although progress has been made, the integration of gender considerations in PPP projects still lags behind climate change measures, highlighting the need for continued efforts to make PPPs more inclusive for all marginalized or vulnerable groups.

Climate Change Mitigation and Climate Change Adaptation

Responding to climate change requires a two-pronged approach that includes the reduction of GHG emissions and stabilizing the levels of heat-trapping greenhouse gases in the atmosphere ("mitigation") on one side, and adapting to the climate change that is already in the pipeline ("adaptation") on the other.

Managing risk uncertainty associated with climate change, while designing infrastructure solutions that are bankable and affordable, requires knowledge of sector-specific solutions to achieve climate resilience; measures to reduce GHG emissions; and the adoption of adaptation strategies. The global climate change agenda consists of two approaches that, when applied in combination, can increase the resilience of communities and infrastructure: climate change mitigation and climate change adaptation.

Climate change mitigation refers to the reduction of GHG emissions and the development of alternative pathways toward decarbonization. Governments committed to the Paris Agreement are required to propose specific strategies to reduce their GHG footprint in their Nationally Determined Contributions (NDCs). Governments can proactively pursue the implementation of their NDC commitments in various sectors, e.g., infrastructure, by developing investment pipelines, prioritizing climate-smart construction, maximizing resource efficiency, implementing sustainable operational practices, and optimizing maintenance through the utilization of climate data analytics. As such, climate change mitigation considerations are critical during the preparatory, planning, and contractual stages.

Climate change adaptation refers to the incorporation of measures that increase the ability of infrastructure to absorb, withstand, and recover from shocks such as extreme weather events as well as sudden changes in demand that might be driven by climate migration patterns. National Adaptation Plans (NAPs) are the tools through which all signatories to the Paris Agreement can advance their resilience-building strategies and development instruments.

Section 10 provides more details on the interlinkages between gender equality, climate change, infrastructure and PPPs and how gender and climate change can be considered at different project stages. Selected climate change and gender-inclusive approaches that are already considered good practice are highlighted throughout this PPP Guide. While focused on gender equality, it is important to note, that the described approaches can be applied correspondingly to make PPPs more inclusive with regard to other marginalized or vulnerable groups or individuals. [3]

Phase 1 (Chapter 3) – Project identification and PPP screening

Objectives: To select the right project option (the best technical solution for the need), and to pre-assess the suitability of the project as a potential PPP so as to avoid sinking resources unnecessarily into the full assessment and preparation of unworthy projects.

Tasks:

- Indentify the "need" for a project;
- Identify/select project solution out of a number of options to address the need;
- Scoping the project;
- Assessing the project economics (including a socioeconomic assessment by CBA in some countries) and prioritizing the most worthwhile projects, if needed;
- Screening the project as a potential PPP; and
- Prepare the project governance for the preparation process through tender launch, including developing a project management plan and defining the project team.

The infrastructure need and identification task is inherent to the process cycle of any infrastructure decision regardless of how it will be procured. It does not form part of the PPP cycle in strict terms, as in many cases and many countries projects will be already identified under a planning exercise, or they may be proposed by an agency or procurement authority during the government term legislature (and will be regarded as such as long as they fit the strategic objectives of the government).

For convenience, this PPP Guide includes this task in the same phase as PPP screening, to reinforce the importance of proper project selection (PPPs cannot perform miracles and a PPP will only succeed if it is an economically sound and sensible project). However, in some cases, especially in EMDEs and when the PPP route is mostly motivated by government financial needs (including the fact that sometimes if it is not procured as a PPP, it will not be procured at all), identification and appraisal come together with screening and testing of PPP suitability and feasibility.

The exact effects of climate change on infrastructure are unpredictable and will affect the PPP project for years after the financial close, potentially resulting in unforeseen harm to the contract. Ignoring climate risks and their impacts in the present day can have devasting consequences in the future. As such, it is imperative to systematically assess and address current and future climate risks at an early stage in the PPP process.

Box 1.35. Integrating climate considerations during the project identification and PPP screening stage

This PPP Guide proposes that climate-change impacts, in the form of chronic and acute climate risks, should be identified and evaluated throughout the PPP development process in order to continuously refine the project team's understanding of climate risks and their potential impact on the project. As the project progresses through the PPP life cycle, additional resources must be mobilized and deployed to conduct more detailed assessments that offer a clearer understanding into the potential direct and indirect costs and benefits of incorporating low-carbon and climate-resilient (LCR) elements.

PPP projects should be screened to ensure they:

- Result in zero or very low carbon, or ideally negative emissions, and are consistent with a fully decarbonized economy that contributes to climate change mitigation;
- Contribute to the transition toward a decarbonized economy (e.g., energy efficient construction or the manufacture of low-carbon technologies/materials);
- Contribute to increasing adaptation and resilience and reduce the cost of long-term climate change effects through adaptation actions;
- Build resilience against the impacts of natural hazards, many of which are increasing in frequency and intensity due to climate change;
- Promote the sustainable use and management of ecosystems;
- Adopt (where possible) NbS to address climate change mitigation goals; and

The prioritization of climate actions at this stage is important as it typically results in multiple benefits that are not always quantifiable in monetary terms. Therefore, the concept of the Triple Dividend of Resilience should be incorporated in the analysis.[127]

[127] [i] World Bank; International Finance Corporation (IFC); Multilateral Investment Guarantee Agency (MIGA). (2022). Climate Toolkits for Infrastructure PPPs. World Bank, Washington, DC. http://hdl.handle.net/10986/37287

Box 1.36. Integrating gender considerations during the project identification and PPP screening stage

Similarly, to the considerations regarding climate change, the impacts of a project on gender equality in terms of risks and opportunities should be identified, assessed, addressed, monitored and evaluated throughout the entire PPP project life cycle.

At this early stage, preliminary assessments may be undertaken to establish an initial understanding of potential gender risks as well as differentiated positive and negative impacts of the proposed PPP infrastructure project on women, men, girls and boys. During identification and PPP screening a rapid gender analysis that will mainly be based on preexisting information and data may offer first insights into different roles and responsibilities of females and males within the affected communities, their access and control over resources, decision making power, gender-specific needs, constraints and priorities as well as the range of potential gender impacts of the project. The identification of stakeholders should begin at this stage and include vulnerable female and male members of the community (e.g., elderly, female-headed households, children, those with disabilities) as well as relevant groups, organizations, and institutions representing their interests. It could also be valuable at this stage to reach out to a limited number of female and male community members or relevant representatives to get initial inputs.

Depending on these preliminary results, the collection of sex-disaggregated data, as well as gender-inclusive assessments and community engagement activities will need to deepen and broaden throughout the entire PPP process cycle. More refined assessments will, for example, need to be undertaken to understand potential risks as well as lost opportunities if gender-inclusive features are not integrated in the design of the project, to assess the costs and benefits of potential solucions, and to develop appropriate gender actions.

See also Chapter 3 sub-section 8.3 Incorporating Risk and Uncertainty into the Analysis as well as Box 3.13 Gender-inclusive Stakeholder Identification and Analysis and Chapter 4, Box 4.13 Collecting Gender-Disaggregated Data). and Box 4.14 Integrating Gender Into Social Impact Assessments.

Before considering how a project can be procured, it is necessary to have a clear notion of what is the best solution to meet the relevant public need from a technical and strategic standpoint. For example, to solve a problem of congestion in a particular city, the possible solutions might be a light rail transit (LRT) investment, an upgrade of the road network, or a metro system. An assessment of possible solutions should be undertaken for any public project decision (in infrastructure, for a service, a policy, a law, or in any other government activity). This is the basis of good practice in project identification.

A number of options should be considered and compared (including a “do nothing” option as a baseline), and the most suitable will be selected according to a selection method. CBA and other simpler methods may be used for this purpose (for example, multi-criteria analysis, cost-effectiveness

analysis). This process will identify a technical solution in general terms. At this phase, the project scope may be in the form of an outline including rough cost estimates. The scope and costings will be further developed through a final assesment in the Appraisal Phase.

In addition to using CBA for selection purposes, CBA may also be conducted in the project Identification Phase to pre-assess whether the project makes economic sense. In some countries, other appraisal tasks may also commence in the project Identification Phase. These analyses are generally referred to as pre-feasibility exercises, as they will be adjusted, evolved or further developed in subsequent phases before the project is tendered.

A high-level climate risk screening of the technical design solution, location, operations, and revenue streams can help the PPP partners to prepare for extreme weather events and identify project options that will be highly exposed or vulnerable to future climate conditions. The following text box highlights key measures to incorporate climate considerations during the CBA.

How to incorporate Climate Change in CBAs.

At the project screening phase, a high-level CBA should incorporate climate considerations such as the estimated costs of climate hazards identified in the high-level climate change risk assessment. These impact costs might include the cost of recovery, the cost of including GHG emission reduction measures, as well as the cost of climate-resilience measures. Indirect costs, such as those related to operational disruptions due to climate hazards, should also be taken into consideration. Likewise, it is important to quantify (where possible) the benefits of risk reduction and co-benefits to the economy, including GHG emission reduction, as committed to through a country's NDCs. Other benefits include the procuring agency's ability to access green financing for the PPP project and the enhanced residual value of the project throughout the life cycle.

Climate risk assessments include the analysis of three components: hazard, exposure, and vulnerability.

A range of free tools are available online, which provide critical inputs for a preliminary high-level assessment of climate hazards such as ThinkHazard! (https://thinkhazard.org/en/) and the World Bank Group's Climate Change Knowledge Portal (https://climateknowledgeportal.worldbank.org/).

While future climate change scenarios depend on GHG concentrations in the atmosphere (classified by the various Representative Concentration Pathways (RCPs)), these databases offer insights into possible trends and their impact on the evolution of climate hazards.

Low carbon and climate resilient (LCR) projects often offer additional non-monetary benefits, called "co-benefits," which can create significant economic and social value. For example, the development of effective water sinks around new road infrastructure to prevent major damage from flooding will bring additional value to adjacent property values.

Once the project has been properly identified (including economic pre-assesment), this PPP Guide assumes that the project will be screened as a PPP. This requires defining the contract scope in general terms and conducting a preliminary test of whether the PPP method of procurement is appropriate for the project.

At the end of this phase, a decision is made whether to proceed with a full appraisal analysis both of the project and the project contract as a PPP on the basis of a "PPP screening report." The report should also include a description of how the project process will be managed under a project plan and related schedule.

Suitable adaptation and resilience strategies should be identified at this stage to ensure key climate risks that are unique to the location and project can indeed be addressed and that climate change will not threaten the project's viability.

Phase 2 (Chapter 4) – Appraisal and preparation phase

Objectives: To assess whether the project and PPP project contract is feasible in order to mitigate the risk of project failure during tender or during the contract life of the project, and to further advance its preparation as a PPP.

Tasks:

- Refine project scope and pre-design, test technical feasibility and assess environmental and social impact;
- Refine socioeconomic feasibility/assessment (CBA) or conduct it in full from the outset;
- Assess PPP commercial feasibility (which includes bankability) and test the market;
- Develop other financial assessments: VfM under the Public Sector Comparator method (PSC analysis) in some countries, PPP affordability, and national accounting impact analysis (in some countries);
- Preparation and due dilligence: assess risks and conduct due dilligence tasks;
- Pre-structuring the PPP; and
- Define procurement strategy/route and design the procurement plan.

Box 1.37 provides information on alternative processes for identifying and appraising PPP projects.

Box 1.37. Alternative processes for Identifying and appraising PPP projects

The standard PPP process cycle described in this PPP Guide involves initial analysis of the project economics and PPP screening in the Identification and Screening Phase, followed by a detailed appraisal of the project both as a technical solution and as a PPP during the Appraisal Phase.

The standard PPP process cycle described in this PPP Guide is therefore well suited to EMDE countries with PPP programs motivated by a desire to use PPPs as an alternative to public finance through traditional procurement. However, for some governments (particularly in developed countries with strong fiscal positions), the key motivation for using PPPs is efficiency and effectiveness rather than financing (see Section 5.2). These governments are able to separate the investment decision from the procurement decision, making the investment decision first. Thus, the government first decides whether the project should proceed irrespective of how it is procured (typically informed by an economic cost-benefit analysis), and then decides whether PPP procurement will offer better Value for Money than traditional delivery. This decision making process is only possible when the government is in a fiscal position to undertake the project as either a PPP or as a traditional project, and it enables a different decision-making process from the standard process described in this PPP Guide.

The State of Victoria, Australia, is an example of a jurisdiction that is in a fiscal position to undertake projects as either PPPs or traditional projects. It focuses on efficiency and effectiveness as a motivation for using PPPs. The initial stages in the project cycle in the State of Victoria are as follows:

- For a large and complex project that might become a PPP, the first phase is the development of a strategic business case. The strategic business case analyzes the problem or business need to be addressed, the benefits that the government expects in successfully responding to the problem, and the identification of a strategic response (which may include an infrastructure project) that will best address the identified problem or business need. To identify the preferred strategic response, options are analyzed using a form of multi-criteria analysis. True cost-benefit analysis is not required. The options examined at this stage typically represent different strategic responses, for example, the options considered for a public transit need might include a bus way and light rail.

- The strategic business case may identify the expected procurement route if this is known, but detailed evidence for this is not required as no decision on procurement is made at this stage.

Box 1.37. Alternative processes for identifying and appraising PPP projects (cont.)

- Following consideration of the strategic business case, the government makes a decision as to whether a full business case should be developed. The full business case contains what the PPP Certification Process describes as appraisal, including full cost-benefit analysis — usually for more than one project option. Options compared at this stage typically represent different scope options for the preferred strategic response identified at the previous stage. For example, if the strategic business case identified light rail as the preferred strategic response to a public transit need, the full business case might look at two different alignments and two different technologies (overhead power supply versus wireless) for the light rail project.

- In addition, the full business case includes the procurement strategy, which is a qualitative comparative analysis of different procurement methods. Usually, the procurement strategy is one of the last elements of the business case developed, and it focuses only on the preferred project scope option. As the cost-benefit analysis and other elements of the appraisal are largely complete at this stage, the analysis of possible procurement methods benefits from a strong understanding of the project.

- The government then decides (as part of its budget process) whether the project should proceed (this is the investment decision). If approval is given for the project to proceed, the government then decides how it should be delivered, including whether it should be a PPP or traditionally procured (this is the procurement decision).

A project should be appraised regardless of the procurement method that may be finally selected to develop and manage it. Therefore, much of the work done in this phase is common for any type of procurement and not exclusive to a PPP process. In fact, PPP is just a "branch" of the broader public investment management process. However, in addition to the appraisal tasks and preparatory activities that would be conducted for any other project, there are also specific tasks and activities to assess and prepare the project as a PPP.

In countries or contexts with a strong public works tradition (practically all), there is a tendency to think that the preparation and bidding processes of PPP projects can be as short as those typically used for public works projects. However, this is far from true; practitioners wishing to design suitable and realistic PPP projects and their tendering processes will have to realize that preparing, appraising and structuring a sound PPP project is much more demanding in terms of time than that of a conventional project.

The feasibility analysis is two-fold. Firstly, the feasibility analysis is used to assess whether the project (or the form of procurement) is the optimum solution for the identified project need. This is usually done in the Identification Phase. Secondly, a feasibility analysis is used to assess the feasibility of the solution (can this project be done with no or limited risk of failure?).

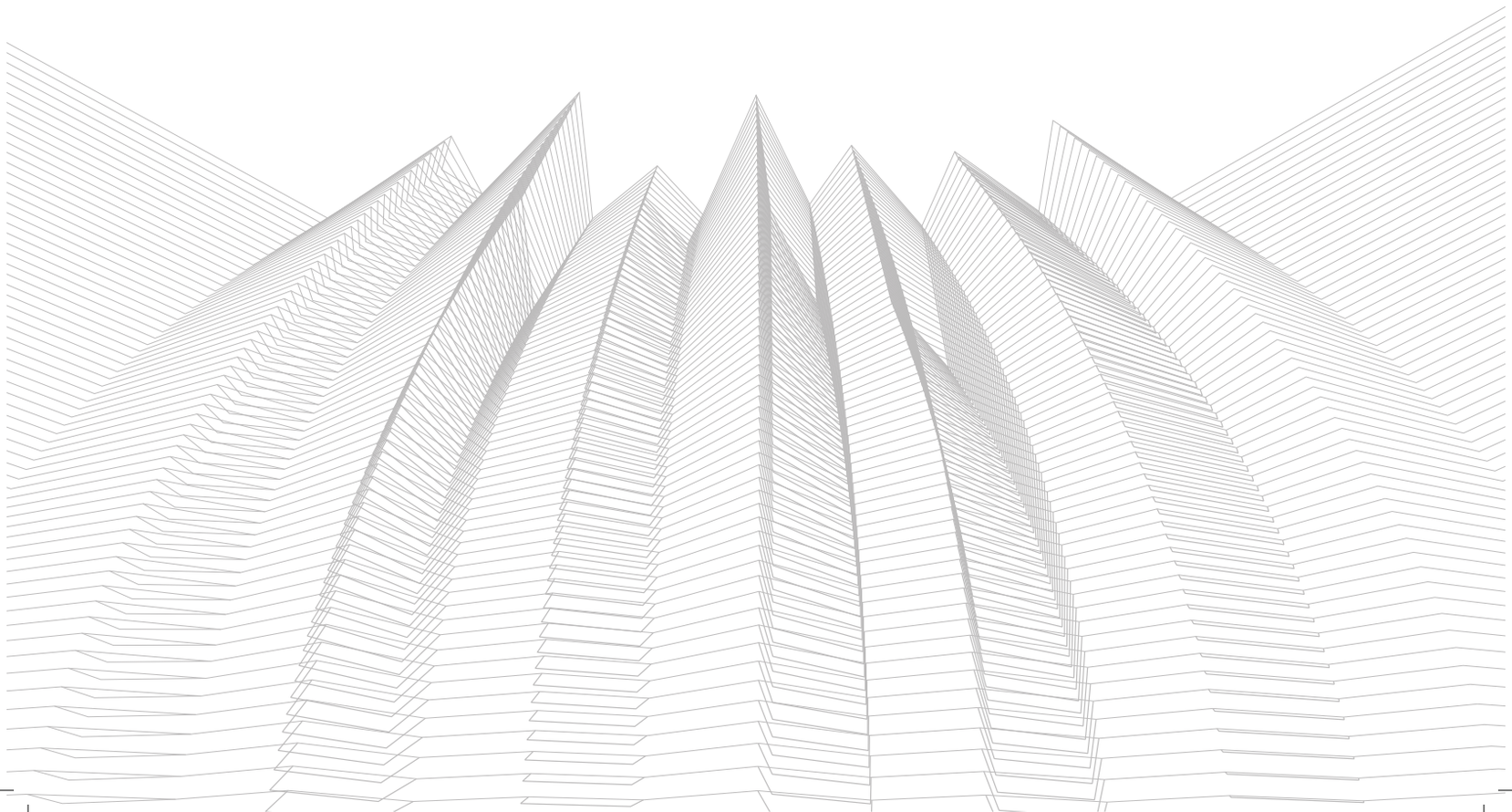
Assessment of whether the project is the optimal solution requires a full cost-benefit analysis. The analysis should be done during appraisal unless it was done in the Indentification Phase. If the analysis was done in the Identification Phase, it will sometimes be developed further, or refined, in the Appraisal Phase if a more complete set of data is available for confirmation purposes at that stage.

The central purpose of the appraisal of the project is to confirm that the project provided sufficient economic benefit for society, which is commonly regarded as the "economic" feasibility. A number of additional feasibility assesments are conducted to confirm whether the expected net benefit or value for society estimated for the project is achievable.

Analysis is also conducted to determine whether PPP delivery of the project is the best procurement option. In many countries this involves the preparation of a Public Sector Comparator, which is used to compare the PPP option with other methods (usually conventional procurement). This is used to test and confirm that the PPP option, as a procurement method, will likely produce additional net benefits, rather than destroy part of the overall benefit inherent in the project solution.

Climate change considerations affect PPP feasibility, affordability, and bankability on several levels, as the project will likely incur additional costs in the design and construction phases. However, building low-carbon and climate-resilient (LCR) infrastructure will decrease the likelihood and associated costs of asset loss, damage, and service disruption in the medium and long terms.

Box 1.37 describes the process of climate risk screening to be undertaken at the appraisal stage. It is important to consider that a more comprehensive climate risk assessment must be undertaken at the feasibility study stage that incorporates a detailed climate vulnerability analysis and results in specific LCR measures to be included in the project's construction design as well as tender documents including RFQ, RFP and draft contracts.



At the appraisal stage, project teams refine the initial climate risk screening by expanding the risk assessment with quantitative models that assist in estimating the exposure and vulnerability of the project location and assets in various climate scenarios. These scenarios typically include several RCPs based on which climate models are generated that assist in assessing the evolution of climate hazards at the project site. For this exercise, climate change modeling experts must be recruited if the procuring authority lacks this expertise.

LCR elements should be considered also during the PPP suitability assessment by taking into account:

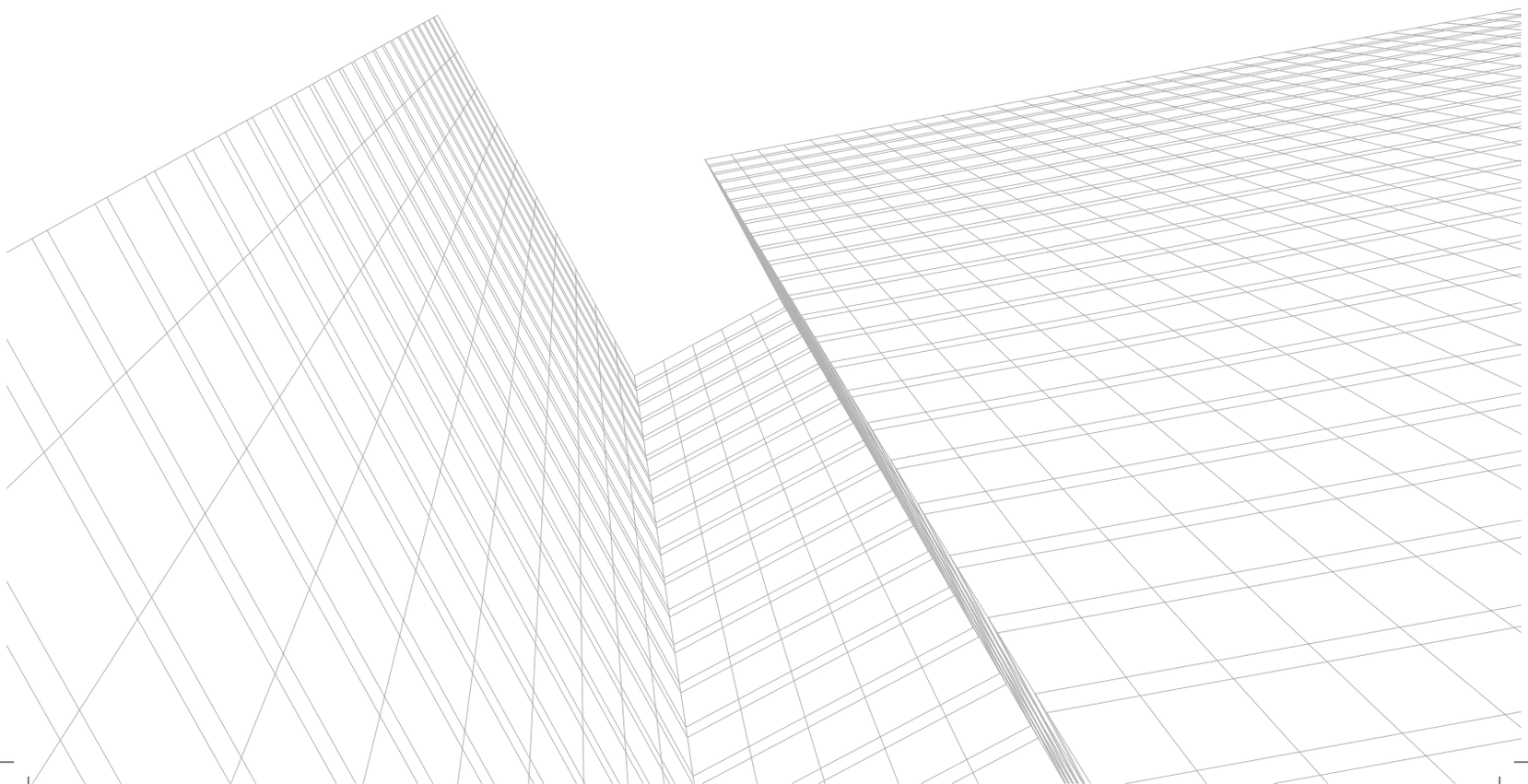
(1) The level of climate change adaptation and mitigation costs in a traditional vs. PPP procurement method comparison;

(2) The possible climate-risk allocation scenarios in a PPP scheme, and

(3) The availability of risk protection measures such as insurances and guarantees.

The proposed risk allocation and associated costs for climate considerations that the private party might incur typically have an impact on the project's bankability. On the other hand, the project's co-benefits, in terms of resilience through infrastructure, often materializing in multiple ways (i.e. to the TDR concept), can positively contribute toward the public sector's economic development objectives.

Box 1.38 provides information on steps that are typically undertaken to refine initial assessments with regard to gender during the PPP appraisal and preparation stage:



Box 1.38. Integrating gender considerations during the PPP appraisal and preparation stage

During the appraisal and preparation phase, preliminary assessments that were carried out during previous stages need to be expanded and refined. Further collection and analysis of data disaggregated by gender as well as other socioeconomic factors (such as age, ethnic group, disability, marital status, etc.) may be needed to ensure that the feasibility study is based on up-to-date baseline data and adequately considers the project's potential negative and beneficial impacts on females and males, including potential measures that avoid or mitigate potential negative gender impacts and enhance positive or beneficial outcomes for different gender groups. Whether a gender impact assessment and the development of a project-specific gender action plan (GAP) is needed as well as the depth and breadth of the analysis required will depend on the project's scope, potential gender-related impacts, and regulatory requirements.

Often DFI/MDBs, private lenders, and/or investors require gender impact assessments as part of environmental and social impact assessment (ESIAs) for projects that they support. Community engagement activities are crucial at this stage and need to be designed to ensure that all community members – women and men – are informed about the project and can provide input and share their perspectives as community members, potential infrastructure users, entrepreneurs, and employees.

See also Chapter 3, Box 3.14: Gender-related Stakeholder Communication and Engagement Challenges and Solutions and Chapter 4, Box 4.13 Collecting Gender-Disaggregated Data). and Box 4.14 Integrating Gender into Social Impact Assessments.

As appraisal is a progressive and iterative process; some elements of the feasibility analysis continue during the next phase (structuring). This is particularly true of analysis elements that are specific to the PPP route and relate to financial matters, such as commercial and financial feasibility, VfM/PSC, and affordability.

There is a subtle distinction between appraisal and preparation. Preparation refers to the activities handled by the government to mitigate project risks and advance matters that are the responsibility of the government before the contract is tendered, starting with a due dilligence of risks and obstacles that may threaten the success of the project. Examples include conducting geotechnical tests when the geotechnical risk represents a serious uncertainty to the project outcome, securing site availability for a facility, or obtaining preliminary environmental clearances.

Text box 1.39 proposes approaches to allocate climate risks, like other risks, to the party best able to manage them. The evolving climate risk assessment methodologies and resulting risks sharing mechanisms may require reevaluation of the Force Majeure concept in the future as climate change continues to cause significant changes in the global insurance industry

Climate change risks are often transferred to the private party as it is typically the party that can best manage the risk through innovative solutions. This has significant impact on the payment structure in government-pays PPPs as well as user-pays PPP models. Inadequate risk allocation and protection from climate-change risks via insurance, for example, can threaten the entire project and potentially result in unprecedented contingent liabilities. If the private party cannot cover unplanned costs due to asset loss or damage caused by extreme climate phenomena, the public party would have to salvage the project with its own resources to avoid complete project failure. As such, it is in the interest of all parties to comprehensively assess, allocate, and, as far as possible, mitigate such risks.

Climate risk allocation must be clearly defined and contractually agreed to within the project documents. It may require a new definition of the Force Majeure (FM) concept and the establishment of refined thresholds for triggering a FM event in contractual terms.

A range of free and pay-for tools exist that can assist in the identification of climate trends and hazards, such as NCAR Climate Data Guide,[128] the ThinkHazard Database,[129] or the World Bank Group Climate and Disaster Risk Screening Tools[130] [3].

Preparation activities may continue during the next phase. They should be finalized within the timeline estimated in the procurement plan and before the tender is launched.

As introduced, feasibility is commonly divided into several types of exercises or analysis. Some of them relate to the project in itself. These include technical, economic or socioeconomic, and legal, enviromental, and social feasibility. Most of these elements of feasibility relate to the "doability" of the project, although socioeconomic feasibility relates more to the value of the project. Sustainabilty and resilience considerations need to be considerd when exploring environmental feasibilty due to the increasing occurence of climate change impacts.

Other elements of feasibility relate to the project as a PPP. These include the PSC or other form of test for the appropriateness of the PPP option, financial and commercial feasibility, and the affordability test (which includes a control on the government's aggregated exposure to PPPs). It is also customary in some countries to analyze the nature of the transaction in terms of fiscal treatment (that is, whether the infrastructure and related debt should be regarded as public sector assets and liabilities in the national accounting system).

The outcomes of this phase include the foundations of the feasibility assesment (as to whether the project is beneficial and doable) which enables the government to decide whether the project should proceed to the next phase. The outcomes also include an initial outline of a proposed PPP structure for the project, which is further developed in the next phase.

Before moving to the next stage (structuring), the procurement strategy is defined and a procurement plan is shaped during this phase. The basic features of the procurement strategy are as follows.

[128] Available at: https://climatedataguide.ucar.edu/climate-tools/trend-analysis
[129] Available at: https://thinkhazard.org/en/
[130] https://climatescreeningtools.worldbank.org/

- The approach to qualifications, including:
  - the timing of the issue of the request for qualifications, that is, in advance of or at the same time as the RFP; and
  - whether to pre-select (shortlist) or only apply pass/fail qualification criteria.
- The approach to request for proposals, including:
  - the timing of the finalization and issue of the RFP and contract — whether before or after a period of dialogue and interaction, or not allowing for interaction or dialogue but only minor clarifications; and
  - the approach to bid submittal and evaluation — whether negotiations and iterative proposals are allowed.

The definition of these features will depend on the legal framework and common practice in the respective country. Box 1.38 introduces the main types of tender process used worldwide.

It has become best practice to include climate considerations in all aspects of PPP feasibility analyses to allow for design components that integrate adaptation measures under uncertainty related to climate change.

The literature suggests there are two options for PPP planners:

(1) "Base" plan, i.e., a project plan in which all capital expenses associated with adaptation and resilience measures are disbursable upfront; and

(2) "Adaptive" plan, i.e., a project plan in which adaptation and resilience expenses are disbursable throughout the project, depending on specific climate-related performance indicators.

For more information on adaptive planning and detailed guidance on climate risk allocation in PPPs, please refer to the World Bank Group's Climate Toolkits for Infrastructure PPPs or the Global Center for Adaptation's Climate-Resilient Infrastructure Officer Handbook.

Nature-based solutions (NbS) can be defined as actions that protect, sustainably manage, and restore natural or modified ecosystems; address societal challenges effectively and adaptively; and simultaneously provide human well-being and biodiversity benefits. NbS are increasingly integrated into infrastructure PPPs as lower-cost alternatives to conventional structural elements, which may come with a carbon cost.

There are three main types of NbS:

- Protecting and expanding existing natural ecosystems, e.g., peatland rewetting and ceasing deforestation;
- Developing sustainable procedures for managing or restoring ecosystems, e.g., agroforestry, reforestation, and blue carbon initiatives; and
- Creating new ecosystems that can sequestrate GHGs, e.g., establishing green buildings (includes green roofs and walls).

NbS usually incorporate natural features, nature-based features, and other approaches that combine or integrate natural elements into "grey" infrastructure assets, which are traditionally made from steel and concrete.

Box 1.39. Main types of tender processes

Open tender or one-stage tender process

There is only one single stage, integrating submission of qualifications and proposals. The proposal requirements also include the qualification requirements, structured in one single document or two separate but linked documents (RFP and contract).

Open tender is the most common (and in some jurisdictions the only) method for procurement in many Latin American countries. This approach is also used in the Philippines for some projects.

This form of open tender is also named the "one-stage tender process" by some practitioners and guides.

Open tender with pass/fail pre-qualification (or two-stage open tender)

This may be considered a variant of the former type of process, with the only difference being the timing of the issuance of documents, separating the call for qualifications (RFQ) from the call for bids or invitation to propose (RFP issuance).

Therefore, there is an initial stage in which potential bidders are invited to pre-qualify before the issuance of the RFP and contract, but there is no shortlisting. Issuance of the RFP implies an invitation to propose. Usually, there is only one bid (that is, only one round of bids) and no negotiations.

This is also common in a number of countries in Latin America (for example, Mexico).

Restricted procedure (shortlisting with one bid)

As with open tender with pre-qualification, there is an initial stage in which potential bidders are invited to submit qualifications. Qualifying bidders (those that meet the pass/fail criteria) are ranked on the strength of their qualification responses, and a limited number of the highest-ranking bidders are shortlisted.

This shortlist of bidders will be invited to submit their bids and will be evaluated on them before an awarding decision is made.

This is a common method in a number of countries, such as EU member countries and India.

Box1.39. Main types of tender processes (cont.)

Negotiated process (shortlisting with negotiations)

Based on a previous shortlisting, companies are invited to submit their bids. Negotiations are then opened with all of the shortlisted bidders or with a limited number of candidates.

Bids may be iterative, with more than one bid submitted by each proponent during the bid process before calling for the final offer. Only the final bid may be evaluated, but negotiations may be established with the preferred bidder (which is not desirable).

The negotiated process may be considered a variant of the former type, that is, any negotiated process is usually a restricted process.

Dialogue or interaction process

In some countries, shortlisting is accompanied by a dialogue or interactive structured process. First, the RFQ is issued (customarily including the basic business terms and the project structure) with the intention of pre-selecting a shortlist of qualified bidders. Dialogue or interaction then takes place in conjunction with the RFP process.

This modality has significant variations among countries, notably the distinction between Australia, the EU, and New Zealand.

Phase 3 (Chapter 5) – Structuring and drafting phase

Objectives: To define and develop a PPP contract solution and tender process that best fits with the specific features of the project contract so as to protect and, if possible, optimize VfM.

Tasks:

- Define the final structure of the project contract (financial stucturing, risk allocation and structuring, payment mechanism definition) and outline the contract;
- Finalize due diligence and preparation (finalizing the preparation tasks started in the Appraisal Phase);
- Re-assess or confirm previous analyses if needed (economic, financial, commercial – potentially including new market testing, and updating the PSC and affordability analysis);
- Finalize the reference design, technical requirements and output specifications;
- Define other business terms and contract structure matters (especially implementing contract management strategy and tools);

- Structure and draft the RFQ: defining the qualification criteria;
- Structure and draft the RFP: defining the proposal requirements and evaluation criteria (and regulations for the dialogue or interactive phase, when the tender process is of this type, or negotiation procedures when negotiations are allowed);
- Finalize the draft contract for issuing with the RFP; and
- Liase with oversight bodies in the government to ensure consistency with government best practices.

The main work in this phase corresponds to two main tasks:

1. The structuring and drafting of the project contract; and
2. The structuring and drafting of an enforcable package of procurement documentation, including the RFQ and RFP.

Structuring the contract: The structure that was developed at a preliminary level in the previous phase must now be refined (especially with respect to the financial structure, payment mechanism and risk allocation, as it is usually in this phase that the risk analysis is developed in substantial and greater detail). The rest of the business terms should also be developed before starting to draft the contract.

Structuring the RFQ and RFP: It is not only the contract that has to be designed during this phase. The tender process must also be structured and designed because it should be tailor-made to fit the characteristics of the project. The tender process will have been selected at the end of the Appraisal Phase, but many details will now be defined according to the project specifics. These include the bar for pass/fail qualification criteria and the specific evaluation criteria. They also include some relevant features of the tender process, such as bid bond requirements, time to submit, and detailed regulations for dialogue or interaction in these type of tender processes.

Drafting is the process of effectively developing all the contents and provisions of the tender package, including the RFQ, RFP, and contract. Drafting should occur only after the main characteristics of each document have been outlined, discussed and approved. The timing of the drafting of the documents may vary depending on the tender process selected. In an open tender, the qualification conditions are included in the same document and form part of the RFP. In these processes, the tender is one single package covering qualifications and selection requirements, requirements to submit proposals, evaluation criteria, and contract regulations. It is also important that a legal review be undertaken by the attorneys of the implementing line ministry, such as the Ministry of Finace, and if required by law by the treasury. In two-stage processes, it may not be necessary to finalize the RFP at the same time as the RFQ. However, the foundations of the proposal requirements and evaluation criteria, and especially those of the contract, should be defined before the launch of the qualification process. The period between launch of the qualification process and receiving submissions is the time available to refine and finalize the RFP and contract.[131]

[131] In two-stage processes that include a dialogue or interactive phase, it is common practice to include a description of the proposed key terms of the project contract together with the RFQ package. This includes the basic structure and fundamental features that are being considered, as well as a brief description of the evaluation procedures.

The structuring and drafting process is a highly iterative task. The contract structure is linked to the resolution of risk matters, financial and commercial feasibility, and therefore affordability. These will all still be assessed during this phase, and they depend on the final definition of the technical requirements; legal terms,and output specifications.

Once all assessments are finalized in parallel and iteratively with contract structure refinements, the drafts are closed and submitted for internal approvals, so as to obtain the green light for launching the tender process.

It is important to highlight that climate change-related infrastructure investments are most effective when they are integrated in the initial design. Retrofitting infrastructure is costly and might require unplanned downtime.

Climate-smart qualification and evaluation criteria must be clearly defined. This is critical to the selection of the best bidder. Assessing the bidders' ability to incorporate climate considerations in the design and O&M of the projects is important to ensuring high design standards and establishing international best practices with respect to sustainability construction standards and operational specifications.

As the impact of climate change is difficult to predict, investments in adaptation should not necessarily address the "worst case" scenario (unless specific impacts are fairly certain due to climate modeling) as significant additional cost may threaten the bankability of the project. At the same time, insufficient investment in resilience might cast doubt on the long-term viability of the project. As such, PPP procuring authorities must consider innovative and flexible ways to integrate adaptative planning methodologies in the financial model. For example, one approach might include planning for, but deferring, financial investments to a later point when more accurate climate data is available.

These and other innovative structuring approaches are still in their nascent stages and need refinement. PPP teams are encouraged to join the network of climate-resilient infrastructure professionals through the World Bank Group and the Global Center for Adaptation and access case studies and proven models as become available in the future. These innovative approaches must be customized to the project and will likely require provisions for increases in availability payments or other financing instruments. This may include, among other adjustments, the re-assessment of payment structures of climate-smart PPPs to cater to the frequent monitoring of cashflow variations due to climate-induced impacts. The payment mechanism adjustment might include incentives, such as temporary tax breaks, to encourage private sector innovation and the consideration of climate risk in design, operation, and maintenance.

The iterative PPP structuring and drafting can also be influenced by the outcomes of the due diligence undertaken with regard to gender. Box 1.40 illustrates how gender-related actions or features that have been identified previously can influence the PPP structuring and drafting:

Box 1.40. Integrating gender in the structuring and drafting stage

If gender assessments have been undertaken during previous stages as part of any feasibility studies, the structuring and drafting of the project documents needs to be informed by the results of these assessments. The tender package submitted to potential bidders should indicate what the identified gender impacts are and describe the proposed activities and desired outcomes as reflected in the project-specific gender action plan or similar instruments. In particular, they should spell out any design criteria and standards to be met and specific activities that will likely be required by the bidder (for example, preparation and implementation of a code of conduct regarding gender-based violence and sexual harassment).

As appropriate, qualifications and experience that may be required to perform the anticipated gender activities can be included in the expression of interest (EOI) and RfQ or be incorporated as evaluation criteria used to assess bids submitted by potential private sector partners. For example, a good track record of experience with preparing and implementing gender assessments and action plans in similar projects could be made part of the overall technical score for staff qualifications and company experience. Based on the decisions made regarding the allocation of risks and responsivities associated with gender equality goals, the draft PPP contract needs to translate the proposed actions, targets, and indicators from the project-specific gender action plan (GAP) into clear and enforceable contractual obligations and performance requirements.

Phase 4 (Chapter 6) – Tender phase (to award and sign contract)

Objectives: To smoothly but rigorously manage the process to select the best value proposal in a competitive and regulated environment and execute the contract with the most suitable and reliable bidder.

Tasks:

- Launching the tender including schedule and tender plan;
- Qualify bidders (and shortlisting them in some processes);
- Issue clarifications;
- Dialogue, interact or negotiate contract — in interaction processes;
- Close RFP and contract and issue the invitation to propose (ITP)— in interaction processes;
- Evaluating proposals;
- Negotiate proposals — in some processes;
- Awarding and calling for contract signature (commercial closure);
- Checking precedent conditions (approving contract in some countries) and signing the contract; and
- Financial Close.

The key activity during this phase is the management of the tender process as it has been designed and regulated through the RFQ and RFP. At times an EOI might be launched to screen potential bidders. The process should be managed as smoothly as possible and coordinated with all mandated stakeholders to maximize the value inherent in the project.

Many features and characteristics of the tender process will be the same as in any other public procurement process. The same general objectives of procurement (such as transparency and competitiveness) apply to a PPP procurement as to other procurement processes. However, PPP procurements are more complex than most other procurement processes, and the particularities of the PPP will demand additional attention and resources from the procuring authority.

The Tender Phase can be divided into several stages, which will depend upon the type of procurement process that has been selected.

Generally, there are four main stages into which any tender process may be divided.

- Pre-qualification (in open tenders with a pre-qualification stage) or shortlisting (in a process with shortlisting or pre-selection of candidates through an EOI);
- Bid period from launching through to bid submission or reception (in open tenders without pre-qualification) or from an invitation to offer (or to negotiate) through bid submission in other processes;
- Bid evaluation (including qualifications in one-stage open tenders) and award — the procuring agency receives, analyzes/assesses, evaluates and selects a winner (usually referred to as the preferred bidder); and
- Contract signature or "commercial close" (from decision to award to the effective date of contract) – financial close may occur at the end of this period or at a later time after contract signature.

The actual outline of the process and a more detailed description of the phases will vary depending on the tender process type.

At one extreme of the spectrum of tender process types is the one-stage open tender. The main variation of the open tender process is the two-stage open tender with pre-qualification. At the other extreme of the spectrum of variations, there are various interactions or dialogue processes.

In an open tender with one stage (i.e. there are no pre-qualification requirements), the steps or sequence of the tender process will be as follows.

1. Bid period (from launching through to bid submission) — bidders prepare and submit their bids, together with their qualifications;
2. Qualification and evaluation — the procuring agency receives, analyzes/assesses, evaluates and selects a winner (the preferred bidder); and
3. Contract execution — from award to contract signature.

From an internal agency standpoint, the qualification and evaluation stage is also divided into 2.1 "Qualification", 2.2 "Evaluation" (usually starting with technical and other potential valuation drivers subject to qualitative assessment, and later the economic/price offer and potentially other numerical criteria), and 2.3 "Award." In some jurisdictions there can be negotiation between the procuring agency and the preferred bidder before the contract is awarded.

Even under open tender there may be variations in the award process: in some jurisdictions it is necessary to obtain the authorization of a general attorney or general auditor, or to obtain ratification by the legislature (for example, parliament). The award stage itself has two sub-stages in some jurisdictions, with the award decision being considered provisional for a certain time before it becomes definitive.

Some jurisdictions allow for limited clarifications of the offer after contract award. In addition, the RFP will generally define some precedent conditions to be met (which must be completed within a certain time limit) before contract signature can occur. In particular, the constitution of the SPV that will sign the contract must be provided to the government.

In other types of processes, the timing and therefore the stages varies significantly. For example, under a competitive dialogue method based on two stages, the process will be handled according to the following stages and sequence.

1. RFQ: From invitation to qualify, and then to Submission of Qualifications (SoQ);

2. Evaluation of qualifications and selection of the shortlist: This stage finishes with the publication of the results of selection and appointment of the qualified (or shortlisted) bidders;

3. Dialogue or interactive phase: This stage starts with the issuance of the invitation to negotiate or call for dialogue (during which the contract will be discussed and refined in EU dialogue process);

4. Bid/offer submission: This may be done in a form of consecutive offers and a final bid (sometimes between only two competitors); and

5. Contract execution: From award to contract signature. This may include final negotiations in some processes.

Apart from the dialogue or interactive process itself, the rest of the process and management challenges are the same as in other procurement methods. The authority will have to qualify (in this case usually to shortlist) and evaluate offers so as to select the awardee and subsequently manage the contract execution process.

In addition to signing the contract, the awardee must achieve financial close which is the point at which it has finance available for the project. As mentioned in section 7, in some countries financial close is done soon after signing the contract. In other countries, more time is required for the awardee to reach financial close, but construction does not start until financial close has occurred. These variations are explained further in Chapter 6 (additionally, appendix A to Chapter 6 offers the perspective of the private partner in managing the process of preparing and submitting the bid and closing the financing).

PPP procuring authorities should ensure the RFP stipulates that the design complies with the climate provisions included in national or international codes, such as ISO 14080:2018 or the International Green Construction Code – IGCC. Further, the project's technical characteristics should comply with established sustainability rating frameworks, such as LEED, EDGE, and SuRe.

This recommendation not only increases the chances of securing climate finance and other concessional financing for the project, but it also adds value to the project through the inclusion of benefits from increased performance and cost minimization such as energy efficient design and reuse of water resources.

Climate KPIs must be included in the technical specifications in order to create measurable output expectations with respect to the project's performance during its life cycle. As such, RFQ anf RFP documents should specify minimum climate resilience targets and mandate bidders to include climate risk in O&M and emergency response plans. This will help embed climate requirements in operational procedures.

With this achievement of financial close, the procurement process finishes and the Implementation Phase then starts.

Phase 5 (Chapter 7) – Contract Management Phase

Objectives: The objective of PPP contract management is for the government contracting authority and/or procuring authority to oversee the private sector project company's delivery to obtain the services specified in the output specifications of the PPP contract, thereby ensuring ongoing affordability, Value for Money (VfM) and appropriate management of risk transfer, while managing the impacts on the project and contract of changes in the external environment. For the Procuring Authority, this will include both routine contract management and managing non-routine events such as disputes, requests for renegotiation, or premature termination of the PPP contract. It will also involve managing relations with other key stakeholders that could include investors and oversite government agencies and preparing for the handback of the project facilities at the end of the PPP contract.

Tasks:

- Establishing and training the procuring authority's contract management team;
- Managing relations between the contract management team and the Central PPP Unit [and other entities involved e.g., sector regulators if in water/power];
- Routine contract management, including project monitoring and reporting;
- Managing stakeholder relations;
- Dispute resolution;
- Managing requests for renegotiation;
- Managing exceptional events: Force Majeure, insolvency, eefault and termination, including termination payments and compensation mechanisms, and step-in rights;
- Preparing for and managing handback of projects;

- Establishing and executing contract administration — including the development of a contract management manual (initially focused on the Construction Phase);
- Oversight and managing site handover, permits and design;
- Monitoring private party's compliance and performance during construction;
- Managing delays;
- Managing communication and stakeholders;
- Managing changes (due to change orders proposed by government or suggested by the private partner), claims (due to retained or shared risk events), and disputes;
- Administrating payments during construction in co-financed projects;
- Administrating payments under government pays PPP; and
- Commissioning/acceptance and start of operations.

The existence of a well-trained and adequately funded contract management team at the Procuring Authority is a key to the success of the contract management process. The Procuring Authority's contract management team should be fully funded, fully staffed and fully trained well in advance of the commencement of the Implementation Phase when financial close occurs.

As was noted in the 2021 EPEC PPP Guide published by the European PPP Expertise Centre (a division of the European Investment Bank): effective contract management in PPPs requires a dedicated, well-funded team with the authority to act in accordance with the contract and legal framework. This team may manage a single project or a portfolio, such as a network of PPP motorways. It is crucial to ensure a smooth transition between the team managing the project before financial close and the contract management team responsible after financial close. Ideally, some members of the pre-financial close team should transition to the post-financial close team to maintain continuity. If this is not possible, the contract management team should work closely with the pre-financial close team during project preparation and procurement phases to ensure a clear understanding of project risks, objectives, and reporting requirements.

The contract management team will employ a variety of tools to assist with its work, including:

- The PPP contract;
- A contract manual, setting out, in a user-friendly manner, the procedures to be followed by the Procuring Authority's contract management team, for both routine and non-routine management activities;
- The financial model agreed upon by the contracting parties at financial close;
- The risk register, developed during the project preparation phase, which will help the contract management team proactively manage project risks; and
- User satisfaction surveys, in the form of periodic soundings of representative users of the PPP facility

Routine contract management will involve tasks such as:

- Monitoring the performance of the project company (SPV) and where necessary, imposing penalties for poor performance, in accordance with the terms of the PPP contract;
- Administering performance payments due under government pays PPPs;
- Administering any other payments (e.g. viability gap grants) due under the contracts;
- Managing the relationship with the central PPP unit and other external stakeholders;
- Managing claims made in accordance with the terms of the PPP contract;
- Managing changes of ownership of the project company; and
- Managing refinancings

Non-routine contract management will include activities such as:

- Managing any formal disputes;
- Managing requests for renegotiation of the PPP contract;
- Managing the premature termination of the PPP contract as a result of defaults, insolvency, or other acts or omissions giving rise to a right of termination.

Managing the handback process will include:

- Preparing for the handback well in advance of the expiry date of the PPP contract (up to three to four years in advance);
- Monitoring the ongoing maintenance of the project facilities by the project dompany, up until the final date of the PPP contract;
- Developing a strategy to transition to new arrangements for the project facilities, as chosen by the Procuring Authority;
- Arranging for a final implementation evaluation of the PPP project

The foundations of the contract management strategy include a range of tools that are included in the contract itself. These include:

- The financial model and reporting;
- Mechanisms to remedy faults and missed performance such as penalties, Liquidated Damages (LDs), deductions, or even early termination; and
- The basic procedures to deal with risks, claims, changes and disputes.

However, it is good practice to develop a contract management manual in "common language" as a more friendly management tool. The manual should not be a substitute for the contract as a "reference" document but should help the contract management team to develop their management task. The manual may serve to clarify ambiguities or further develop management procedures that are outlined in the contract. It may even serve to reach a consensus regarding potential ambiguities.

The very first task within the Contract Management Phase is to develop the manual, establish the contract management team (both the public and private sector), and establish the management decision governance (decision flows). Preparation for this task should commence before contract signature.

The Contract Management or Monitoring Committee should draw on expertise in tracking climate indicators, qualitatively evaluating climate risks, and investigating options for reducing GHG emissions. It is also important for the committee to effectively utilize external consultants as needed. A comprehensive plan is essential for overseeing climate-related construction and operations and integrating adaptation measures and strategies for reducing GHG emissions. It is vital to evaluate the appropriateness and effectiveness of monitoring climate-related key performance indicators (KPIs) early in the process to quickly address any shortcomings. A practical method might include setting precise milestones in cooperation with the private partner to improve the objectivity and promptness of the monitoring process. This ensures a productive collaboration between public and private sectors in addressing the impacts of climate change. Chapter 7 explains the main elements of the contract management strategy common throughout the contract life, before explaining the specific managerial aspects related to the first part of the contract, development and construction through to commissioning and service commencement.

Contract management includes many different activities, such as:

- Monitoring performance;
- Managing other threats and risks that may affect the project outcome and therefore the VfM;
- Managing changes in the contract, risk allocation, disputes, and many other events including early termination;
- Administering the obligations and responsibilities of the procuring authority;
- Providing authorizations;
- Calculating and making payments;
- Analyzing claims; and
- Managing information and communications

Some of the tasks listed above are continuing tasks (monitoring, administering payments). Others are discrete and respond to episodes of risks occurring. The episodic processes primarily relate to the following situations or types of events.

- Claims for compensation or financial adjustments (typically referred to as rebalancing in civil law countries), especially those due to project contract risk events that have been retained by the procuring authority or shared;
- Changes in contract service requirements or "change orders", which may be especially relevant during the Construction Phase; and
- Disputes resulting from the former and other changes.

The Construction Phase is completed with the commissioning of the asset and the authorization and order to commence the service or operations period, which is by itself a relevant milestone to be carefully managed.

Contract management - finalization and handback

Objectives: To proactively manage the contract so as to avoid or minimize the impact of risks and threats (in this case, during the Operations Phase) associated with changes, claims and disputes. This is especially true of monitoring the performance and controlling the handback of the asset at the contract expiration date.

Tasks:

- Monitoring performance;
- Administrating payments payable under the contract;
- Managing changes, claims and disputes;
- Preparing for handback; and
- Handback and finalization.

During this phase of the contract life, the foundations of contract management are naturally the same as during construction. However, some situations and risks are specific to the Operations Phase.

It is good practice for the contract management manual to include specific sections dedicated to each of the phases.

During the Operations Phase, the proper monitoring of contract performance starts (as the essence of PPPs is to pay for the service rendered and only when and to the extent the service is provided), as does the administration of the payment mechanism.

This is the phase in which the procuring authority commonly has to deal with the following:

- Administrating any payment fdue from the Procurement Authority under contract;
- Non-compliance and under-performance of the private partner in executing specification outputs under the contract;
- Changes in ownership and/or transfer shares;

- Refinancing (which is a change in the financial plan, usually with impacts in the contract financial architecture, as long as refinancing gains are shared); and
- Oversight of the renewal plan, renewal investments and renewal fund management.

This phase also includes the contract expiration and the handback of the asset to the procuring authority. The contract should include specific provisions for the handback, as well as technical specifications for the required condition of the infrastructure at this point in time. To meet this condition, the private party may have to make material investments before turning the asset over to the authority.

Box 1.41 highlights important climate considerations during PPP contract management.

PPP procuring authorities should promote collaborative and participatory processes with all PPP partners and maintain open communication channels with all stakeholders throughout the project life cycle. This is important as changing climatic conditions can produce new hazards and increase the exposure of assets to novel hazards, which will exacerbate the vulnerabilities of the infrastructure.

During the Contract Management Phase, all PPP partners are responsible for monitoring ongoing and evolving climate risks. Increased levels of communication among the PPP partners can help deal with climate-related changes and identify new and innovative resilience building measures that can be incorporated in operations and maintenance.

Similarly, collaboration between all PPP partners is needed to implement and monitor compliance with gender-related actions and performance indicators and to evaluate the impact and outcome of the project's gender-inclusive elements. Box 1.41 provides an overview of some key features of a gender-inclusive PPP project during the implementation and contract management stage:

Box 1.41. Integrating gender during the implementation and contract management stage

During project implementation, the monitoring of gender obligations and desired performance requirements agreed to under the PPP contract requires collaboration between the contract management team of the contracting authority and the private sector partner. While the private partner has reporting obligations, the contracting authority and the private partner usually share the responsibility to collect gender-disaggregated data for different aspects of the project and to conduct gender-inclusive stakeholder engagement activities to keep affected women and men informed and give them the opportunity to provide feedback. This includes the establishment of grievance and redress mechanisms that are set up in a way that women and men can voice concerns. This mechanism also documents if gender actions are being implemented properly and what type of gender issues and concerns may need to be addressed.

See also Chapter 7 Box 7.5 Gender-inclusive Grievance and Redress Mechanism

These, and other specifics related to contract management during the operations period of the contract are described in Chapter 7.

As noted earlier, there may be major disruptions to contracts from outside events that in some cases may need interventions that go beyond the foreseen mechanisms for contract management (see Box 1.42).

Box 1.42. Addressing disruptions to contracts outside of the contract management structure

COVID-19 caused disruptions not only to operational projects, but also to the planning, preparation, and procurement of PPPs. Overall, however, less project distress was seen than might be expected given the extent and severity of the COVID-19 lockdowns and restrictions. The varying responses by governments provide interesting examples of addressing systemic economic shocks.

In some countries with large PPP portfolios, governments took a sector-wide approach. For example, in Colombia the government reached two framework agreements with road and airport concessionaires. In both cases these amended the existing concession arrangements. Some of the key aspects of these amendments included (1) treating the COVID-19 pandemic as a liability- exonerating event covering important areas of project management and concerning the fulfilment of certain key performance indicators (KPIs) (2) providing an additional 98-day term for the execution of contractual activities; (3) taking on the responsibility for bearing bio-security costs, which was originally assigned to the concessionaires.

The agreements also addressed how revenue shortfalls would be addressed. In the case of airports, fixed-term concessions saw an extension of the contract term to cover lost revenues during the suspension period. For concessions based on expected income, an adjustment to the fixed- and non-fixed income thresholds as well as an extension of the contractual term were agreed. In the case of highways, the agreement recognized the impact on project revenues caused by the suspension of toll charges and by lock-down measures and the need for compensation for this from preestablished compensation mechanisms and funds that would contractually belong to the granting authority.

Source: Stocktake of government responses to the impact of COVID-19 on PPP projects (2021), the World Bank Group and the Public-Private Infrastructure Advisory Facility (PPIAF).

The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to enhance and broaden the disclosure of climate-related financial data. The TCFD organized its recommendations into four thematic pillars that reflect fundamental aspects of organizational operations: governance, strategy, risk management, and metrics and targets. It is recommended that project teams follow the TCFD recommendations that track climate risks and their impact on project finances.

Appendix A to Chapter 1: Basic Introduction to Project Finance

A1. Introduction

This appendix introduces some basic features of project finance. It also identifies some different approaches to, and the principles of, financing PPP projects. It provides an explanation of major sources of funding and outlines some benefits and limitations of project finance. This appendix should be read in conjunction with Chapter 1 as not all the issues, complex and often project-specific, relevant to PPP financing structures are discussed in this summary.

For PPP projects, project finance is the mechanism adopted for obtaining debt financing from lending institutions. Project finance is a specific kind of financing in which lending institutions look primarily at the expected project revenue stream as the only means for payment of the interest and repayment of the outstanding debt. The lending institutions do not look so much into the firm's asset and liability portfolios when deciding to extend a loan. Rather, they look at a project as a distinct entity with its own project assets, project-related contracts and project cash flow segregated to a substantial degree from the entity sponsoring the project. For this reason, project finance is also known as 'limited recourse' or 'non-recourse' financing as lenders will normally not have recourse to the entities (sponsors and shareholders) which have initiated the project if the project has difficulty in servicing the debt. This is in contrast to corporate lending in which lenders rely on the strength of the borrower's balance sheet for their loans.

A2. Basic considerations of PPP project finance

- Under a project finance loan, the lenders will be relying on the underlying cashflows being generated by the project to repay their loans (principal and interest). Therefore, the lenders will need to undertake a detailed risk assessment of the project and its ability to generate sufficient cashflows to repay the debt. As part of their loan due diligence, the lenders will want to make sure that the SPV is still able to service its debt even if the cashflows are lower than expected. This due diligence will determine, inter alia, how much debt the lenders will be willing to lend to the SPV and what loan structuring features will be required to protect the lenders in situations where the SPV has insufficient cash to service it debt e.g. the establishment of a 6 months Debt Service Reserve Account; and

- The lenders will document the terms of the project financing loan to the SPV in a Loan Agreement which sets out the conditions on which the lenders will lend the agreed funding to the SPV, as long as the SPV (the "Borrower") complies with all of its obligations (including equity obligations) under the Loan Agreement;

It is important to stress that the project finance structure should be designed to optimize the costs of finance for the project. It should also underpin the allocation of risks between the public and private sectors, as agreed in the PPP contract. In particular, the project financing should ensure that financial and other risks are well managed within and between the PPP Company shareholders, sponsors and its financiers. This should give comfort to the government that the private partner, and particularly its funders, are both incentivized and empowered to promptly deal with problems that may occur in the project. Indeed, to a very large extent, the project finance structure should ensure that the interests of the main lenders to the project are aligned with those of the government.

A3. Principles of project finance

The concept of project finance requires the sponsors to adopt a unique organizational structure in the form of a stand-alone project company (that is, a special purpose vehicle, SPV) which will enter into a PPP agreement with the government to design, build, and operate the project. This SPV has a finite life that equals the duration of the concession agreement. The sponsors are the only shareholders of the project company and their exposure is limited to the amount of equity investment that has been made in the project (with potential exceptions in some projects during the Construction Phase).

Because the SPV will not have any operating history, the lenders look primarily at the projected cash flows of the project as collateral instead of the project assets (which will not have much value in the case of financial distress). Lenders, therefore, require assurance that the project will be put into service on time, and that once the project is in operation it will be an economically viable undertaking. Similarly, in order to avail themselves of the funding, the project sponsors need to convince the lenders that the project is technically feasible and financially viable.

In assessing a project's viability, lenders also examine the technical feasibility, financial feasibility and creditworthiness of the project (the capacity of the project to service the debt considering a certain degree of downside in the cash flows available) in order to decide whether to advance a loan or not (the due diligence process).

The technical feasibility of the project is examined to ascertain that: (1) the project can be constructed within the proposed schedule and within budget; (2) once completed, the project will be able to operate at the planned capacity; and (3) construction cost estimates, along with the contingencies for various scenarios, will prove adequate for the completion of the project. In evaluating the technical feasibility, it is necessary to take into account the influence of environmental factors on the construction of the proposed facilities and/or operation of the constructed facilities. When the technological processes and/or design envisaged for the project are either unproven or on a scale not tried before, there will be a need to verify the processes and optimize the design as part of evaluating the project's technical feasibility.

From a broad perspective and general analysis, the financial viability (or commercial feasibility) of the project is assessed by determining whether the net present value (NPV) is positive. NPV will be positive if the expected present value of the free cash flow[132] is greater than the expected present value of the construction costs. However, in addition to or in lieu of the NPV, lenders will use debt ratios such as the Debt Service Cover Ratio (DSCR) and Life Loan Cover Ratio (LLCR) as the main ratios to measure bankability.

The DSCR measures the protection of each year's debt service by comparing the free cash flow (more precisely, the cash flow available for debt service – CFADS) to the debt service requirement. The DSCR requires that the cash flow available for debt service is at least a specified ratio (for example, 1.2 times) of the scheduled debt service for the relevant year. The LLCR compares the overall amount of free cash flow projected for the life of the loan, duly discounted with the amount of debt under analysis. The LLCR also reflects the capacity of the SPV to meet the debt obligations over the life of the loan (considering potential re-structuring).[133]

[132] Free cash flow is what is left over after the company has paid all the costs of production (operating and ordinary maintenance costs) and taxes, and has made any capital expenditures required to keep its production facilities in good working condition.

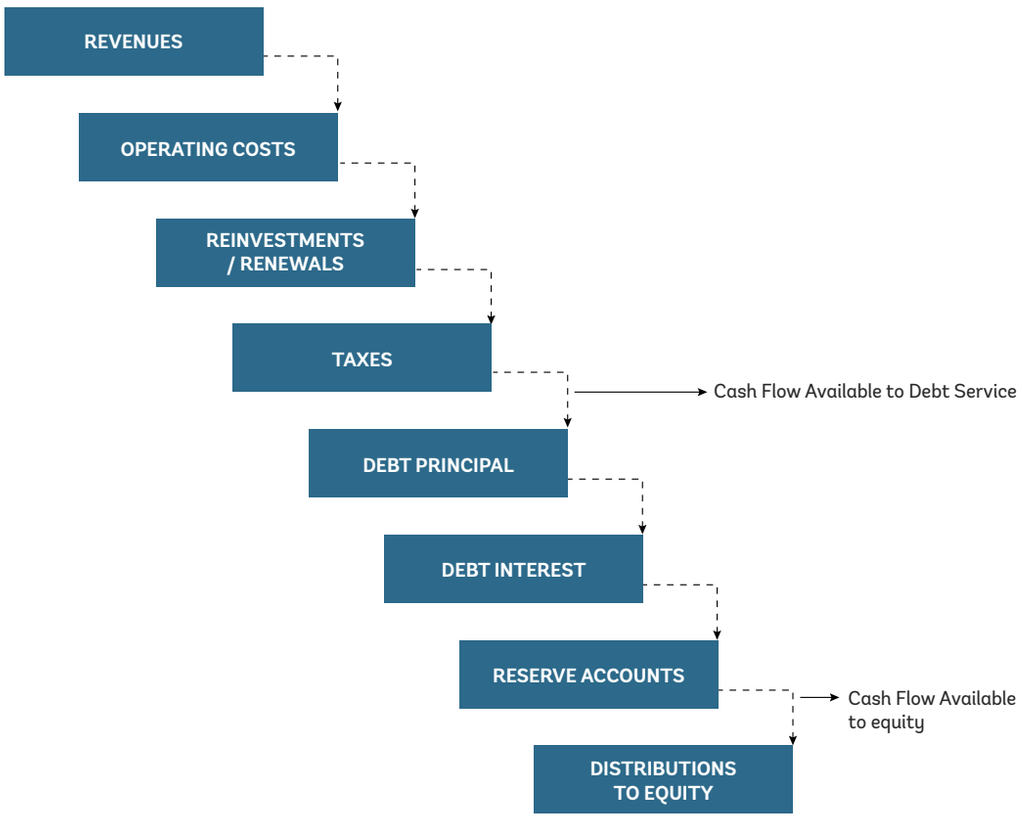
[133] The Project Life Cover Ratio (PLCR) is often used as a secondary measure. It compares the cash flow of the entire project life against the debt amount.

On the basis of the projected cash flows of the SPV, including the debt profile under analysis, lenders and their due diligence advisors will define the value of such ratios, and structure the debt amount so as to meet them, considering the maximum term at which they are ready to lend. Subsequently, they will run sensitivities analysis (including break-even analysis) on the project cash flows to test the resistance of the project to adverse conditions or adverse movements of the free cash flow figures from the base case.

In determining financial viability, and related to the reliability of cash flows and the guarantees offered by the contract (especially termination provisions), the lenders will analyze the risk structure of the contract. This will include determining how achievable the performance standards in government-pays projects, or the forecast user-demand levels in user-pays projects, actually are.

Lenders will exercise tight control of all cash flows, limiting the ability of the private partner to dispose of them — through "covenants" (for example, no distributions may be made if the actual DSCR of the previous year has not meet a certain threshold). The bank accounts through which cash flows pass will be pledged and normally held with a bank within the syndicate; this is in addition to other provisions to be reflected in the loan agreement.[134] Cash flow payments will be subject to prioritization rules defined in the loan agreement under a "waterfall" sequence (see Figure A1).

Figure A1. Waterfall of the Project Cash Flow Payments



[134] Appendix A to chapter 6 discusses further typical conditions and covenants which are usually incorporated in a project finance loan.

A4. A basic description of major sources of financing

There are three basic sources by which a PPP project can be financed: debt, equity and government support.[135]

Debt

Senior debt enjoys priority in terms of repayment over all other forms of finance. Mezzanine debt is subordinated in terms of repayment to senior debt but ranks above equity both for distributions of free cash in the so called "cash waterfall" (that is, the priority of each cash inflow and outflow in a project) and in the event of liquidation of the PPP Company. Since mezzanine debt repayment can be affected by poor performance of the PPP Company, and bearing in mind the priority in repayment of senior debt, mezzanine debt typically commands higher returns than senior debt.

Debt for a PPP project is normally priced on the basis of the underlying cost of funds to the lender, plus a fixed component (or "margin") expressed as a number of basis points to cover default risk and the lender's other costs (for example, operating costs, the opportunity cost of capital allocations, profit).

Debt for major PPP projects may be provided by either commercial banks, international financial institutions or directly from the capital markets. In this last case, project companies issue bonds that are taken up by financial institutions, such as pension funds or insurance companies that are looking for long-term investments.

Financial advisers will be able to advise as to the likely sources of funding for a given project. They would also be expected to make an assessment of the anticipated costs and benefits of various funding options. This will include an assessment of the debt tenors (the length of time to maturity, or repayment, of the debt) likely to be available from various sources.

Equity

Equity is usually provided by the project sponsors, potentially including the contractors who will build and operate the project as well as by financial institutions. A large part of the equity (often referred to as "quasi-equity") may actually be in the form of shareholder subordinated debt for tax and accounting benefits. Since equity holders bear the primary risks under a PPP project, they will seek a higher return on the funding they provide.

Government Support

Government support can be defined as a direct funding support by way of public sector capital contributions, usually in the form of grants. These may come from community, national, regional, or specific funds. They may be designed to make a project bankable or affordable. They may take the form of contingent support or guarantees by the public sector for the PPP Company or other private sector participants. This may be for certain types of risks which cannot otherwise be effectively managed or mitigated by the PPP Company or by other private sector participants (for example, a minimum revenue guarantee for a toll road).

[135] The EPEC PPP Guide (2015), How to Prepare, Procure and Deliver PPP Projects, European Investment Bank.

A5. Project Finance — Benefits and Limitations

Financing infrastructure projects through the project finance route offers various benefits such as the opportunity for risk sharing, extending the debt capacity, the release of free cash flows, and maintaining a competitive advantage in a competitive market. Project finance is a useful tool for companies that wish to avoid the issuance of a corporate repayment guarantee, thus preferring to finance the project in an off-balance sheet manner. The project finance route permits the sponsor to extend their debt capacity by enabling the sponsor to finance the project on someone's credit, which could be the purchaser of the project's outputs. Sponsors can raise funding for the project based simply on the contractual commitments.

Project finance also permits the sponsors to share the project risks with other stakeholders. The basic structure of project finance demands that the sponsors spread the risks through a network of security arrangements, contractual agreements, and other supplemental credit support to other financially capable parties willing to assume the risks. This helps in reducing the risk exposure of the project company.

The project finance route empowers the providers of funds to decide how to manage the free cash flow that is left over after paying the operational and maintenance expenses and other statutory payments. In traditional corporate forms of organization, corporate management decides on how to use the free cash flow — whether to invest in new projects or to pay dividends to the shareholders. Similarly, as the capital is returned to the funding agencies, particularly investors, they can decide for themselves how to reinvest it. As the project company has a finite life and its business is confined to the project only, there are no conflicts of interest between investors and the management of the company, as often happens in the case of traditional corporate forms of organization.

Financing projects through the project finance route may enable the sponsors to maintain the confidentiality of valuable information about the project and maintain a competitive advantage. This is a benefit of raising equity finance for the project. However, this advantage is quite limited when seeking capital market financing (project bonds). Where equity funds are to be raised (or sold at a later time so as to recycle capital) through market routes (for example, Initial Public Offerings [IPOs]), the project-related information needs to be shared with the capital market, which may include competitors of the project company/sponsors. In the project finance route, the sponsors can share the information with a small group of investors and negotiate the price without revealing proprietary information to the general public. And, since the investors will have a financial stake in the project, it is also in their interest to maintain confidentiality.

In spite of these advantages, project finance is quite complex and costly to assemble. The cost of capital arranged through this route is high in comparison with capital arranged through conventional routes. The complexity of project finance deals is due to the need to structure a set of contracts that must be negotiated by all the parties to the project. This also leads to higher transaction costs because of the legal expenses involved in designing the project structure, dealing with project-related tax and legal issues, and the preparation of necessary project ownership, loan documentation, and other contracts.

Appendix B to Chapter 1: Islamic Financing of a PPP Project

B1. Introduction

Islamic financing of PPP projects is becoming more common for a number of reasons, including: the creation of Islamic banks (such as the Islamic Development Bank) that are able to provide Islamic financing products for PPP projects, the reduced availability of non-Islamic financing in the aftermath of the Global Financial Crisis, and the increasing number of infrastructure PPP projects being procured in the Middle East which have, in effect, acted as a catalyst for the use of Sharia-compliant project financing.

Islamic financing of PPP projects can provide a complete financial solution, or it can be used in combination with other sources of non-Islamic finance.

Any Islamic financing will have to comply with the following Islamic Sharia principles in table B1.

Table B1. Islamic sharia principles

Islamic Principle	Meaning
Riba	The prohibition of interest. As a consequence, interest cannot be earned on agreements.
Gharar	Prohibition against uncertainty. In practice, this means that under any relevant agreement, the subject matter, price and time of delivery of the subject matter to the receiving party must be determined at the outset.
Maisir	Prohibition against gambling/speculation. This means that agreements in which the investment return cannot be quantified in advance, and is simply inferred, are not permitted.
Sharing of profit and risk	A transaction's profits should be real and represent a genuine return for the sharing of profit and risk within that transaction. Profits should not be pre-determined.
Prohibition against gambling, alcohol, drugs	A transaction cannot be entered into which involves gambling, alcohol or drugs.
Sharia Law compliance	A transaction must be ethical and comply with local Sharia Law which may be different across regions/countries.

There are a variety of Islamic financing solutions that can be used to finance a PPP project. Primary financial products and secondary agreements will support each solution. The main primary financial products are:

- Traditional Istina'a;
- Procurement Istina'a; and
- Ijara

The principle secondary agreements include:

- Services agreements; and
- Purchase agreements

B2. Traditional *Istina'a*

A traditional *istina'a* (*'istina'a'*) is an agreement between two parties (the Islamic funder and the construction contractor) whereby the construction contractor agrees at the outset to construct/manufacture a clearly described/specified PPP project asset for the Islamic funder. The price for carrying out the construction/manufacture will be determined at the time of entering into the agreement, as will the date of delivery of the asset to the funder. Payment of the price may be made as a lump sum on delivery or, as is more common, in installments linked to the achievement of milestones throughout the construction/manufacturing period. Title to the PPP project asset will pass to the Islamic funder on delivery.

The arrangement requires the Islamic funder to enter into a direct contractual relationship with the construction contractor. This means that the Islamic funder is assuming performance risk — a risk that it will not have much appetite to absorb. Consequently, the use of traditional *istina'a* for PPP projects has generally stopped and has been replaced by the procurement *istina'a*.

B3. Procurement *Istina'a*

A procurement *istina'a* ('procurement agreement') is also an agreement between two parties, however the parties are the Islamic funder and the PPP project's special purpose vehicle (SPV). Under the procurement agreement, the SPV is required to procure the PPP project asset by a specified date. The SPV will procure the asset by entering into a direct agreement with its construction contractor.

Once the asset has been constructed and effectively procured, the SPV will deliver it to the Islamic funder on the specified date and title to the asset will pass to the Islamic funder. The price that the Islamic funder pays the SPV for procuring the PPP project asset is pre-determined at the outset. It is calculated by reference to the total cost of the PPP project asset (that is, an amount which is the same value of the PPP project loan used in a traditional project financing). Payment of the price is normally made according to the achievement of milestones.

Both the traditional *istina'a* and the procurement agreement products have similarities with traditional project financing arrangements, such as the calculation of the price. Similarly, the use of milestone payments is, in effect, equivalent to the regular drawdowns made under a traditional project financing.

However, both the *istina'a* and the procurement agreement do not generate any income for the Islamic funder. As they require an income in return for providing the project finance, this means that an *ijara* needs to be put in place.

B4. Ijara

An *ijara* is a lease of the PPP project asset, granted by the Islamic funder to the SPV. It is possible because under the *istina'a*, the Islamic funder has received title to the PPP project asset.

An *ijara* is effective during the Operations Phase of the project. Under the arrangement, the SPV will lease the PPP project asset from the Islamic funder and will make lease payments to the Islamic funder for this purpose. The amount of the lease payments is calculated by aggregating the total cost of the debt provided by the Islamic funder plus the cost of any margin, pro-rating this on a monthly basis throughout the duration of the PPP project's Operations Phase.

The *ijara* is therefore the only finance product that delivers a fixed and determined income to the Islamic funder. It is for this reason that the *istina'a* and the *ijara* are used together. The *istina'a* provides the Islamic funder with the PPP project asset, and the *ijara* ensures that the PPP project asset can, through the operation of the lease, generate a revenue (repayment of the loan amount) to the Islamic funders.

B5. Supporting Agreements

It is usual for a supporting agreement, known as a services agreement, to be entered into between the SPV and the Islamic funder.

As the Islamic funder has title to the PPP project asset, it therefore has a responsibility to operate, maintain and insure that asset. This will take time and money. However, the Islamic funder's responsibilities can be met through putting in place a services agreement. The services agreement is an arrangement whereby the SPV acts as the Islamic funder's agent. Under it, the SPV manages the asset that it has leased from the Islamic funder. In return for a fee, the SPV pays for all of the costs associated with the management of the asset. The management will include carrying out such activities as day-to-day operational management and maintenance of the PPP project asset, as well as meeting the cost of putting in place the project insurances.

B6. Making Payment to the Islamic Funders

The SPV will use the unitary charge and/or user revenues it receives to make the ijara lease payments.

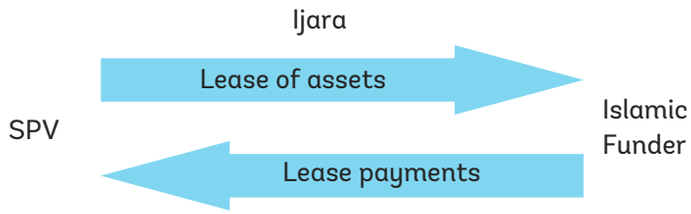
B7. Reversion of the PPP Project Asset to the SPV

The other principle supporting agreement that is entered into under an Islamic financing is the purchase agreement. Under this agreement, the PPP project asset reverts to the SPV at the end of the PPP Project term.

B8. Islamic Financing in Practice

The combined use of an *istina'a* and *ijara* can be illustrated in figure B1.

Figure B1. Combined use of *Istina'a and Ijara*



B9. Tangible and Intangible PPP Project Assets

Islamic financing of a PPP project normally assumes an asset-based project financing that requires the transfer of tangible/real assets. However, there may be some situations where the transfer of tangible/real assets is not permitted. For example, if a PPP project asset is of cultural and/or strategic importance, then the procuring authority may not permit its physical transfer. If this is the case, then a variation of the combined use of the *istina'a* and *ijara* is used.

In this situation, the Islamic funder will enter into a procurement agreement for the assignment to it of the rights contained within the project agreement (that is, the assignment of the intangible project agreement rights by the SPV to the Islamic funder). In return for assigning its project rights, the SPV receives milestone payments from the Islamic funder to enable it to pay for the construction of the PPP project asset. Additionally, the SPV will enter into a services agreement with the Islamic funder. Under the services agreement the SPV will get paid to manage, maintain and operate the physical PPP project asset.

Under this arrangement, when the SPV receives its unitary charge and/or user revenues, it will deduct all of its outstanding liabilities from these monies leaving it with its profit. The SPV will then pay the profit to the Islamic funder.

References

The rest of the PPP Guide provides further knowledge on all the relevant topics regarding the use and management of the PPP option to procure and manage infrastructure.

These documents provide guidance to some external references. A selection of other general guides on PPPs are provided in the first section, then some additional specific references, mentioned in this chapter, are provided as further sources of information on some of the specifics.

Name of Document	Authors/Editors and year	Description	http link (when available)
General PPP Guides on the PPP Concept and the PPP Process Cycle			
The PPP Reference Guide 3.0, Third Edition	The *PPP Reference Guide 3.0* is published by the World Bank, but it is a joint product of the: Asian Development Bank (ADB), the European Bank of Reconstruction and Development (EBRD), the Global Infrastructure Hub (GI Hub), the Inter-American Development Bank (IDB), the Islamic Development Bank (IsDB), the Organisation for Economic Co-operation and Development (OECD), the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and the World Bank Group. (2017)	The *PPP Reference Guide 3.0* provides the most relevant examples and resources on key PPP topics and helps readers navigate the substantial body of knowledge that has been generated across the world by practitioners from governments, international development institutions, academia, and the private sector.	https://ppp.worldbank.org/public-private-partnership/library/ppp-reference-guide-3-0-full-version
EPEC Guide to Public-Private Partnerships	The European PPP Expertise Centre (EPEC), a division of the European Investment Bank (2021)	The *EPEC PPP Guide* provides a high-level comprehensive framework to guide public sector officials dealing with PPP projects. It identifies other authoritative PPP guidance materials, available either online or in print publications from a wide variety of sources. The *EPEC PPP Guide* consists of three chapters. Chapter 1 provides a general introduction to PPPs. Chapter 2 presents an overview of the PPP life cycle. Chapter 3 provides detailed discussions of significant issues which typically arise during PPP projects.	https://www.eib.org/en/publications/epec-guide-to-public-private-partnerships

Name of Document	Authors/Editors and year	Description	http link (when available)
EBRD PPP Regulatory Guidelines Collection	The European Bank for Reconstruction and Development (EBRD) (2023)	The *EBRD PPP Regulatory Guidelines Collection* is a digital collection of PPP regulatory guidelines developed by the EBRD for governments and authorities in EBRD economies. Eventually, the *EBRD PPP Guidelines* will consist of three volumes. Volume 1, which became available in April 2023, includes a set of model PPP laws and PPP policies, plus templates for PPP contracts and associated agreements.	https://www.ebrd.com/sites/ContentServer?c=Content&rendermode=preview& cid=1395312943603&pagename=EBRD%2FContent%2FContentLayout #:~:text=The%20EBRD% 20PPP% 20Guidelines% 20comprise, as%20benchmark %20 and%20 reference% 20material.
The World Bank Public-Private Partnership Legal Resource Centre (PPPLRC)	The World Bank Group (Ongoing database)	The PPPLRC is a publicly available database of sample PPP agreements and concessions; checklists; sample contractual provisions; terms of reference; risk matrices; sample PPP and sector legislation and related materials. Designed for government officials, project managers and lawyers involved in PPP projects in developing countries, it provides international experience and precedents to help develop a conducive PPP enabling environment, a solid pipeline of projects and structure well-designed PPP project and contracts. It has materials in English, French, Spanish, Portuguese, Arabic and Mandarin Chinese, with materials from both developed and developing countries.	
Global Infrastructure Hub – Knowledge Hub	The Global Infrastructure Hub, a G20 Initiative (Ongoing database)	The GI Hub knowledge hub is a free-to-use searchable database of global infrastructure resources	https://www.gihub.org/knowledge-hub/

Name of Document	Authors/Editors and year	Description	http link (when available)
Infrastructure Australia National PPP Guidelines, Volume 2: Practitioners' Guide	Commonwealth of Australia (2011)	Detailed guidance material for implementing agencies regarding how to implement PPP projects under the national PPP policy, including project identification, appraisal, PPP structuring, the tender process, and contract management. Includes detailed guidance in annexes on technical subjects.	http://infrastructureaustralia.gov.au/policy-publications/public-private-partnerships/files/Vol_2_Practioners_Guide_Mar_2011.pdf
How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets	World Bank - Farquharson, Torres de Mästle, and Yescombe, with Encinas (2011)	Describes and provides guidance on the whole PPP process, highlighting the experience of developing countries. Briefly covers project selection. The focus is on preparing and bringing the project to market and engaging with the private sector.	https://openknowledge.worldbank.org/ bitstream/handle/10986/2262/594610PUB0ID1710Box358282B01 PUBLIC1.pdf?sequence=1
Online Toolkit for Public-Private Partnerships in Roads and Highways World Bank	World Bank, PPIAF (2009)	Implementation and monitoring provides guidance and links to further material on project identification, feasibility studies and analysis, procurement, contract award, and contract management.	http://www.ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaystoolkit/index.html
South Africa National Treasury PPP Manual	South Africa (2004)	A comprehensive guide to PPP process management.	http://www.ppp.gov.za/Legal%20Aspects/PPP%20Manual/Module%2001.pdf
Attracting Investors to African PPP	World Bank 2009	Includes interesting reflections from the perspective of the African region.	https://openknowledge.worldbank.org/ bitstream/handle/ 10986/2588/461310revised0178082 13773070Revised.pdf? sequence=1
Public-Private Partnerships: In pursuit of Risk Sharing and Value for Money	OECD (2008)	Analyzes PPPs from the perspective of VfM and risk sharing.	
Standardization of PFI Contracts (version 4)	HM Treasury (2007)	Detailed guidelines to structure a PFI (government-pays PPP) contract.	

Name of Document	Authors/Editors and year	Description	http link (when available)
Standardization of PF2 Contracts	HM Treasury (2012)	Develops the former standards so as to adapt them to PF2.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221556/infrastructure_standardisation_of _contracts_051212.pdf
Information and Guidance about Institutional Investment in PPPs and Infrastructure Funds			
Pension Funds Investment in Infrastructure – A Survey	OECD, September 2011	A survey of the presence of institutional capital in infrastructure assets.	http://www.oecd.org/futures /infrastructureto 2030/48634596.pdf
Institutional Investment in Infrastructure in Emerging Markets and Developing Economies	PPIAF, 2014	A general overview of institutional investors.	http://www.ppiaf.org/sites/ppiaf.org/files/publication/PPIAF-Institutional-Investors-final-web.pdf
Where Next on the Road Ahead? Deloitte Infrastructure Investors Survey	Deloitte, 2013	An interesting paper on the recent evolution and trends among infrastructure funds, and the institutional investor's role in infrastructure investment.	http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Financial-Services/gx-fsi-uk-icp-infrastructure-investors-survey-2013-11.pdf
What are Infrastructure Funds?	Kelly DePonte, Pribitas Partners, 2009	Provides a useful introduction to the work of infrastructure funds.	http://probitaspartners.com/wp-content/uploads/2014/05/What-are-Infrastructure-Funds-2009.pdf
Investment Financing in the Wake of the Crisis: The Role of Multilateral Development Banks	Chelsky and others, 2013	Provides information about the role of multilateral investment banks.	http://siteresources.worldbank.org/EXTPREMNET/Resources/EP121.pdf
Introductory Information on Project Finance			
PPP: Principles of Policy and Finance	E. R. Yescombe (2007)	Chapters 8–12 provide knowledge about project finance techniques in the PPP context.	
Guide to Guidance: How to Prepare, Procure, and Deliver PPP Projects	EPEC 2012	Annex 1 provides a useful summary of project finance in the context of PPPs.	http://www.eib.org/epec/g2g/iii-procurement/31/314/index.htm

Name of Document	Authors/Editors and year	Description	http link (when available)
Other References and Readings cited in this Chapter			
A New Approach to Public-Private Partnerships: Consultation on the Terms of Public Sector Equity Participation in PF2 Projects	HM Treasury 2012	A consultation paper on the new PPP approach developed in the United Kingdom with respect to the public sector participation in equity.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211518/pf2_public_sector_equity_consultation.pdf
Guidance Note: Calculation of the Authority's Share of a Refinancing Gain	HM Treasury, 2008	A methodology to calculate the share in PPP refinancing.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225368/06_pfi_refinancingguidance21307.pdf
Infrascope. Evaluating the Environment for PPPs in Latin America and the Caribbean	Developed by the EIU and commissioned by FOMIN, with the sponsorship of the Government of Spain. 2013	Provides a general view of the evolution and degree of development of the countries in the Latin America region.	http://www.fomin.org/en-us/Home/Knowledge/DevelopmentData/Infrascope.aspx
The U.K. Treasury Infrastructure Finance Unit: Supporting PPP Financing During the Global Liquidity Crisis	Farquharson and Encinas, 2010	Describes the intervention and proactive measures to financially support PPPs.	http://wbi.worldbank.org/wbi/document/uk-treasury-infrastructure-finance-unit-supporting-ppp-financing-during-global
Preferred Bidder Debt Funding Competitions: Draft Outline Guidelines	HM Treasury, August 2016	Describes the process and matters related to debt funding competitions.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225365/04_ppp_pbdfcguide100806.pdf
The Orange Book. Management of Risk— Principles and Concepts	HM Treasury UK, 2004	Provides information on risk management of the PPP process.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220647/orange_book.pdf
Project Governance: A Guidance Note for Public Sector Projects	HM Treasury UK 2007	Provides information on key issues related to project governance of a public project.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225314/01_ppp_projectgovernanceguidance231107.pdf

Name of Document	Authors/Editors and year	Description	http link (when available)
Closing the Infrastructure Gap: The Role of PPPs	Eggers and Startup, Deloitte, (2006), updated in 2015	The PPP maturity concept is proposed and explained by Deloitte, including three stages of development. This study provides a short and easily digestible overview of the advantages and disadvantages of PPPs.	https://library.pppknowledgelab.org/documents/2199
Cost Overruns and Demand Shortfalls in Urban Rail and Other Infrastructure	Bent Flyvberg, Transportation Planning and Technology, vol. 30, no. 1, February 2007, pps. 9–30	Explains how optimism bias or simply lack of appropriate analysis is one of the most common reasons for project failures.	
Green Book: Appraisal and Evaluation in Central Government	HM Treasury UK, (2003)	Provides a description of signs of PPP suitability, in box 23, "Considering private provision."	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf
Good Practice Note – Managing Retrenchment	IFC (August 2005)	Provides guidelines on retrenchment management.	http://www.ifc.org/wps/wcm/connect/8b14b6004885555db65cf66a6515bb18/Retrenchment.pdf?MOD=AJPERES
Experiencia Española en Concesiones y APPs: Rails and Light Rails and other transport infrastructure (	A. Rebollo commissioned by IDB (2009)	Describes the Spanish experience in rail and light rail PPPs and provides case studies and reflections on payment mechanisms.	http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=35822328
Handshake (the International Finance Corporation's quarterly journal on PPPs) issue #1	IFC (May 2012 reprinted)	Provides information and discussions about the role of PPPs in the water sector.	http://www.ifc.org/wps/wcm/connect/3bc26a0048fbf6248799ef28c8cbc78b/Handshake_Issue%231_WEB.pdf?MOD=AJPERES
Handshake issue #3	IFC (October 2011)	Discusses the role of PPPs and other private involvement in the health sector.	
IMF, Finance & Development	IMF (2013)	Provides reflections on shadow banking.	http://www.imf.org/external/pubs/ft/fandd/2013/06/basics.htm).

Name of Document	Authors/Editors and year	Description	http link (when available)
Mejores Prácticas en el financiamiento de Asociaciones Público Privadas en America Latina Best Practices in Public-Private Partnerships Financing in Latin America, Washington, DC: World Bank Institute Conference Report, World Bank	World Bank Institute (2011)	Reproduces the outcome of a Conference held in May 2011 in Washington about best practice in private finance in the Latin America region.	http://www.ppiaf.org/sites/ppiaf.org/files/publication/ConferencereportSpanish.pdf
The Financial Crisis and the PPP Market – Remedial Actions	(EPEC, 2009)	An interesting read to learn more about how intervention measures may help PPPs in times of economic or financial crisis.	http://www.eib.org/epec/resources/ epec-credit-crisis- paper-abridged.pdf
National PPP Forum – Benchmarking Study, Phase II: Report on the performance of PPP projects in Australia when compared with a representative sample of traditionally procured infrastructure projects	University of Melbourne, 2008	Australia's National PPP Forum (representing Australia's National, State and Territory governments) commissioned The University of Melbourne in 2008 to compare 25 Australian PPP projects with 42 traditionally procured projects.	
Sources for Cases Studies			
Health System Innovation in Lesoto	Prepared by UCSF Global Health Group and PwC, 2013	Describes the case of an integrated health PPP in Lesotho.	http://globalhealthsciences.ucsf.edu/sites/default/files/content/ghg/pshi-lesotho-ppip-report.pdf
Resource Book on PPP Case Studies	European Commission, (2004)	Includes a number of European case studies, including a number of joint venture examples in the water and transportation sectors.	http://ec.europa.eu/regional_policy/sources/docgener/guides/ppresourcebook.pdf

Name of Document	Authors/Editors and year	Description	http link (when available)
PPP knowledge lab		Provides further information about PPP application in some sectors, including concrete examples and case studies.	https://www.pppknowledgelab.org/sectors
Public-Private Projects in India — Compendium of Case Studies	Government of India and PPIAF, 2010	Describes the main lessons learned (good and bad) for a number of projects. This is very useful to complement the information and explanations provided about "project failures" in this chapter.	http://toolkit.pppinindia.com/pdf/case_studies.pdf
Paving the Way: Maximizing the Value of Private Finance in Infrastructure	World Economic Forum, 2010	Includes several case studies on relevant PPP transactions.	http://www3.weforum.org/docs/WEF_IV_PavingTheWay_Report_2010.pdf
South Africa's Renewable Energy IPP Program: Success Factors and Lessons.	Eberhard, and others, The World Bank Institute and the Public-Private Infrastructure Advisory Facility (PPIAF), The World Bank, Washington, D.C., May 2014	Analyses cases studies, including the energy IPP program in South Africa.	http://ppp.worldbank.org/public-private-partnership/library/south-africas-renewable-energy-ipp-procurement-program-success-factors-and-lessons
I-595: North American Transport Deal of the Year.	Infrastructure Magazine, Deloitte, July 2010	Describes the case study of the I-95 in Florida.	Project websites: http://www.i595express.com/and http://www.595express.info/
A Preliminary Reflection on the Best Practice in PPP Health Sector: A Review of Different PPP Case Studies and Experiences	The United Nations Economic Commission for Europe (UNECE), World Health Organization (WHO) and the Asian Development Bank (ADB), in draft version 2012	Includes several case studies on the various scopes and structures in health PPPs.	http://www.unece.org/fileadmin/DAM/ceci/images/ICoE/PPPHealthcareSector_DiscPaper.pdf
Case Studies on the Public-Private Partnerships at Humansdorp District Hospital Universitas, Pelonomi Hospitals and Inkosi Albert Luthuli Central Hospital	PPP Unit of the National Treasury South Africa, 2013	Describes several case studies on the various scopes and structures in health PPPs in the country.	http://www.ppp.gov.za/Legal%20Aspects/Case%20Studies/Humansdorp%20Overall%20findings.pdf

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