

# Mastering the Risky Business of Public-Private Partnerships in Infrastructure

*Prepared by a staff team led by Manal Fouad and  
Chishiro Matsumoto, and comprising Rui Monteiro,  
Isabel Rial, and Ozlem Aydin Sakrak*

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## Executive Summary

Investment in infrastructure can be a driving force in the economic recovery from the COVID-19 pandemic. Investment needs were large before the pandemic and have been made more urgent by the need to ensure quality delivery of basic public services such as health and education, create jobs, foster inclusive growth, and facilitate economic transformation with greener and more resilient infrastructure and accessible digital platforms. Public resources alone will unlikely meet the demand, and the private sector will be called on to supplement the public sector to reach investment objectives.

Public-private partnerships (PPPs) bring a promise of efficiency when carefully designed and managed to avoid creating unnecessary fiscal risks. When applied to the right projects, well-designed and properly implemented PPPs can benefit governments in many ways. They can mobilize additional sources of funds, bring private-sector management capacity, and create incentives to deliver and maintain better-quality infrastructure. They may also allow governments to identify project costs more transparently and focus on outputs and performance levels. PPPs usually bring higher financing costs, require more complex tendering and careful contract management, and expose governments to significant fiscal risks. These risks—that is, the possibility of deviations in outturns compared to the projected fiscal position of government—are linked to not only contractually accepted risks, but also potential change during the long contractual term. Enjoying PPP benefits requires governments to carefully manage the PPP processes, including fiscal risk management considering their long-term nature and the complexity of risk-allocation agreements.

The long-term nature of PPPs and the different time-profile of government cashflows generate an illusion of additional fiscal space. The illusion comes from the elimination of short-term budget outflows in exchange for future payments or foregone income from user fees. It is magnified when off-budget and off-balance sheet accounting practices make it difficult to perceive



the full extent of liabilities incurred with PPPs. It is also compounded when governments adopt non-integrated, parallel project-assessment and development processes that prevent a level playing field for project approval. Fully understanding the sources of PPP fiscal risks is crucial to ensure that PPPs are implemented only when they are efficient and affordable and that fiscal stability is not jeopardized by excessive liabilities.

Engaging in PPPs will always imply accepting some fiscal risks. With PPPs being long-term agreements, risks are compounded by the need to manage a contractual relationship over a long period and the often poorly perceived fiscal risks. The government is always ultimately responsible for the provision of infrastructure services—even in well-designed PPP contracts that are expected to be paid for by users.

PPP contracts can also create implicit fiscal risks when they are poorly designed, particularly when a government signs a PPP contract for a project with no financial sustainability. Optimism bias and political interference in the estimation of project costs and revenues, repeated renegotiations of PPP contracts, and the acceptance of unsolicited proposals create additional fiscal risks and challenges for governments. Poor infrastructure governance is also a major source of fiscal risks, particularly weaknesses in project selection and in assessing the adequacy of PPP procurement for each project.

The challenges caused by the pandemic prompt a rethink of the scale and composition of infrastructure needs and of the best options to address them. Governments must identify and distinguish short-term needs from those that will be sustained and therefore can be addressed under long-term contracts. For the latter, PPPs can bring private-sector innovation to create long-term robust solutions that address those long-term needs. Under the right conditions, PPPs can be used to reinforce public provision of infrastructure assets and services, including in key strategic sectors such as health systems, water and sewerage, low-carbon technologies, and transport services.

Adequate PPP fiscal management will continue to be crucial in the post-COVID-19 world. Governments should build the institutions and capacities required to manage the fiscal implications of PPPs. A strong infrastructure governance framework calls for establishing a gateway process governing the preparation and procurement of PPP projects, in which the Ministry of Finance has the power to stop or suspend a project at any stage of the project cycle if it is deemed fiscally unaffordable or carrying excessive fiscal risk. A proactive fiscal risk management function to identify, estimate, and manage fiscal costs and risks from PPPs should be set up in the Ministry of Finance. Likewise, governments should improve their budgeting, accounting, and reporting standards and practices to ensure fiscal transparency in this area. Finally, a clear, consistent, and enabling legal framework for PPPs is a prerequisite for effective fiscal risk management.

## Introduction

The post-COVID-19 recovery is highlighting the importance of infrastructure investment—as both a recognition of insufficient infrastructure in many sectors and a driver for economic transformation, job creation, and inclusive growth. As reported in the October 2020 *Fiscal Monitor* (IMF 2020), many low-income developing countries and emerging economies face major investment needs to reach their UN Sustainable Development Goals. Advanced economies need to significantly maintain and modernize existing infrastructure and to rescind infrastructure bottlenecks (Schwartz and others 2020). Moreover, large investments in digital infrastructure are needed to reduce inequalities and improve access to education. Finally, as countries invest during the recovery, they should choose projects that facilitate a green and climate-friendly transformation of their economies. In light of limited fiscal space and financing constraints, however, many countries will turn to the private sector to complement public investment.

As a result, interest in public-private partnership (PPP)-based public procurement is likely to increase. However, it is important that countries resort to PPPs for the right reasons. With the global increase in debt levels resulting from emergency health measures, fiscal packages to support people and firms and decreased revenues, fiscal space for public investment will be much reduced. Governments may be tempted to use PPPs as a means to avoid using public resources, instead of using PPPs to ensure more efficient use of scarce public resources. It is therefore key to have a sound management of PPPs in place, including good management of the fiscal risks they entail to maintain fiscal responsibility and debt sustainability and to achieve an efficient use of public resources.

Reassessing the existing pipeline of appraised infrastructure projects, or developing one if it does not exist, should be a priority during the post-COVID-19 recovery. Infrastructure needs and gaps have most likely

changed due to the crisis, calling for an overall reassessment of the government role and capacity to provide much needed infrastructure assets, as well as the role and effectiveness of PPPs. Specific actions could include (1) adjusting investment plans to new infrastructure needs, (2) reassessing governments' risk tolerance, (3) strengthening communication with private developers to adjust the investment plans and risk sharing strategies, (4) reviewing the existing pipeline of appraised projects and ascertain the PPP option, and (5) considering new PPP contractual structures to accommodate to changes in government and private sector risk-appetite.

PPPs have a role in public investment programs, both in normal times and as part of the recovery plans. PPPs may have a critical role in complex projects. This is particularly the case in infrastructure programs wherein the level of service depends on variables in which the private sector typically has more experience, knowledge, and control.<sup>1</sup> Successful PPPs in a post COVID-19 world will require significant efforts that allow government to effectively manage fiscal costs and risks arising from them. Irwin, Mazraani, and Saxena (2018), OECD (2012), Schwartz and others (2020), and Kim, Fallov, and Groom (2020) discuss principles for sound governance for PPPs, particularly the integration of public investment management and PPPs in a unified framework. They can create incentives to mobilize private capital, bring in private sector management capacity, and achieve higher quality of service.

PPPs can improve the management of some types of infrastructure projects and reduce their cost for government. As long-term contracts, PPPs are a mechanism for trading direct liabilities for future risks and vice-versa. They can reduce overall costs, containing fiscal risks and helping medium-term budgetary management. They can be an effective tool for the timely completion of infrastructure projects. And they provide for continued maintenance of infrastructure assets.

But all infrastructure projects are risky by nature, and PPPs are no exception. PPPs' long-term nature and complex risk allocation require governments to have strong infrastructure governance institutions in place. Inappropriately managed, they can pose significant fiscal risks that if materialized would impact public finances, jeopardizing medium-term fiscal sustainability. Project selection and project development are more critical in infrastructure than in other public projects, as most infrastructure costs are sunk costs once they are realized—meaning that, if the project is canceled after some assets are built most of them cannot be reused in another project. Infrastructure costs and revenues are typically location-specific and difficult to assess in advance—for instance, construction depends on the geology, orography, and other characteristics of the site—and service delivery depends on specific demand, its

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<sup>1</sup>For examples of fiscal risks in infrastructure, see Schwartz and others (2020).

distribution along the day, and its seasonality. Complex infrastructure projects tend to face cost overruns and delays which also result in additional cost for government. Moreover, given that infrastructure usually implies a local monopoly, governments accept responsibility for its provision. While some infrastructure assets, such as telecommunications, can be fully provided by the private sector with government simply keeping the regulator function; others, such as roads and water, require governments to provide the services or to procure contracts for private sector provision under public control (for example, for assets that otherwise would be provided by a monopoly).

This paper discusses the fiscal risks associated with PPPs and how governments can manage and make the most of them. After presenting the pros and cons of PPPs, it outlines the “fiscal illusion” typically created by PPPs, as well as the main sources of fiscal risks PPPs present and how governments can manage them. The paper complements various IMF recent and forthcoming publications on the importance of infrastructure governance. It is intended to inform policymakers, staff of international financial institutions, technical experts, and any stakeholders and practitioners with an interest in infrastructure governance.



## The Case for Public-Private Partnerships

PPP procurement, when applied to the right projects, can bring a range of benefits. In this paper, PPPs encompass all the projects presenting the characteristics described in Box 1, regardless of the legal definition of “PPP” in each country. PPPs typically present a credible guarantee of implementation according to schedule; they help relieve the pressure on overstretched public finances, while contributing to overcome borrowing constraints; they help deliver better quality infrastructure with a whole-life-costing approach; and they help preserve the value and quality of infrastructure through adequate asset maintenance.

Using PPPs to reduce the financing gap is conditional on measures to reduce the funding gap. Although private finance can alleviate public investment needs (see Gaspar and others 2019), it cannot in itself reduce the funding gap—meaning that the private partner brings in the financing of the project but under the expectation that the project will be funded, over time, by users and/or taxpayers. Therefore, PPP success requires a credible funding plan for each project, and a consistent infrastructure funding policy, without which private investment will not be attracted, or fiscal risks will accumulate. This paper presents several cases wherein unrealistic expectations that resorting to PPPs would solve funding issues led to fiscal risks that actually converted into significant fiscal burdens—see, for instance, the cases of Vasco da Gama bridge (toll reductions), Johannesburg–Pretoria highway and Skye bridge (in both, toll abolition), and South Korea highways (user-funded projects that later had to be funded by taxpayers).

PPPs can reduce some major project risks while introducing some new risks to public finances. PPPs do not eliminate project risks, but they do bring a business-oriented implementation partner that is able to make swifter managerial decisions and to implement them with recourse to the financial markets. They also foster in government a more comprehensive and holis-

tic approach to project risks prior to drafting a contract. With a long-term contract transferring to a private entity the immediate responsibility for project development and implementation, PPPs can give the private partner the responsibility for major project risks, such as design, construction, maintenance, and operational risk. Therefore, they alleviate public finances from significant risks that they would usually bear. A well-structured PPP allocates to the private partner the risks that such a partner can manage better than the public partner (such as the ones that it can directly influence through business-minded project management). Transferring some risks to the private partner reduces project risks that affect the fiscal position of government—those that are here designated as “fiscal risks.” Table 1 presents the most common occurrences of project risks in PPPs and their typical risk allocation between the public and private partners. At the same time, PPPs create new risks. PPPs lock the public partner into a long-term relationship with a private entity to commit the private partner to project performance, and to avoid corner-cutting and poor infrastructure design. But long-term contracts create new fiscal risks linked to the vagaries of change, be it economic, technological, demographic, or preference change. These changes may affect government directly or the financial sustainability for the private partner and, consequently, government.

Good practices in public procurement usually call for separate contracts to regulate different aspects of infrastructure and service provision. Efficient governments carefully develop the project to ensure that it serves the identified needs with adequate quality and at lowest cost. Then, they contract separately the detailed design of the infrastructure, the construction of different infrastructure assets, the provision of equipment, the maintenance of facilities and equipment, and the operation of services.

In traditional procurement, there are good reasons for having separate contracts, but managing them can be challenging. One reason for this is the convenience PPPs offer in getting the best contractor for each part of the project. Another is the ability to avoid perverse incentives. For instance, if the construction company is simultaneously responsible for the technical design, bidders will be able to optimize their bids by planning to “cut corners” in the design, thus reducing not only construction cost but also service quality. Implementing the project through a plurality of contracts requires good project management by the authorities. Managing large projects, from the initial concept to construction and then operation, is a challenge for many governments. Poor management often results in change orders, costly renegotiation of contracts, and the need for signing additional contracts; in turn leading to cost overruns, implementation delays, and sometimes poor quality of service.

**Table 1. From Project Risks to Fiscal Risks**

Project phase	Type of project risk	Explicit fiscal risk, through contractual allocation?	Can implicit fiscal risks arise?
Risks during construction	Land issues and resettlement	Risk typically shared or fully allocated to public partner	Yes, when private partner cannot cope with risk
	Urban and other local licensing	Risk typically allocated to private partner	Yes, when private partner cannot cope with risk
	Environmental risks	Risk typically shared or fully allocated to one or the other partner	Yes, when private partner cannot cope with risk
	Geology and other construction risks	Risks typically allocated to private partner	Yes, when private partner cannot cope with risk
	Project design errors	Allocated to private partner	Yes, when private partner cannot cope with risk
	Cost of inputs	Risks typically allocated to private partner	Yes, when private partner cannot cope with risk
	Force majeure	Risk typically shared or fully allocated to public partner	Yes, when private partner cannot cope with risk
Risks during operation	Demand issues	Varies widely: allocated to one party or the other, or shared	Yes, when private partner cannot cope with risk
	Regulation of user fees	Allocated to public partner	Yes, when public partner is under pressure
	Maintenance and operational costs	Allocated to private partner	Yes, when private partner cannot cope with risk
	Policy change	Allocated to public partner	(not applicable)
	Changes in law	Allocated to one or the other partner, depending on change type	Yes, when private partner cannot cope with risk
	Force majeure	Risk typically shared or fully allocated to public partner	Yes, when private partner cannot cope with risk
Renegotiation		—	Yes, public partner tends to accept higher costs and risks

By bundling all infrastructure project activities into a single contract, PPPs reduce the management burden for government, but require long-term contracts and private finance to be efficient. In complex infrastructure projects, it may be more efficient for government to hire a single partner to assume responsibility for the whole project, instead of managing specialized contractors implementing the various project activities (for example, design, construction, operation). Yet when bundling the project activities under a single contract, efficiency requires a long-term contract and private finance. As the private partner will command project design and implementation of the infrastructure, it has strong incentive for “cutting corners,” reducing the quality of the service to end-users. In complex projects, the solution for neutralizing this perverse incentive requires a long-term contract wherein the private partner commits to the future performance of the project. In a long-term contract, the credibility of the private-partner commitment is established by the existence of “money at stake” through private finance: the opportunity to make a profit through good delivery, but also the risk of facing losses when penalties for under-performance are applied.



A single PPP contract allows government to identify project costs in a more transparent manner, providing a better link between fiscal costs and public service delivery. This helps in the identification of cost overruns, which are usually more visible under PPP procurement than traditional procurement. It also helps for public investment planning purposes, creating better incentives for the costing of investment plans and for the definition of output-based indicators.

A major benefit accruing from PPPs is the effective implementation of complex infrastructure projects. When an infrastructure project is highly complex, traditional procurement presents challenges to government, which often translates into delayed implementation (and cost overruns). In general, well-structured and competitively procured PPPs have demonstrated their ability to deliver timely and effective infrastructure for several well-known reasons: (1) the financing of the whole project is agreed in advance, (2) the private partner needs to complete construction in order to start recovering its costs, and (3) bidding for the whole project induces complete and careful costing. Thus, PPP procurement ensures the establishment of both resources and incentives.

A well-structured PPP allows for the private partner to implement the project using business rationality (without the public sector's more rigid rules), as long as the project is serving the intended goals and satisfying the output and performance requirements. The private partner can benefit from the efficiency savings it can devise, while protecting the public purse if additional expenditure needs arise. A PPP acts as a mechanism for efficient project implementation, reducing waste. Of course, such mechanism requires (1) competitive tendering of the PPP contract, allowing for expected savings from private management to reduce the cost for government (or increase its revenue) and (2) adequate management of the contract by the authorities, ensuring that output and performance requirements are assessed and application of contractual penalties is enforced.

PPPs shift the focus of infrastructure procurement from bricks and mortar to service delivery. For the incentive reasons described above, a PPP project is defined according to outputs and performance levels. Instead of detailing the design, the type and volumes of construction materials, and the human resources needed for a project, a well-structured PPP contract typically defines what type of assets should be built and what services are to be provided using those assets, and commits the private partner to effective service delivery according to a set of key performance indicators. This allows for the contracting authority to aim directly at service delivery, instead of merely asset construction. By linking project cost directly to performance levels, PPPs specifically address efficiency in public investment.

PPPs help protect the value of public assets by requiring adequate maintenance of the assets during the term of the contract. Poor maintenance is chronic in many countries, due to a mix of poor funding and poor management. While brand-new construction has political visibility, the continued maintenance of existing assets lacks allure and is not always protected by public investment management systems. PPPs create both the incentive for adequate maintenance and financial plans that reserve funds for that purpose.

Last, but not least, governments facing constraints on their access to credit can use PPPs to mobilize additional sources of funds. The quality of a project, and often its ability to generate revenue, may attract investors and private finance, increasing the government's fiscal space in the short-term, as no upfront capital outlay is required. But governments face a long-term financial commitment given that any additional investment will need to be paid back.

**Box 1. Main Characteristics of Public-Private Partnerships**

A PPP can be characterized as a project governed by a long-term contract between a government and a company, in which the company makes an investment in an asset and uses it to provide services to the government or the public, while usually being required to satisfy a set of performance criteria. The services and infrastructures are usually those traditionally provided by the government, such as roads, railways, schools, hospitals, prisons, ports, or airports. The PPP contract is always a single contract for the design, construction/rehabilitation, and maintenance of the asset, sometimes including its operation as well.

The company signing the PPP contract with authorities (alternatively called the PPP company, the private partner, the PPP operator, the PPP concessionaire, or simply the concessionaire) is typically established specifically for the purpose of the PPP. It is usually a private company, to bring the private capital that adds credibility to the commitment to performance. The private party usually bears significant risk and management responsibility throughout the life of the contract, while the government continues to be the ultimate responsible for the quality of the services and bears some of the risks of providing them. At the end of the contract, full usufruct of the asset typically reverts to the government.

Infrastructure PPPs are always long-term (often 25 years or more), to encompass infrastructure maintenance (and sometimes its operation) and keep the PPP company responsible for the contractually agreed service performance.

PPPs can be broadly grouped into two types: (1) government-funded—wherein the government pays for the services by way of predetermined payments over the term of the contract for making the asset available (availability payments) or payments per volume of services provided and (2) user-funded—wherein users pay fees for the services. Under the user-funded model, the government may still subsidize the investment or guarantee the company's debt or revenue. Various combinations of these two funding arrangements are possible. Some countries make a legal distinction between "PPP" as government-funded project and "concession" as user-funded project (while other name some PPPs as "privatized projects")—all of them are classified here as PPPs as long as they share the characteristics above.

## Challenges with PPP Procurement

Even effective PPP projects present challenges that governments cannot eliminate but only mitigate.

- PPPs financing costs are usually higher than those for financing traditional public investment. PPP financing costs are higher because (1) private firms usually lack government's access to sources of low-cost financing, and (2) financial risk depends on the specific risk of a project and a firm, while government can pool risks from many projects and support from its taxpayers. Paying higher financing costs is not an issue in and of itself, if those costs are more than compensated by the ability of the private partner to manage the project and its risks and to deliver high-quality service to end-users. Financing costs also may be unnecessarily high if the contract allocates risks to the private partner that it cannot manage or if the tender for the contract does not include satisfying requirements regarding the financial qualification of bidders.
- PPPs require more complex and costly administration, both in tendering and contract management. Screening PPP projects, adopting the right PPP structure, and designing the draft contract are all complex tasks, requiring specialized knowledge and presenting significant costs. For this reason, some countries put a lower bound on the size of projects to procure as PPPs. Managing the tender is also complex and sensitive, as potential bidders face high bidding costs. And the adequate contract management over the full life of the contract is also complex and costly. These inconveniences can be mitigated through contract standardization and central provision of PPP expertise. Several governments already include the line ministry's contract-management capacity in the assessment of their ability to procure PPP efficiently.

- PPPs create significant fiscal risks linked to potential change during the long contractual term. Change may be alien to the parties, taking the form of natural disasters or war, technological change (for example, alternative services or new ways of delivering the service, possibly with higher benefits for users and much higher or much lower costs for the service provider), demographic change (in terms of volume, age structure, and geographical distribution), or user preferences. But change can also originate in government entities, such as the executive, legislative, or judicial branches of government. It may result from a change in policy or legislation, or simply from a project-specific decision (or lack of needed action) by the public authority managing the contract. These potential changes create fiscal risks that may suddenly convert into effective financial liabilities under the terms of the contract or by pressure of users or influence groups. In addition, government faces the risks that the private partner, at some future point, is unable to face the risks it accepted at the inception, and so cannot keep delivering the agreed performance. The referred potential changes also affect traditionally procured projects, but in PPPs their impact is much broader—for instance, the fiscal impact of a natural disaster may be more than simply the cost of damage, but also the need to buy back infrastructure assets and terminate the PPP contract.

The primary issue with fiscal risks is not merely their existence, but the fact that they are too often disregarded in project selection and project implementation, due to fiscal illusion. The recourse to PPP procurement often comes surrounded by a cloud of fiscal illusions that prevents careful fiscal risk management and allows for too-costly or poorly structured projects to be approved and procured.

## Fiscal Illusion and Fiscal Risks

### Fiscal Illusion Caused by PPPs

PPPs have special characteristics that make them prone to “fiscal illusion.” The impact of PPPs on government cash balances differs substantially from that of traditional public procurement. In traditional public procurement, the government finances, builds, and operates infrastructure assets, with the corresponding cash flows affecting government budgets (that is, expenditures, revenues), public debt, and public-sector balance sheets. In PPPs, the private partner is responsible for financing and building the asset. Compensation to the private partner by the public sector usually takes place later during the operation of the asset, either directly through public sector payments or indirectly through the public sector allowing the private partner to charge user fees (and so forgoing revenue it might otherwise receive). Therefore, in PPPs governments do not need to issue debt or use existing public resources to provide new infrastructure assets, at least not at the beginning of the contract. In PPPs that require public sector payments, the “fiscal illusion” is diluted after the construction phase, once regular payments reduce public sector cash balances over the duration of the contract. However, in PPPs with user fees, the fiscal illusion may be permanent, given that cash flows from the public sector and the loss of future revenue are not foreseen for the whole duration of the contract, generating in government the idea of “infrastructure for free.”

While PPPs create incentive mechanisms that could reduce total project risk, additional risks from long-term contracting and from fiscal illusion may increase total fiscal risks in PPPs when compared to traditional procurement. Public contracting entities can use PPPs to transfer to the private operator the risks it can manage better than the public sector—but government is not immune to risks when a private partner cannot cope with risks it con-

tractually accepted. And maintaining value in a long-term contractual relationship may be difficult in projects or sectors wherein change is pervasive. Public investment management systems should be able to ponder the pros and cons in deciding on the procurement mode to use—but fiscal illusion (as presented below) often distorts decision making and leads to adopting PPP procurement for the wrong reasons instead of those concerning efficiency.

PPPs face three main sources of fiscal illusion: budgeting and accounting practices, asset recognition criteria, and fiscal risks assessment by public sector contracting agencies. Countries are exposed to these sources of fiscal illusion in varying degrees depending on their national practices and capacities. Failure to tackle all the sources of fiscal illusion comprehensively, would leave the public sector exposed to fiscal illusion in PPPs.

Budgeting and accounting practices that allow governments to increase infrastructure without an immediate impact on public-sector deficits or debt are a large source of fiscal illusion. This is typically the case in countries that rely on cash accounting but can also arise under accrual accounting. For example, under cash accounting, the fiscal impact of PPPs is based on the government cash balances only during the operational phase of a PPP, ignoring significant liabilities that are accrued during construction and along the way (as prescribed by IPSAS 32 standards). Good practice for assessing the fiscal impact of infrastructure projects is to consider the whole project cycle, not only the construction phase. Moreover, the assessment should go beyond cash balance implications and look at both the assets and the public liabilities (explicit and implicit) created. When looking at the whole project cycle (that is, asset construction, operation, and transfer back to government or full decommission) in the absence of efficiency gains in using PPPs, the fiscal impact is basically the same, in net present value terms, regardless of the procurement method used (that is, traditional or PPP). For PPPs that require public sector payments, while the public sector avoids the large upfront investment required under traditional procurement in the short-term, subsequent payments to the private partner over the long-term should be large enough to compensate for the costs of construction and operation of the asset, as well as its profit margin. Hence, governments may only “gain time” during construction but need to pay during operation. Similarly, for PPPs that are based on user fees, short-term budget savings during construction are equal, in net present value terms, to the user fees foregone by the public sector during operation. Yet, introducing accrual accounting and looking at the whole project cycle would not eliminate fiscal illusion if ultimately PPPs are regarded as private assets.

Fiscal illusion in PPPs can also arise from failing to recognize PPP assets as public infrastructure. Governments may classify PPP infrastructure as “private” assets instead of “public” assets. However, private financing of public

infrastructure should not be confused with private ownership. PPPs require complex legal arrangements to facilitate private financing, which typically result in private-sector legal right to use the infrastructure assets (with legal ownership or usufruct rights) during the term of the PPP contract. Based on these legal rights over the infrastructure asset, and disregarding the fact that the public sector is in fact controlling the assets and/or is the economic owner of the asset, governments may be tempted to exclude PPPs from their fiscal accounts, even if they have modern fiscal accounting systems, leading to fiscal illusion (see Box 2 for a detailed analysis of control and ownership of a PPP asset). A first step in addressing fiscal illusion would be to classify PPPs as public assets regardless of the legal structures supporting them. If the public sector retains some degree of control over the PPPs it would be difficult to argue that PPPs are private assets from an economic perspective. If this is the case, the infrastructure assets should be included in public balance sheets, as defined in the IPSAS-32 accounting standard.

Fiscal illusion can also stem from limited assessment of fiscal risks in PPP contracts. Even PPPs that carry less fiscal risk in terms of their contractual risk allocation can present significant overall fiscal risks. For example, user-funded PPPs with no expected cash flows for government budgets and no public guarantees can still create fiscal risks. These can arise from a low demand for services, resulting in bankruptcy of the private partner. If these risks materialize, governments usually cannot abandon the asset and often are legally bound to buy the asset back and absorb the fiscal costs.

## **Fiscal Risks Originating in PPP Contracts**

PPP contracts create firm and contingent public-sector liabilities. Apart from firm liabilities (in the form of availability payments, acquisition of services, subsidies, etc.), PPP contracts create a range of contingent liabilities, that is, liabilities triggered by some future event (Table 2). Most contingent liabilities are not formal guarantees approved by the treasury in a specific document but rather simple clauses of the PPP contract that commit the contracting authority to pay a certain or an undetermined amount in case a specific event occurs. Usually such clauses are scattered throughout the contract, sometimes in an annex, or even an appendix to an annex.

Some contingent liabilities are created even in well-structured PPP contracts. At a minimum, a PPP contract needs to stipulate the financial consequences of an early termination of the contract. Typically, this involves buying back the core assets and paying a compensation to the private partner; in some case it involves the direct assumption of debt of the PPP company. Early termination may occur due to prolonged force majeure events, private partner



**Table 2. Fiscal Costs and Fiscal Risks from PPPs**

	<b>Fiscal Costs</b>	<b>Fiscal Risks</b>
<b>Explicit</b>	<ul style="list-style-type: none"> <li>• Liabilities and fixed assets (estimated construction costs) when the government controls the asset and/or bears most of the risks from the contract</li> <li>• Prior or contractually agreed commitments to buy land, resettle people, reestablish utility connections and other infrastructure, or compensate affected entities</li> <li>• Up-front capital payments for viability gap funding and other contractually agreed predetermined firm payments during the construction phase</li> <li>• Availability payments, service payments, viability gap funding, and other contractually agreed firm payments during the operational phase</li> <li>• Payments by public corporations or subnational governments related to purchase agreements (power, water, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Explicit guarantees (e.g., minimum revenue, exchange rate, reinstatement of economic equilibrium)</li> <li>• Early contract termination (e.g., paying for assets, compensating investors, reestablishing service) in case of concessionaire bankruptcy, underperformance, force majeure, or public interest reasons (e.g., privatization)</li> <li>• Legal disputes</li> <li>• Asset condition at termination</li> </ul>
<b>Implicit</b>		<ul style="list-style-type: none"> <li>• Implicit guarantees: government will strive to maintain infrastructure services</li> </ul>

bankruptcy, its inability to deliver the contractually prescribed performance level, serious breach of the PPP contract provisions, or a unilateral decision by government. Contracts may also create other sources of contingent liabilities, such as minimum revenue guarantees, coverage of exchange rate volatility, or even debt guarantees. Contracts may also provide compensation for significant variations in the price of critical construction inputs. Payments are usually adjusted by inflation. As PPP contracts are expected to allocate risks according to the ability of each partner to manage respective risk and cope with its consequences, some risks will necessarily be allocated to the public partner, and therefore some contingent liabilities will arise out of a well-structured PPP contract.

PPP contracts also create implicit contingent liabilities for government. Implicit contingent liabilities also arise when projects or contracts are poorly designed. They are not legally binding, but they still exist out of public pressure or group pressure. When a public authority signs a PPP contract for a project that has no financial sustainability, it is creating a liability for government, as public pressure will later induce government to strive for effective project implementation and service provision to end-users. Public pressure may also induce government to introduce contract changes that create additional fiscal costs. Also, when private partners are facing financial difficulties, governments may be tempted to rescue them instead of rescuing the project, attracting opportunistic investors and fostering moral hazard. Liabilities may also result from power purchase agreements (PPAs) and similar agreements linked to the PPP contract, whereby another entity (for instance, an energy distribution company) guarantees a certain minimum consumption, paying compensation otherwise—when a state-owned company signs such PPA, an

implicit (or sometimes explicit) liability is created for government, who must face the risk of paying compensation, or of buying energy at a loss.

PPPs are particularly exposed to optimism bias and political interference. Optimism bias is the excessive reliance on optimistic project planning scenarios, disregarding risk and thus underestimating project costs and overestimating revenue (Box 6). Confidence in optimistic demand forecasts can make governments feel comfortable in providing guarantees on demand (expecting a low likelihood of them being called). Similarly, private companies may be willing to accept too much demand risk that they may ultimately not be able to afford if demand levels do not materialize in practice. Thus, optimism bias creates explicit and implicit fiscal risks, and the expected value of those risks cannot be easily computed for a project (even scenarios are hard to compute, except for the worst-case scenario, the upper bound on demand risk). Poor perception of real risks, bundled with the ability of PPPs to convert fiscal costs into fiscal risks, allows project selection to deviate from the country's development policies and priorities, being manipulated by decision makers. Therefore, PPPs require adequate fiscal risk management to restrict the use of PPP procurement to the projects for which it can deliver efficiency and to effectively assess and manage their fiscal risks.

Contract renegotiations are common. Due to changes in technology or demand, or unexpected events, long-term contracts are expected to face some renegotiation during their lifecycle. But evidence shows that too often PPPs face repeated renegotiation, starting in their first few years. And often it is the public authorities that initiate renegotiation, giving a bargaining advantage to the private partner (who can always refuse to change the terms of the contract, except when forced and compensated). In some cases, the possibility of extending a concession for a few more years helps disguise the fiscal cost of the renegotiation, when the loss of future revenue is not fully perceived as a fiscal cost.

Contract renegotiation tends to favor private-sector operators and reduce PPP efficiency. While PPP procurement is expectedly done under competition, renegotiation is usually conducted under no competitive pressure and with information asymmetry. Poor negotiating skills often compound weak government bargaining power, leading to efficiency losses.

Unsolicited proposals for PPPs create a particular challenge for governments. An unsolicited proposal is a proposal made by a private party to undertake a PPP project, submitted at the initiative of the private party rather than in response to a request from the government. The evidence presented in World Bank (2018) shows that contrary to expectations, they usually do not accelerate infrastructure delivery and do create significant fiscal risk and governance issues. Low capacity by public procuring entities to identify, prepare,

and evaluate infrastructure projects and the incentive to move projects off budget are often identified as primary reasons for the acceptance of unsolicited proposals.

The acceptance of unsolicited project proposals can create a potentially large deviation from strategic priorities and prevent competition during procurement. Unless unsolicited proposals are restricted to specific sectors, allowing private entities to prepare and propose projects in which government will then assume liabilities (even if only contingent liabilities) creates the risk that resources will be deviated from priority sectors and priority projects to projects that are less relevant for economic growth or quality of life but are still profitable from a private viewpoint. Even when subject to competition, a contract originated in an unsolicited proposal usually does not spur effective competition. There is evidence that the vast majority of tenders for unsolicited PPPs present a single bidder. A primary reason for this is that the firm that presented the unsolicited proposal has an advantage over any potential competitor, because it has already done its due diligence while developing the project, and knows the project very well. As bidding for a PPP contract is costly, firms naturally refrain from presenting costly bids when they know that a competitor has a built-in advantage.

### **Fiscal Risks Originating in Poor PPP Governance**

Fiscal risks from PPPs are exacerbated by weaknesses in infrastructure governance. This spans the public institutions, processes, and procedures that guide government decisions in planning, allocating funds, and implementing public investment projects, including PPPs. All aspects of infrastructure governance are under direct government control. Therefore, risks related to infrastructure governance originate from government action and/or inaction. Identifying these risks would allow governments to take actions to minimize and manage them properly.

A large portion of fiscal risks in infrastructure originate from weaknesses in the early stages of the project cycle, mainly during strategic planning and project appraisal. While it is wise to avoid downplaying the relevance of having a well-structured contract, it needs to be acknowledged that too many fiscal risks originate, not in low-quality contractual design, but in (1) the poor quality of project selection, (2) the inadequacy of PPP for the project at stake, or (3) government willingness to sign a contract with no realistic financial feasibility—all this leading to fiscal risks materialization, or pressure for renegotiation and further risk acceptance.

Many governments tend to create parallel evaluation, approval, and management processes for PPPs, significantly increasing fiscal risks. This occurs

when PPPs are treated fully off-budget, meaning that the usual legislative oversight does not fully apply. Typically, separate project pipelines are created, with PPPs following a completely different and sometimes much-simplified approval process. Even when PPPs are subjected to a rigorous appraisal under their separate process, these practices reduce budgetary discipline and weaken the role of the budgetary authority to safeguard fiscal sustainability in the public investment management framework.

By keeping PPPs off-budget, governments can increase long-term commitments in infrastructure without legislative scrutiny or oversight, jeopardizing fiscal sustainability. In many cases PPPs are regarded as a way to spend more in infrastructure circumventing budgetary controls and legislative oversight. This happens with not only new PPP projects but also amendments to existing contracts. For example, when governments ask for additional works to the initial project and pay with an extension of the duration of the contract or by committing to payments by future administrations. The effect is to reduce fiscal resources available to future governments without the budgetary oversight process. Off-budget treatment and poor budgetary transparency of PPPs increase the government's risk exposure and creates incentives for PPPs to be perceived as adding fiscal space for additional projects (fiscal illusion). This jeopardizes fiscal sustainability and increases the probability that low-quality projects are implemented.

Similarly, fiscal risks from PPPs increase when they are implemented outside the central government, with limited central oversight. PPPs undertaken by subnational governments or public corporations are good examples. Central oversight over PPPs implemented outside the central government is often quite limited and requires strong intragovernmental coordination, which is not always easy to achieve. The ability of converting costs into PPP fiscal risks, coupled with the expectation of being able to shift risk occurrence to upper levels of government, may generate moral hazard, both in PPP project selection and procurement. Capacity to develop PPP projects and structure their contracts may also be lacking if there is no system for sharing knowledge among government officers in the country. Moreover, many governments created public entities in the form of public corporations to take responsibility for the design, construction, and implementation of public assets (for example, road agencies), sometimes with an objective of circumventing budgetary restrictions. PPPs undertaken by these public entities increase fiscal risks, given that these are ultimately public assets.

Fiscal risks are aggravated when public corporations are major PPP shareholders and when the project is significantly financed by public financial corporations. In some countries, public corporations are allowed to sign "PPP" contracts with public entities, as if they were private entities. The absence of

shareholders' private capital at stake in those contracts reduces incentives for efficiency—due to moral hazard, from the perception that government will be more easily convinced to rescue the public corporation if in need—and increase fiscal risk—as actually governments tend to rescue those public corporations. Even public corporations considered to have an arm's length relationship with government may create significant fiscal risks for government when they accumulate a large volume of PPP commitments. Similar moral hazard, and the consequent loss of efficiency, is experienced when projects are financed by state-owned banks and other government-owned financial entities. The extent of fiscal risks depends on private-sector guarantees—for instance, the European Investment Bank (a government-owned multilateral bank) provides finance to private PPP concessionaires but mitigates its risk (for example, requiring private-sector bank guarantees during the construction period).

Inadequate skills and capabilities in public agencies that implement and manage PPPs expose governments to additional risks. PPPs are financially more complex than traditional public investment projects and require a deep understanding of all potential sources of risks for government. PPPs also require dedicated management teams in government agencies that are capable to take actions to ensure the quality of infrastructure assets and services and protect public interest during the long term. Similarly, managing long-term contracts also involves ensuring that potential contracts amendments do not distort the incentives of the original contract. Sectoral governance, with contracts adapted to the regulatory framework, and regulations that are compatible with private management of infrastructure, may be critical for serving the needs of users and mitigating fiscal risks.

### Box 2. PPP Asset Recognition Criteria: Control vs. Risks and Rewards Approaches

These two approaches set the asset recognition criteria for PPPs infrastructure assets in public sector accounting and statistics, respectively.

The *International Public Sector Accounting Standards (IPSAS)* set the criteria for recognizing PPPs infrastructure assets into the government accounts (IPSAS 32, Service Concession Agreements: Grantor, 2011). PPP assets are considered public assets, therefore included in the government's accounts, if the public partner controls them, which is known as the "control approach." The public partner is regarded as controlling the PPP assets when it has the ability to define the utilization of the assets, can define who can use them, and how much should be paid for their use or availability. If the public partner controls the assets, the latter are deemed as public infrastructure, regardless of who legally owns them.

The *Government Finance Statistics Manual (GFSM 2014)*, in line with the *System of National Accounts (SNA 2008)*, classifies PPP infrastructure assets in the government's accounts if the public partner bears the majority of the risks and reaps the majority of the rewards arising from them, which is known as the "risks and rewards approach." When the majority of the risks and rewards from the assets are borne by the public partner, the latter is deemed to be the "economic owner" of these assets. Legal ownership of an asset is different from "economic ownership," the latter being a statistical concept.

In theory, the control and risks and rewards approaches are not vastly different, despite longstanding discussions among the accounting and statistical community. Historically, the risks and rewards approach originated as a way to ascertain control by the public partner over the assets, but along the way these approaches end up being regarded as two completely different concepts, when in substance they are not. When the public sector has the ability to define the utilization of the assets, who can use them, and how much should be paid for their use or availability, it is quite likely that in practice it bears significant fiscal risks, both explicit and implicit. This is particularly the case for large and strategic assets (for example, roads, airports, dams, railways) wherein the government is the ultimately responsible for the delivery of the infrastructure services to the population. However, while similar in substance, these two approaches can lead to quite different results in practice, depending on how they are implemented.

While the control approach is easy to implement and normally results in most PPP assets being classified as public infrastructure, the risks and rewards approach is much more prone to manipulation. When PPP risks assessment is done in a narrow or rather

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Sources: Eurostat Manual on Government Deficit and Debt; Eurostat and European Investment Bank Guide for the Statistical Treatment of PPPs; GFSM 2014; and IPSAS 32.

**Box 2. PPP Asset Recognition Criteria (continued)**

simplistic way, statistics might end up excluding most PPPs from the government's accounts. Assessing whether the "majority" of the risks have been transferred to the private partner is not straightforward in practice. The *System of National Accounts 2008* merely sets the principles; it does not provide enough guidance on how to implement the risks and rewards approach in practice, leaving it to countries to define what is the "majority" of risks in PPPs. In Europe, the Eurostat *Manual on Government Deficit and Debt* and the *Guide for the Statistical Treatment of PPPs* provide practical rules to decide whether PPP assets should be included in the government's accounts, thus impacting fiscal deficit and debt. However, Eurostat's rule-based implementation of the risks and rewards approach has led countries to exclude most of their PPPs from the government's accounts, by focusing on a limited number of risks and preconditions. While limiting the assessment of risks facilitates the implementation of the risks and rewards approach, it also introduces a bias to exclude PPPs from statistics and, more importantly, it generates the incentive to structure PPP contracts to circumvent Eurostat rules.

**Box 3. Occurrence of Explicit Fiscal Risks**

Government contingent liabilities are sometimes the optimal way to structure an efficient PPP contract. They should refer to risks that government—not the private partner—can better manage. And they should be carefully assessed in the context of fiscal risk management, with the identification of the probability of occurrence and fiscal impact of each contingency. Some contingent liabilities come from minimum revenue guarantees. Others originate in events that force an early termination, such as concessionaire bankruptcy, concessionaire underperformance, nationalization, or extreme force majeure case.

Early termination is rare, but it does happen. Several highway PPPs went bankrupt in Spain in the 2010s, forcing the government to buy their assets. The Marão Tunnel concession in Portugal was terminated for prolonged interruption of construction in 2013. Belize decided to renationalize the water and electricity concessions in the early 2010s. Termination during construction is the most complex, as it involves assessing the value of works completed and plans for the completion of construction. For this reason, some countries monitor closely the construction phase, as done by PIMMAC in Korea. Termination during the operational phase involves the careful prevention of service disruption—often involving the availability of a management team, at least until a new concession is tendered.

Contingent liabilities also come from events external to the project (such as a significant variation in the exchange rate) or from project-related events. In the United Kingdom the single-largest component of the London Olympics, its Olympic Village housing 24,000 athletes, required government financial support when the public-private venture building it could not raise enough funds. In New Delhi, the PPP concessionaire installing the metro line to the airport claimed defective construction of the elevated platform that government had transferred to the PPP and used a contract clause to force early termination. In Portugal, after several decisions from the environmental authority implied significant fiscal costs from project changes in PPP highways, the legal framework was changed, requiring environmental approval prior to the call for tender for PPPs. Significant PPP fiscal risks have induced governments with large PPP portfolios to create PPP fiscal risks management teams in the Ministry of Finance, working with line ministries and their contract managers in preparing for possible occurrences, and even in implementing active measures that may reduce the probability of occurrence of fiscal risks.

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Source: Authors.



**Box 4. Contractual Risk Allocation**

Although a credible private-partner commitment on the performance of infrastructure is critical for PPP efficiency, some project risks may have to be assumed by government. Allocating demand risk to the private partner creates strong incentives for high performance, but there are many cases in which it is better to define performance incentives on good alternative ways such as availability payments conditional of satisfying a battery of performance indicators. When demand risk is too high, risk transfer may be too costly and extreme cases will transfer risk back to government (namely when the concessionaire goes bankrupt due to revenue scarcity).

Demand-risk transfer should be avoided or mitigated when incentives for demand growth are not desirable, such as in PPP prisons—wherein payments to concessionaires are expected to be based on the number of available cells and not on the number of prisoners. Evidence of this can be inferred from a famous case created by corrupt officials, the Kids for Cash scandal in Luzerne county, Pennsylvania, United States, wherein judges were receiving kickbacks for sending juvenile offenders to prison, even for minor crimes, because the local private prison was paid according to the number of inmates. Thus, in addition to fiscal risks, poorly designed PPP structures may create relevant social issues, particularly in environments prone to corruption. PPP efficiency, fiscal risk containment, and social justice require that private partners are remunerated according to cell availability, and not cell occupancy—and that good practice has been adopted in the vast majority of PPP prisons in the world, from the United Kingdom and Spain, to Brazil, Chile, and Uruguay.

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Source: Ecenbarger (2012); and local judicial notices.

**Box 5. The Fiscal Cost of Implicit Contingent Liabilities**

Common sources of fiscal risks are tolls and other fees that users cannot afford (or governments cannot politically sustain) and unrealistic business models. Portugal had to pay compensation to the PPP company to lower tolls for cross-Tagus bridges in Lisbon because of an electoral promise that implied contract renegotiation. South Africa paid compensation to delay the implementation of tolls in PPP roads because of public reaction against them. In Scotland the Scottish Executive had to buy Skye Bridge to eliminate tolls when the devolution of power to the regional government led to a policy change. South Korea had to lower tolls and pay compensation regarding several PPP highways when citizens felt aggrieved for paying, as taxpayers, minimum-revenue compensation for low demand in highways whose cost they could not afford as road users. In Spain unrealistic traffic forecasts forced the Spanish government to provide finance to the Madrid “radiales” highways even before it had to buy their assets. In Mexico, cost overruns plus a devaluation of the peso induced the government to buy the assets of its highway PPP concessionaires, in 1997, taking about \$7.7 billion in debt.

As they have long-term contracts, PPPs may also suffer from change, namely technological, commercial, and demographic change. In the United Kingdom the British Army faced a costly renegotiation of its PPP for worldwide telecommunications to accommodate for technological evolution. PPP contracts for local government information systems faced issues that led the British Parliament to recommend not using private finance initiative in that area. In Scotland the government had to buy back Inverness Airport because the high fee, as contractually prescribed, was preventing the development of low-cost travel in the region.

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Source: Hyeon Park (2012); McQuaid (2007); and Sarmiento (2016).

**Box 6. Optimism Bias in Infrastructure: Optimistic Cost Expectations**

*Optimistic Cost Expectations*

Although common, optimism bias is not an unavoidable plague. The Golden Gate Bridge in San Francisco is perhaps the most striking example. A non-PPP project built between 1933 and 1937 with the longest and highest span in the world and under harsh water-current conditions, it was built on time and on budget (actually with a small surplus), most likely because of financial constraints imposed and strict project governance. Most public infrastructure projects suffer significant cost overruns, as demonstrated by numbers collected by Flyvbjerg (2003) regarding transport projects (24 percent cost overrun in roads and 40 percent in railways, in a sample of 1,603 projects from 17 countries, spanning nearly one century) and by Sovacool, Gilbert, and Nugent (2014) for energy projects (average 66 percent cost overrun in 401 projects, reaching 71 percent for hydroelectric dams and 117 percent for nuclear reactors). Anecdotal evidence regarding non-PPP projects highlights the Big Dig in Boston (the highway tunnels replacing the former elevated structures) with a 478 percent cost overrun, and Forrest Highway in Australia, with a final cost of more than five times the amounts politicians initially promised it would cost—in both cases linked to significant scope changes. Flyvbjerg (2003) identifies several reasons for what he calls “strategic misrepresentation” of projects by their proponents in government, aiming at maximizing the probability of having it approved.

PPP projects typically reduce cost overrun due to the due-diligence project review required by financing parties, the more robust cost estimates prepared by bidders at tender time, and the reduced space for scope changes. The scarce statistical data suggest much lower cost overruns. Duffield, Raisbeck, and Ming Xu (2008), in Australia, studied a sample wherein 25 PPP projects faced 4.3 percent cost overruns when measured from contractual commitment to the final outcome, while 42 traditionally procured projects had a 11.4 percent cost overrun. They found that PPP projects had significant delays prior to execution but “provide far greater cost certainty than traditional contracts.” Vasco da Gama Bridge, a EU 900 million, 11-km PPP bridge over the Tagus in Lisbon was built on time and on budget (as were Portuguese highway PPPs in general); Sydney’s Cross City Tunnel also had no cost overrun. While PPPs in general are not known for significant cost overruns, there are also some counterfactual examples. The Eurotunnel resulted in roughly 100 percent cost overrun—but it managed to survive challenges and bankruptcy, avoiding the need for governments to step in.

The evidence does not demonstrate that PPPs are cheaper, only that cost estimates at the time of contracting are more reliable in general. Contrary to traditional procure-

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Sources: Duffield, Raisbeck, and Xu (2008); Flyvbjerg (2003); Sarmiento (2016); Schwartz and others (2020); and Sovacool, Gilbert, and Nugent (2014).

**Box 6. Optimism Bias in Infrastructure: Optimistic Cost Expectations (continued)**

ment, PPPs usually do not to create fiscal risks via cost overruns, instead they tend to create fiscal risks later, during the operational phase, if processes are not well managed.

*Optimistic Revenue Expectations*

Optimism bias in PPPs often occurs when demand is over estimated. The fiscal illusion created by PPPs is amplified when project costs are fully covered by expected revenue from users—so there are strong incentives for consultants to present scenarios with high demand and strong incentives for decision makers to focus precisely on the high-demand scenarios, downplaying or simply ignoring alternative scenarios. The Fertagus rail project in Portugal exemplifies how optimism bias can drive the procurement of PPPs. Its first contract, dated from the 1990s, was based on a demand scenario where fees would cover costs and the concessionaire remuneration, allowing for the authorities to announce the project “at no cost for government,” while the concessionaire signed the contract under the protection of a minimum revenue guarantee, which was later called.

Many other projects in the transport sector face demand significantly lower than initially expected, having led to guarantees being called, or fiscal risk being realized when the project company fails. Minimum revenue guarantees have been called in many PPP projects, ranging from cases wherein government is asked for continued support (Evergreen light rail and Busan metro line in Korea, Gautrain in South Africa) to cases wherein most fiscal support corresponds to periods of recession (Chile, Colombia). In Spain, the financial collapse of Radiales highways (facing demand levels of about 20 to 30 percent of initial expectations) forced the government to buy the assets, in a multibillion euro operation. The bankruptcy of Ciudad Real Airport (a EUR 1 billion privately financed initiative that attracted scarce air traffic) in Spain had no direct fiscal cost, but affected the regional credit union, which needed itself government support. Some governments have been more successful in avoiding fiscal costs from troubled projects (for example, the demand-afflicted Sydney Cross City Tunnel). Accepting specific risks in PPP contracts is often the right solution but requires good due diligence and independent review, namely investigating how realistic demand forecasts are.

**Box 7. Renegotiation in Practice**

Renegotiations are common in PPPs. Even countries with good regulatory frameworks for PPPs, such as Chile, have been plagued by excessive renegotiation. In Colombia, the frequency and volume of renegotiation of road PPPs were so high (roughly one renegotiation per year per contract, with volume of contracts trebling) that the government decided to cap the level of amendments to PPPs contracts as a percentage of the original value of the investment. In India, the initially very low rate of renegotiation of their extensive road PPP program, was followed by a wave of arbitrations in the mid-2010s, with roughly 100 road contracts in arbitration at a single point in time. Renegotiation processes initiated under pressure of interest groups prior to having a robust team and a well-defined strategy tend to create not only costs, but also additional fiscal risks—the renegotiation of Vasco da Gama Bridge, following an electoral promise, led to compensation for reduced tolls and also to the transfer of some risks back to government (for example, major maintenance of the old Tagus bridge). PPP operators can also initiate opportunistic renegotiation, either when facing an event that may affect service delivery and create public pressure on government, or when feeling that they can bring political value (for example, inaugurations during an electoral campaign).

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Sources: Dachs (2014); Engel, Fisher, and Galetovic (2020); and Sarmiento (2016).

**Box 8. Examples of Risks of Unsolicited Proposals**

The evidence on unsolicited proposals for PPPs (see, for instance, World Bank (2018)) shows that they have created significant delays in relevant projects and often do not effectively deliver the needed infrastructure assets. For instance, unsolicited PPP contracts for roads in Ghana, hydroelectric dams in Albania, and airports in the Philippines have been signed and never delivered. Some governments do not accept unsolicited proposals. Other governments did effectively contain unsolicited proposals for PPPs by creating strict legal frameworks for their presentation, requiring rigorous scrutiny of those proposals and contract drafting by government. Examples include the State of Victoria in Australia, the Commonwealth of Virginia in the United States, and South Africa. In Korea, the government accepted many unsolicited proposals for projects in different areas, many in transportation. In unsolicited highway PPPs, government accepted to allow tolls higher than the usual tolls in other highways, while providing minimum-revenue guarantees. This resulted in traffic diversion away from the most expensive highways, with government paying minimum-revenue compensation to low-demand roads, and users rightfully complaining that, as taxpayers, they were subsidizing the operators of roads that they could not afford to use. To mitigate the paradox, government had to unilaterally lower tolls and pay the corresponding compensation to PPP operators. Currently, the legal framework in Korea no longer allows providing minimum revenue guarantees to unsolicited proposals.

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Sources: The evolution of South Korea mechanisms for fiscal support of PPPs is described in Hyeon Park (2012); US Federal Highway Administration (2016); and World Bank (2018).

**Box 9. Fiscal Illusion and Fiscal Sustainability**

Fiscal illusions regarding PPPs have resulted in many governments accumulating too much liability in PPPs, jeopardizing fiscal sustainability as well as overall macroeconomic stability. Portugal exemplifies this scenario, as well as the measures countries can take to prevent it. In the 1990s and 2010s, Portugal had been able to procure and build one of the best highway networks in Europe both per capita and per area, with the whole network under PPP schemes. PPP projects were reviewed and approved under a gateway process wherein the Ministry of Finance had veto power, while the Ministry of Public Works defined the policy. But when in the late 2000s the road agency, Estradas de Portugal, was converted into a commercial public corporation, its off-budget status exempted it from the gateway process, allowing it to engage in a new, large road PPP program, with scarce supervision. Therefore, at a moment when government was starting to face the cost of funding half of the network (with tolls funding the other half) and several PPP contracts for high-speed railways were being procured, new PPP liabilities were being created for new highways. During the crisis of the early 2010s, the full realization of the extent of fiscal commitments under the new contracts forced government to recognize that it could not afford them, canceling (with compensation) the new contracts and negotiating the conversion of shadow-toll contracts into availability contracts to allow for the introduction of tolls in several of the recently built highways. At the same time, the whole high-speed rail program had to be canceled and the construction of a new Lisbon airport postponed.

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Source: Legislation and audit reports by Tribunal de Contas.

### Box 10. Fiscal Risks Originating in Subnational Governments and Public Corporations

Governments may also be implicitly affected by PPP risks that do not explicitly affect them but that create liabilities to public corporations or to subnational governments. In countries with a layered structure of government, those are a significant source of PPP fiscal risk in all continents—because of the moral hazard and capacity issues discussed above. In Turkey the central government had guaranteed the take-or-pay municipal commitment to Izmit Su A.S., the PPP project company for the Izmit Domestic and Industrial Water Supply Project. When its water treatment plant was commissioned in 1999, demand expectations had dropped and municipalities had cheaper supply alternatives, so the commitment to buy water from this plant was not satisfied, and the guarantee was executed with Treasury replacing municipalities in paying the PPP company, disbursing more than \$2 billion until 2014.

When in 2010 the PPP concessionaire completed construction of Yongin Rapid Transit in Korea the contracting authority, Yongin city government, demanded the resolution of safety and noise concerns, delaying the start of operation. The concessionaire resorted to the Paris-based International Court of Arbitration, that ruled Yongin city government should pay compensation amounting to 453 billion won, about 40 percent of the city's annual budget. When the operation started, demand was so low that the city government had to pay compensation under the minimum revenue guarantee agreed in the contract. Unable to cope with these liabilities, the city required support from the Korean government.

In 2010, in Brazil, when a new 298-bed PPP hospital opened in Subúrbio, Bahia, the local municipality permanently closed two health centers in its vicinity, forcing the hospital to accept additional demand with a reduced case-mix, leading to the payment of compensation by the state government that had procured the PPP. In 2011 Portugal's government decided to bail out the regional government of Madeira, the Atlantic archipelago, which had procured a volume of highway PPPs it could not afford. In South Africa, the contingent liabilities regarding the PPP highway between Pretoria and Johannesburg forced the National Treasury to provide additional financial support to the road agency SANRAL, which had accepted the risk and could not cope with its impact.

Implicit fiscal risks for central governments are also created by commitments assumed by public corporations, as public partners and as electricity or water off-takers. The signature of power-purchase agreements, often with take-or-pay schemes, if not disclosed and scrutinized may lead to overexposure of signatories—over-optimistic demand expectations may arise, and demand subsidization may put pressure on central government as supply increases.

Sources: Jinyoung and Jinsu (2014); Schwartz and others (2020); and Turkey Undersecretariat of Treasury (2015).





## Managing PPP Fiscal Risks

To implement PPPs soundly, governments need to strengthen their infrastructure governance, within the whole public sector, from procuring to monitoring agencies. The critical governance elements that governments should have in place to manage the fiscal costs and risks from PPPs include (1) a gateway process governing the preparation and procurement of PPP projects with a strong role of the Ministry of Finance; (2) a proactive fiscal risk management function for PPPs in the Ministry of Finance; (3) budgeting, accounting, and reporting standards and practices that ensure fiscal transparency regarding PPPs; (4) an enabling legal framework that is clear and consistent. Country examples of good practices are also presented in the following paragraphs.

### A Gateway Process for PPP Preparation and Procurement

The Ministry of Finance should be able to stop or suspend a project at any stage of the project cycle if deemed fiscally unaffordable or if it exposes government to excessive risks through a gateway process (Table 3). Given the long-term nature of PPPs, the Ministry of Finance should be able to ascertain that a PPP project is efficient and affordable in the medium and long term (that is, governments commitments over the entire project cycle). The role of the Ministry of Finance should not be limited to endorsing the final decision of a procuring agency or the Executive (that is, checking if the project is fiscally affordable just before the contract is awarded). Experience shows that at the awarding phase, the Ministry of Finance has a limited capacity to stop a project when deemed inefficient or unaffordable, due to the political momentum and social pressure to deliver the project, at that advanced stage. Therefore, PPPs should be evaluated by the Ministry of Finance from early stages of the project cycle (for example, pre-feasibility and feasibility) to ensure that projects are implemented only if they are deemed efficient and affordable considering current and future budgetary restrictions. In some countries

**Table 3. A Generic Gateway Process for Managing PPPs**

Phase in infrastructure project cycle	Gateway	Tasks of the MoF before approval/rejection of projects, including PPPs
Phase 1: Pre-feasibility studies	Provide opinion about project	Review of pre-feasibility analysis; preliminary assessment of fiscal costs and risks, and of impact on budget sustainability and efficiency
Phase 2: Feasibility studies	Approve/reject project	Review of studies, namely the socio-economic evaluation and the justification of the option for PPP procurement; re-assessment of fiscal costs and risks, and of impact on budget sustainability and efficiency
Phase 3: Budget preparation	Approve/reject project to be included in budget proposal	Projects selected in line with budget envelope, policy priorities, and medium- term fiscal framework
Phase 4: Call for tender	Approve/reject call-for-tender	Review of draft contract and other call-for-tender documentation; re assessment of fiscal costs and risks, and of impact on budget sustainability and efficiency
Phase 5: Tender and contract definition	Approve/reject contract	Review of contract before signing; re-assessment of fiscal costs and risks, and of impact on budget sustainability and efficiency
Phase 6: Construction and operation	Approve/reject contract changes	Management of the fiscal costs and risks of the infrastructure portfolio; before any addendum or contract renegotiation, assessment of its impact on budget sustainability and efficiency

the Ministry of Finance reviews, within the gateway process, the economic efficiency of the project, the added value of using the PPP procurement route, the fiscal affordability of the project considering its fiscal risks, and the institutional capacity to manage the PPP. See Box 11 for examples.

Ensuring fiscal discipline in PPPs demands a gateway process managed by the Ministry of Finance. The gateway process ensures that PPP projects pass a sequence of “gates,” with due-diligence and approval in each one. A gateway process minimizes fiscal illusion and promotes public investment efficiency. To ensure the most efficient allocation of scarce public resources in line with policy priorities, the gateway process should require PPPs to compete with other investment projects in a level playing field. This can be achieved through a two-step approach. First, the decision on whether to undertake an investment project—regardless of the type of procurement—should be based on technically sound appraisal techniques. The choice of procurement route—that is, as traditional public procurement or a PPP—should be a second step to ensure that PPPs are pursued “only” if they are the most efficient option and are fiscally affordable.

A PPP gateway process also improves the quality of infrastructure projects. As projects are reviewed by the Ministry of Finance during the preparation phase and then draft contracts during procurement, a checks-and-balances mechanism operates, creating incentive for optimism bias and overconfidence of project managers to be contained and accountability to be enhanced. Effective fiscal risk management in the Ministry of Finance will require questioning of announced expected costs and benefits of projects, as well as associated risks, leading to more robust projects and more efficient and resilient contracts.

## A PPP Fiscal Risk Management Function in the Ministry of Finance

A strong infrastructure governance framework requires a fiscal risk management function. While other areas of risk management are typically well developed (for example, macroeconomic risks), only a few countries have made significant progress in managing fiscal risks from PPPs. The objective is to enable governments to move from ad hoc reactive behavior toward PPPs (for example, addressing PPP fiscal risks once they materialize) to a proactive management function of fiscal risks arising from them. This function requires governments to systematically identify, estimate, and manage fiscal costs and risks from PPPs, including vetoing projects or contracts with too high costs or fiscal risks, and taking actions to mitigate risks and absorb those that cannot be mitigated. The function also needs to be at the core of the gateway process governing each individual project, as well as the whole portfolio of infrastructure projects, looking at the aggregate risk and at the ways risks are correlated among projects. Key steps in developing this function include the following:

- **Fiscal costs and risks from PPPs should be centrally managed.** The Ministry of Finance should be responsible for proactively managing fiscal risks from PPPs as well as any other large infrastructure project. While different contracting agencies (for example, line ministries, subnational governments) are responsible for managing PPP contracts from project identification and construction to operation, fiscal risk management should be primarily the responsibility of the Ministry of Finance, including identifying, estimating, and managing fiscal costs and risks from PPP contracts. To perform this function, the Ministry of Finance should have a clear mandate prescribed by the legal and regulatory framework; be in charge of a strong gateway process; and have the technical skills to identify, estimate, and mitigate fiscal risks from PPPs. The PPP Fiscal Risk Assessment Model (PFRAM 2.0) can be a valuable resource for governments (Box 12) for assessing the impact of PPPs on overall fiscal space. Other IMF resources include the Debt Sustainability Analysis framework (LIC-DSF and MAC-DSA) and the Fiscal Space Analysis.<sup>1</sup> Within the Ministry of Finance this function can be implemented in different ways. Some countries created specialized units within the ministry (for example, PPP units, investment units, fiscal risk units) with the necessary technical skills to manage fiscal risks from infrastructure projects including PPPs. Other countries assigned this function to existing departments or units (for example, budget department, debt management office, etc.). Countries implementing a PPP gateway process always face concerns regarding possible excessively bureaucratic procedures leading to a low and less-than-desirable number of proj-

<sup>1</sup>DSA analysis for low-income countries and market-access countries and the fiscal space analysis.

ects completed—therefore the design of the gateway should consider the trade-offs between the thoroughness of the process and the need for swift project implementation, and investments in capacity building are required.

- **PPP risk management should start at early stages of the project cycle and take a whole lifecycle approach, as with any other public investment project.** Early identification, at the planning stage, of main sources of fiscal risk in PPPs is critical to informing investment decisions and preventing scarce resources being spent on projects that do not add value to society or are poorly aligned with government strategies. For example, the Ireland National Planning Framework is supported by a 10-year capital plan to enable objectives set out in the framework. Housing was identified as one of the national priorities, which requires both public and private financed infrastructure to be undertaken by different levels of government. The capital plan for social housing is a good example of mitigation measures, by ensuring adequate interdepartmental coordination of all investment projects at the planning stage. Proactive risk management is also important at the allocation of funds and implementation stages. Some countries, such as Denmark and Germany, include in their budgets a contingency margin for infrastructure projects including PPPs to deal with uncertainties in project costing. During the project implementation phase, proactive risk management requires adequate funding for PPP payments and continuous assessment of fiscal risks by the Ministry of Finance, while contracting authorities manage PPP contracts throughout their term.
- **The Ministry of Finance fiscal risk management function should cover not only the assessment of individual PPP projects but also the overall PPP portfolio.** PPP fiscal risks tend to be correlated among themselves and with other public investment projects (for example, network effects), and are usually highly dependent on key macroeconomic variables (for example, GDP, nominal exchange rate). Therefore, the Ministry of Finance should take decisions at the portfolio level to account for project correlations, evaluating projects as part of a system rather than in isolation.
- **Aggregate limits to PPPs can also be useful.** Although limits per se do not guarantee that PPP costs and risks are better managed, they are a second-best solution when PPPs are not fully integrated in the budget cycle and medium-term fiscal framework, and/or the role of Ministry of Finance is not supported by a strong gateway process. Apart from ensuring that each project brings efficiency when contracted as a PPP, the Ministry of Finance has to determine whether the sum of PPP-related liabilities is affordable. This can be achieved in different ways. Some countries have limited the size of the PPP programs by capping annual government payments to PPPs (Brazil, Colombia, Hungary). Others have limited the stock of the government's commitments in PPPs (El Salvador, Honduras, Peru) or the flow of new commitments, that is, to say not only the cash spent during the budget year but also commitments affecting the medium-term

fiscal framework (Finland, France). Limits can also be imposed on the value of government guarantees granted to PPPs (Cambodia). The adequacy of the limit depends on specific country circumstances, such as the deficit and debt levels, the type of PPP contracts being implemented, as well as government liquidity and solvency considerations. Effective caps require clear and unambiguous metrics and effective monitoring. See more in Box 13.

- **Periodic reviews of PPP efficiency and affordability are critical.** Some countries review their decisions to pursue PPP programs when pressed by crisis situations—as Portugal did in 2011 during a fiscal crisis, canceling the high-speed rail program. Other countries conduct those reviews in the wake of sectoral audits or broader PPP evaluations. Following an evaluation of the private finance initiative (PFI) model—and particularly of the inclusion of several services in PPPs that did not include asset operation—PFI was replaced by a new PPP model, PF2, later also abandoned. In France, audit reports led to hospitals being legally forbidden to procure PPPs. Large sectoral programs were canceled, for reasons of efficiency, in several countries (for example, schools in Egypt, prisons in South Africa, prisons and tribunals in France). Indonesia is currently relaunching a highway PPP program based on a new PPP model, improving on a previous model that had been unsuccessful. Colombia has been periodically reviewing the PPP model for roads, changing contractual provisions as learning and market conditions allow—Colombia’s most recent contracts follow the fourth, improved contractual risk allocation matrix.

Many countries have a PPP unit in a central ministry. This unit serves as a central pool of expertise on PPPs and usually has a relevant role in establishing good project assessment and contract preparation practices. In most countries, PPP units are hosted by a central ministry, such as the Ministry of Finance or the Ministry of Economy. When that unit sits in the Ministry of Finance and is responsible for the promotion of PPPs, prevention of conflicts of interest dictates that another department in the ministry should assume the fiscal risk management function.

## PPP Fiscal Transparency

The effective management of fiscal risks requires transparent reporting practices, ideally anchored in budgeting and accounting standards that minimize fiscal illusion. The way PPPs are budgeted and accounted for in public accounts is an important factor contributing to the ability of governments to manage fiscal costs and risks arising from them. If, contrary to what happens in traditional public procurement, the investment through PPPs does not increase the government’s deficit and debt during the construction of

the asset (for example, roads, schools), the government is exposed to fiscal illusion. In that case, the government would tend to use PPPs irrespective of their associated fiscal costs or risks or overall efficiency. Government could consider the following actions to improve the management of fiscal costs and risks from PPPs:

- Ensure that PPPs have the same effect on the most prominent measures of deficit and debt as traditional public procurement. The objective is to avoid any bias being introduced by the budgetary, accounting, or statistical treatment of PPPs.
- From a budget perspective this objective is achieved by fully integrating PPPs in the budget process and medium-term budgetary framework and treating all infrastructure projects equally. Two steps in the budget appropriation process would be required. First, appropriating total project costs at the time of budget approval regardless of how they are finally procured. As a second step, cash appropriations would cover only those projects that are procured traditionally. This practice would ensure that PPPs are subjected to budgetary controls by the Ministry of Finance and legislative oversight.
- From an accrual accounting and statistical perspective this is achieved by classifying the asset built or purchased through PPP contracts on the government balance sheet. In this case, governments would include initially both an asset and a corresponding liability of the same value. Under accrual accounting and statistics, both PPPs and traditional public procurement increase the deficit and debt during construction, eliminating the possibility of fiscal illusion.<sup>2</sup> This can be applied even if governments are not the legal owners of the assets, as in cases where a special-purpose-vehicle company is created with the sole purpose of implementing a PPP contract.

Regardless of how PPPs are treated in national budgets, financial statements, or fiscal statistics, effective management of fiscal risks requires transparent reporting practices. Information on PPPs can be disclosed together with budget documentation on a best effort basis, being improved over time as better data becomes available (Box 14 includes good reporting practices prescribed by the IMF *Fiscal Transparency Handbook*). Governments could consider the following:

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<sup>2</sup>The International Public Sector Accounting Standard on “Service Concession Agreements” (IPSAS32) puts on the government’s balance sheet any PPP in which the government controls the service that is provided and controls the asset at the end of the contract. The Government Finance Statistics Manual 2014 and the Government Finance Statistics Guidelines 2011, put PPPs on the government balance sheet if the government bears most of the risks and benefits from most of the rewards, regardless of whether the government is the legal owner of the asset.

- Publish baseline forecast of the government’s payments and receipts under PPPs along with long-term fiscal projections, identifying them explicitly. To strengthen fiscal risk management, budget documents should include information on total project costs and multiyear commitments for all large infrastructure projects, including PPPs. In Portugal and the United Kingdom the Treasury and Ministry of Finance publish forecasted annual PPP payments for up to 2060. Other countries include similar information of PPPs in their fiscal risk statements accompanying the budget documents (Georgia, Philippines). In some other countries PPP information is included as part of their debt management reports (Turkey). Transparent disclosing practices demonstrate to financial investors that the government is aware of the long-term costs and the risks from PPPs and that it is managing them. This reduces uncertainty for investors, potentially lowering the risk premium and thus the cost for the government. As PPP contracts cover the life of the project (not only the construction phase), disclosure helps present infrastructure projects in a holistic way and identify their full fiscal cost—something not easily achieved in traditional procurement.
- Disclose the stock of sovereign guarantees to PPPs and assess the likelihood of them being called. In addition to forecasting the PPP net cost for government, information on sovereign guarantees provided to PPP projects should be reported. For example, the Chilean government reports and analyses risks of guarantees provided to user-funded PPPs (for example, minimum revenue guarantees) in its annual report on contingent liabilities. The Colombian government discloses contingent liabilities in PPPs in its annual report on the medium-term fiscal framework.

## **A Clear and Consistent Legal PPP Framework**

The legal framework influences the government’s ability to safeguard public finances and manage fiscal costs and risks arising from PPPs. A sound framework should set the principles and norms for government to ensure proper selection of PPP projects, to prepare efficient contracts, to achieve competitive procurement, and to manage fiscal costs and risks at all stages of the PPP project cycle, while reassuring the private sector that contracts will be honored. Governments have implemented a wide range of legal arrangements, from specific purpose laws (for example, PPP law, concession law) to sectoral regulations (for example, energy law) and contract standardization. Although no one-size-fits-all type of solution exists, and changes in laws and regulations might need time, governments can take the following actions to ensure that key elements are in place to improve their ability to manage fiscal costs and risks from PPPs:



- *Ensure legislative consistency.* Be sure that all norms regulating PPPs are consistent and well aligned with the public investment management legislation; public procurement legislation; and principles, budgetary framework laws, and general transparency and governance norms—see OECD (2020) recommendations on infrastructure governance. Ultimately, the legal uncertainty to which the private sector is exposed, results in higher fiscal costs and risks for government. Inconsistencies may also exist between PPP legal frameworks applicable to subnational governments and national laws; in extreme cases, public and private parties can choose to use national or subnational frameworks according to their specific interests, introducing additional uncertainty and economic distortions.
- *Introduce contract standardization.* Although contract standardization might not be a priority when a country launches its first PPPs and is still gaining experience, those countries that are planning to rely heavily on PPPs to provide infrastructure in key sectors would benefit significantly from standardizing several PPP contract clauses. Several countries have moved in this direction (for example, the United Kingdom many years ago, Colombia more recently) as a way to reach efficiency and improve the management of fiscal risks arising from contract clauses. Standard contract provisions can provide guidance to procuring authorities in designing PPP contracts and help to ensure consistency among projects, reduce transaction costs, and increase transparency. Standardization is most relevant for PPP contract clauses dealing with performance monitoring, performance-related penalty schemes, change orders, force majeure, change in law, reporting requirements, dispute resolution mechanisms, refinancing, termination events, and hand-back of assets. Standardized provisions should also provide temporary emergency regime such as permitting the adjustment of timelines and performance parameters, and the suspension of penalties for non-performance caused by force majeure events. Recognizing that there is no “one size fits all” approach, countries should try to strike the right balance between standardization and customization to have “tailor-made” provisions dealing with the individual characteristics of specific projects or sectors. Contracting authorities may need to request from the Ministry of Finance authorization for some deviation from the standard, whenever specific circumstances so advise. Standard provisions should also be reassessed by the contracting authority from time to time to take into account market evolution and changes in legislation. See examples in Box 15.
- *Incorporate a well-defined rationale for procurement through PPPs in the legal framework, complemented with clear sectoral strategies.* The role of PPPs in the provision of national infrastructure and the reasons for procuring PPPs (namely, bringing added value through private management of infrastructure) should be clearly stated in either the legal and regulatory framework or a similar high-level document (for example, national public investment

strategy). This will contribute to developing a shared vision between the government and private investors on the value of infrastructure and the parameters under which future partnerships can effectively generate commercially viable solutions.

Governments should consider prohibiting the acceptance unsolicited proposals or creating a strict regime for their assessment and procurement. Any private entity, as a member of civil society, can suggest new infrastructure projects. Therefore, what is at stake in formally accepting an unsolicited proposal is giving to some private entity the status of “proponent,” somehow involved in defining the project concept or in developing it. That status, even if not coupled with any favorable regime (such as additional points or the right to match the winning proposal) tends to reduce competition—while the right-to-match often eliminates competition. Many jurisdictions (for example, in Europe) do not accept unsolicited proposals for PPPs; others have created a rigorous legal framework for them (see World Bank (2018) on South Africa, the Commonwealth of Virginia in the United States, or the State of Victoria in Australia) and have witnessed a significant reduction in the number of unsolicited proposals (probably the result of less space for opportunistic proposals). Good practices when accepting unsolicited proposals for PPPs (see, again, World Bank (2018)) recommend that governments submit them to independent review; take control of project development and contract design; and call for open, competitive tender—notwithstanding experience that shows poor competition for those projects, a major reason for rejecting them or for creating enough capacity in government to avoid them.

In each country, the Ministry of Finance and the Finance Minister—as the guardians of fiscal sustainability—should be provided with a clear legal mandate on PPPs. The fiscal risk oversight functions of the Ministry of Finance should be underpinned by a robust legal framework providing for clear institutional arrangements and an explicit legal mandate to the Finance Minister to manage fiscal costs and risks stemming from PPPs—contracting authorities must seek the Finance Minister’s approval (or *nihil obstat*) for the selection of PPP projects, for the draft contract (and explicitly for any deviations from standard clauses), and for contract award (or renegotiation). The Minister of Finance should also be given the legal authority to require the relevant information from different government entities, agencies, and state-owned enterprises to identify and analyze the risks. The absence of a formal authority may mean that the Ministry of Finance will have to rely on moral suasion over line ministries and other contracting authorities.

**Box 11. Examples of Gateway Processes for Controlling PPP Liabilities and Risk**

PPP approval processes should be supported by appropriate gateway safeguards to ensure that only efficient and fiscally affordable PPP projects are allowed to advance. The gateway process, which covers project identification, appraisal, selection, resource allocation, and procurement is a sequence of decision points wherein many institutional actors have specific responsibilities (for example, procuring agencies, Ministry of Finance, approving bodies, etc.). In particular, the role of the Ministry of Finance in the gateway process is key to safeguard public finances against excessive fiscal costs and risks from PPPs. A clear and effective gateway process provides a space for evidence-based decisions and allows the finance minister to stop a PPP project that does not provide efficiency or that puts public finances at risk. It keeps sectoral policy responsibility in the hands of line ministers while providing a degree of filtering by the Finance Minister.

Some countries with significant PPP programs, such as the Portugal, South Africa, and the United Kingdom, have created gateway processes specifically to contain fiscal costs and fiscal risks. In **South Africa**, the central government also has oversight and approval responsibilities for PPPs developed in local governments. The National Treasury requires four stages or gateways: (1) feasibility stage; (2) tender documents, that is, tender rules and draft contract; (3) bid evaluation; and (4) approval of the final contract terms. In **Portugal**, the gateway process requires that PPPs be reviewed by the UTAP (a PPP unit within the Ministry of Finance) and approved by the Finance Minister at several stages. The process requires that project development is led by a steering committee that includes UTAP members and that tender documents are thoroughly reviewed by UTAP before the Minister approves the call for tender; later the Minister authorizes the respective line minister to sign the PPP contract after a review by UTAP. Any renegotiation of the contract also requires involvement of UTAP and approval by the Finance Minister.

In **France**, all public authorities (national or local) preparing a PPP (*marché de partenariat*) are required to prepare an assessment of the fiscal impact and fiscal risks of the PPP over the lifecycle of the project. This fiscal risk assessment report (*évaluation de la soutenabilité budgétaire*—ESB) aims at generating fiscal transparency in the context of the budgetary process. The Budget Department within the Ministry of Finance is in charge of defining the methodological framework for these fiscal risks assessment reports and of reviewing each report. In a situation where this report would demonstrate insufficient fiscal sustainability for a project, the Budget Department could stop the process and prevent the public authorities from engaging further in the public procurement. The Budget Department is also in charge of reviewing central government contracts, checking for excessive fiscal risks or lack of affordability. In such cases, the Budget Department can stop the process and prevent the signature of the contract.

Sources: Code de la Commande Publique; EPEC (2014); and South Africa Public-Private Partnership Manual;.

### Box 12. PPP Fiscal Risk Assessment Model

PPP Fiscal Risk Assessment Model (PFRAM 2.0), developed by the IMF and the World Bank, is an analytical tool for assessing the potential fiscal costs and risks arising from PPP projects. Since it was launched in April 2016, it has been used in IMF and World Bank technical assistance and by country authorities—mainly PPP units in ministries of finance—to estimate fiscal costs and risks arising from typical PPP contracts in line with international accounting and statistical standards.

It cannot substitute for a complete project financial assessment, but it can assist budgetary authorities to better understand the sources and potential fiscal impact of different risks materializing (for example, demand slowdown, currency appreciation, contract termination).

It allows users to analyze both specific PPP projects and/or a combined portfolio of up to 30 projects, at different stages of the project cycle. While it does not explicitly model correlations among projects, it has the capability to perform scenario analysis and estimate the impact on individual projects, as subset of them, or the entire portfolio, of changes in key macroeconomic variables as GDP, inflation, or nominal exchange rate.

The tool can also be used to assess a PPP project idea and compare potential fiscal costs and risks from different contract structures and funding options.

PFRAM is available in English, Spanish, and French with a user manual including exercises.

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Source: IMF Infrastructure Governance.

**Box 13. Limits to Government Exposure to PPPs**

Beyond managing fiscal exposure on a project basis, limiting the size of the PPP portfolio can be useful for managing fiscal risks while safeguarding public finances, particularly for cases wherein the legal, regulatory, and institutional framework supporting PPPs is weak or still developing. While not a substitute for fiscal discipline in medium-term planning, limits can help to contain PPP commitments and fiscal risks to affordable levels. To achieve this objective, limits should be measured using an unambiguous measure that capture the overall fiscal exposure, so they can be credible and verified by independent experts. There is no rule of thumb for the level at which PPP limits should be set. The assessment of the maximum size of a PPP portfolio should be guided by the medium-term budget framework and debt sustainability analysis. These should incorporate PPP-related fiscal commitments, expected government payments, as well as sensitivity analysis of the likelihood of risks materializing under various scenarios (for example, guarantees, contract termination).

Some countries impose limits on PPP-related flows. In the United Kingdom, PPP-related payments were limited to £70 billion across a five-year period from fiscal year 2015–16 (£14 billion a year on average). This amounts to 0.8 percent of the GDP in the first year that parliament introduced this limit. In Brazil, the 2004 federal PPP law initially sets a ceiling on current spending from PPP contracts of 1 percent of net current revenue, applicable to all levels of government. The limit was subsequently raised in 2009 to 3 percent and in 2012 to 5 percent. New subnational PPP commitments cannot be guaranteed by the federal government if (1) existing commitments already amount to 5 percent of net current revenue or (2) the new contract would entail commitments in excess of 5 percent of net revenues at any time during the forthcoming 10 years. In China, PPP fiscal liabilities allocated from the budget of any local government shall not exceed 10 percent of its annual expenditure—and when those liabilities account for more than 10 percent, no new PPP project can enter the Project Management Database, implying that no new PPP project will be developed.

Others choose to limit PPP-related stocks. Peru imposes a limit on the present value of the total fiscal commitments to PPPs (excluding governmental finance entities), which shall not exceed 12 percent of GDP. However, every three years, the President may, with the endorsement of the Ministry of the Economy and Finance, issue a decree to revise this limit, depending on the infrastructure needs of the country. The State of Karnataka in India limits the stock of guarantees at the beginning of the financial year to 80 percent of the government's revenue two years before.

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Sources: Brazil's Federal PPP Law (BR 2004a, Law 11079); China, Implementation Opinions on Promoting Regulated Development of PPPs; NAO (2018); and Peru Legislative Decree No. 410–2015-EF (PE 2015).

**Box 14. IMF Fiscal Transparency Evaluation: Good Practice in Reporting on PPPs**

<b>Basic practices</b>	<b>Good practices</b>	<b>Advanced practices</b>
The government at least annually publishes its total rights, obligations, and other exposures under public-private partnership contracts.	The government at least annually publishes its total rights, obligations, and other exposures under public-private partnership contracts and the expected annual receipts and payments over the life of the contracts.	The government at least annually publishes its total rights, obligations, and other exposures under public-private partnership contracts and the expected annual receipts and payments over the life of the contracts. A legal limit is also placed on accumulated obligations.

Source: IMF, 2017, *Fiscal Transparency Handbook*.

**Box 15. Reporting on PPPs by the Public Sector**

There are three frameworks for reporting PPPs transactions in fiscal accounts: government budget, financial statements, and government financial statistics. Ideally, these three frameworks would rely on an integrated financial information system to estimate consistently the fiscal impact of PPPs. Moreover, to achieve consistency among these frameworks PPP-related assets should be equally recognized in all of them. For PPPs to impact the government's accounts, the underlying nonfinancial asset in a PPP contract should be regarded as a public asset, regardless of the legal arrangements supporting the PPP contract. In practice, most countries treat PPPs differently in their budgets, financial statements, and statistics, significantly reducing fiscal transparency.

*Budgeting for PPPs*

PPPs are hard to manage in traditional annual budget cycles, given that some PPP related costs may occur in the future or may be contingent on the occurrence of specific events. Most countries include in their annual budget PPP-related payments, such as ongoing availability payments, subsidies or grants. However, budgeting for long-term commitments in PPPs is more challenging, even when medium-term budget frameworks (MTBF) are in place, given that fiscal commitments in PPPs go beyond the three to four years covered by the MTBF. Similarly, given that most countries' budgets are conducted on a cash basis, they do not reflect the level of future government commitments during the construction phase where government payments are not required, reducing the ability of the legislative to control overall fiscal commitments from PPPs. In extreme cases, PPPs funded by users are never budgeted for, given that they typically do not require cash appropriations during their whole lifecycle. In addition to PPP commitments, budgets should also reflect contingent liabilities arising from PPPs (for example, guarantees). Typical mechanisms for budgeting for contingent liabilities under PPPs include budgetary contingency lines and contingent liabilities funds.

There are some examples of good practices introduced by countries to overcome the challenges in budgeting for PPPs. In the State of Victoria, Australia, a department considering a PPP must first seek approval for the budget capital spending that would be required as if the project received public funds. If the project is procured as a PPP, required budget cash appropriations are planned accordingly, at a second stage, depending on the project cycle (that is, construction or operation) and type of project (that is, government- or user-funded). By doing that, the treatment of PPPs in the budget is similar to traditional procurement, allowing for legislative oversight of PPP long-term commitments. Colombia requires implementing agencies to make a cash transfer to a

Sources: China's National PPP Integrated Information Platform; Colombia's law on contingent liabilities (CO 1998, Article 6); IPSAS-32; OBR (2017); Philippines; Portugal; and State of Victoria, Australia National PPP Guidelines (AU 2017); .

### Box 15. Reporting on PPPs by the Public Sector (*continued*)

contingency fund when a PPP project is signed. The cash transfer is set equal to the expected cost of programs including any guarantees provided. This means that the decision to accept a contingent liability has an immediate budget impact. Chile's Ministry of Finance assesses the cost of PPP-related guarantees (for example, minimum revenue guarantee) provided to PPP operators and creates a budget line for those guarantees.

#### *Accounting for PPPs*

Governments publish annual financial statements, which ideally should include PPPs when the underlying assets are regarded as public assets. In 2011, the International Public Sector Accounting Standards Board (IPSASB) introduced IPSAS-32 "Service Concession Arrangements: The Grantor" that defines when PPP assets and liabilities should be recognized on the government's balance sheet under accrual standards. Under IPSAS-32 asset recognition criteria, most PPPs are treated as belonging to the government, thus recording both assets and related liabilities on the balance sheet of the government (that is, "on-balance sheet"). While IPSAS 32 is an accrual standard, it also has implications for accounting of PPPs on a cash basis, given that the same asset should not be classified differently depending on the basis of recording.

An increasing number of countries have adjusted their public sector accounting standards to comply with IPSAS-32. Australia and New Zealand have well-developed national accounting systems that are closely aligned to IPSAS standards, particularly in the treatment of PPPs. The United Kingdom publishes its financial statements and the Whole of Government Accounts—a consolidation of all the audited accounts across the public sector—using the International Financial Reporting Standards (IFRS) that are broadly aligned to IPSAS standards. These rules classify nearly all PFI/PPP assets as "on-balance sheet," for financial accounting and reporting purposes. Turkey has recently aligned its national accounting standards to IPSAS—particularly IPSAS-32, requirements are being implemented that would classify a large number of its PPPs "on-balance sheet."

#### *PPPs in Government Finance Statistics*

The IMF's *Government Finance Statistics Manual* (GFSM 2014), in line with *System of National Accounts* (SNA 2008), sets out the criteria for classifying PPP assets and liabilities in government statistics (that is, public sector net lending/borrowing, cash balance, and public sector gross and net debt). The asset recognition criteria for classifying a PPP asset as belonging to the government is different from that used by IPSAS-32 (see Box 2 for a detailed discussion of the control versus risks and rewards approach). And while in substance this discrepancy is not large, in practice the results of its implementation by most countries is quite different. Implementation of IPSAS 32



**Box 15. Reporting on PPPs by the Public Sector (continued)**

control approach is simple and leads to most PPPs assets being classified in the government's accounts. On the contrary, SNA 2008 only sets the principles (risks and rewards approach) giving countries the flexibility to implement them in practice. In Europe, to address the challenge arising from the need of comparability across member countries, Eurostat uses a rules-based approach to decide whether PPP assets and liabilities are to be included on government balance sheets. Historically, even after several rounds of updates, Eurostat guidelines have led countries to record most PPPs off-balance sheet of the government.

For example, in the United Kingdom, while most PPPs are included in Whole of Government Accounts, the majority of them is reported as off-balance sheet under the Eurostat guidelines, which determines government debt levels. As noted by the Office of Budget Responsibility “most public and political attention, and the government's fiscal rules, still concentrate on the National Accounts measures of PSND (public sector net debt) and PSNB (public sector net borrowing),” which does not fully reflect PPP liabilities.

*Other Reporting of PPPs Transactions*

To strengthen fiscal transparency in PPPs, countries have found different ways to disclose information on PPPs, overcoming weaknesses in national budgeting, accounting, and statistical frameworks. For example, Chile publishes an annual contingent liabilities report that originally presented information on contingent liabilities from revenue and exchange rate guarantees provided to PPP operators. Since 2016 this report has been expanded in coverage to include other type of contingent liabilities—and complexity—including better estimates of the probability of these contingencies of materializing. In Portugal the Ministry of Finance, through its PPP unit (UTAP), publishes quarterly data on PPPs, including the time profile of expected future payments for the existing PPP portfolio. The Philippines publishes an annual Fiscal Risk Statement that provides a comprehensive view of the country's exposure to macroeconomic risks and contingent liabilities associated with PPPs—among other sources of fiscal risks—and summarizes the government's policies to manage and mitigate them. China has established a National PPP Integrated Information Platform (managed by the China PPP Center under the Ministry of Finance) for managing and publishing information on PPP projects nationwide. Each PPP project must be registered in the Platform. Basic information on PPP projects as well as procurement information are disclosed in the Platform and in China's Government Procurement Center website. Finance departments or departments in charge of relevant industries at local levels, implementing agencies, non-governmental investors, consulting service agencies, financial institutions, experts, the public, and other users may visit or inquire PPP-related information via the internet.

**Box 16. Examples of Standardization of PPP Contractual Provisions**

Several countries have developed standardized PPP contracts or provisions for different types of infrastructure projects. For instance, South Africa's National Treasury published its Standardized PPP Provisions; South Korea published a Standard Concession Agreement for Build-Transfer-Operate Road (BTO) Projects; United Kingdom published guidance on the Standardization of PFI and PF2 Contracts; and India has model concession contracts for several transport sectors, for example, the Model Concession Agreement (MCA) for Port Sector PPP projects.

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Sources: India Model Concession Agreement for Private Sector Projects in Major Ports; Korea Standard RFPs for Build-Transfer-Operate PPP Projects; South Africa National Treasury Standardised PPP Provisions; and UK Standardisation of PF2 Contracts.



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