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Assessing Fiscal Implications

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A proposed PPP project may be feasible and economically viable, and value for money analysis may show that the PPP is the best option to procure it. Nonetheless, the government also needs to decide whether the PPP project is affordable and fiscally responsible, given its fiscal constraints.

Many governments have entered into PPPs not fully understanding their potential costs. This can create significant fiscal risk for governments (see Insufficient Funds). To avoid this pitfall, governments need to assess fiscal affordability when they appraise a PPP project so that they do not go to market with projects they cannot afford.

Fiscal commitments can be either direct or contingent.

- Direct commitments are those the government knows it will have to make if the PPP project goes ahead—for example, the availability payments for a school PPP.
- Contingent payments are ones that will only be made if certain events occur—for example, payments that may have to be made under a minimum traffic guarantee if traffic levels are below projections on a PPP highway, or compensation in the event of early termination.

For more on these concepts, see Types of Fiscal Commitments to PPPs.

Governments need to assess the likely costs of both types of commitments. Once likely fiscal costs are identified, governments need to assess whether they are affordable. Controlling Aggregate Exposure to PPPs describes how governments can assess the affordability of those commitments. For example, by comparing annual cost estimates against the budget of the contracting authority, considering the impact on debt sustainability under various scenarios, or introducing specific limits on different types of PPP commitment. A **World Bank note on managing fiscal commitments from PPPs** (WB 2013b) provides an overview of typical types of fiscal commitments to PPP projects, and how these can be assessed.

Assessing cost of direct fiscal commitments

Direct fiscal commitments may include up-front capital contributions or regular payments by government such as availability payments or shadow tolls, as described in Types of Direct Payment Commitments to PPP Projects.

Types of Direct Payment Commitments to PPP Projects

Direct liabilities are payment commitments that are not dependent on the occurrence of an uncertain future event (although there may be some uncertainty regarding the value). Direct liabilities arising from PPP contracts can include:

- **Upfront viability gap payments**—an up-front capital subsidy (which may be phased over construction, or against equity investments).

- **Availability payments**—a regular payment or subsidy over the lifetime of the project, usually conditional on the availability of the service or asset at a contractually specified quality. The payment may be adjusted with bonuses or penalties related to performance.
- **Shadow tolls, or output-based payments**—a payment or subsidy per unit or user of a service—for example, per kilometer driven on a toll road.

For more on types of payment commitments, see Public Financial Management Frameworks for PPPs.

The nature of the government's direct commitments will be defined during the structuring process described in Structuring PPP Projects. This highlights the importance of a back-and-forth process between appraisal and structuring. The government should have an idea of the level and type of support that will be needed to make a project bankable to assess fiscal affordability before investing large amounts in project preparation. Fiscal limits set in appraisal can then inform further structuring efforts until the project converges on a structure that is both fiscally responsible and attractive to the market. In fact, the value of the direct fiscal commitments is often a key bid variable, as described in Managing PPP Transactions. This means the fiscal cost cannot finally be known until after the tender process is complete.

During the appraisal stage, the value of the direct fiscal commitments required can be estimated from the project financial model, described in Assessing Commercial Viability. The value of these direct payment commitments is driven by the project costs and any non-government revenues. The value of the direct fiscal contribution required is the difference between the cost of the project (including a commercial return on capital invested) and the revenue the project can expect to earn from non-government sources such as user fees.

The fiscal cost can be measured in different ways:

- **Estimated payments in each year**—that is, the amount that the government expects to have to pay in each year of the contract, given the most likely project outcomes. This is the most useful measure when considering the budget impact of the project.
- **Net present value of payments**—if the government is committed to a stream of payments over the lifetime of the contract—such as availability payments—it is often also helpful to calculate the net present value of that payment stream. This measure captures the government's total financial commitment to the project, and is often used if incorporating the PPP in financial reporting and analysis (such as debt sustainability analysis). Calculating the net present value of future payments requires choosing an appropriate discount rate—the choice of discount rate to apply when assessing PPP projects has been a subject of much debate.

In both cases, it is also helpful to estimate how the payments might vary—for example, they may be linked to demand, or be denominated in a foreign currency and so be subject to exchange rate changes. **Irwin's paper on fiscal support to PPPs** (Irwin 2003, 16–17 and Annex) provides more detail on measuring the cost of different kinds of fiscal support.

Having estimated the cost of direct payment commitments, the government needs to decide if they are affordable. Controlling Aggregate Exposure to PPPs describes how some governments consider the affordability of direct payment commitments under PPPs—for example, this can include projecting current spending levels forward, or introducing specific limits on government payment commitments to PPPs. An **OECD publication on PPPs** (OECD 2008a, 36–46) provides a helpful overview.

Assessing the cost of contingent liabilities

Contingent liabilities arise in well-designed PPP projects because there are some risks that government is best placed to bear. These risks should be defined throughout project structuring—see Structuring PPP Projects.

Assessing the cost of contingent liabilities is more difficult than for direct liabilities, since the need for, timing, and value of payments are uncertain. Broadly speaking, there are two possible approaches, as described in the **Infrastructure Australia guidance note for calculating the PSC** (AU 2016b, 84–109):

- **Scenario analysis**—scenario analysis involves making assumptions for the outcome of any events or variables that affect the value of the contingent liability and calculating the cost to the government given those assumptions. For example, this could include working out the cost to government in a worst-case scenario, such as default by the private party on its debt obligations at various points in the contract. It could also include calculating the cost of a guarantee on a specific variable—for example, demand—for different levels of demand outturns.
- **Probabilistic analysis**—an alternative approach is to use a formula to define how the variables that affect the value of the contingent liability will behave and use a combination of mathematics and computer modeling to calculate the resultant costs. This enables analysts to estimate the distribution of possible costs, and calculate measures such as the median (most likely) cost, the mean (average) cost, and different percentiles (for example, the value within which the cost is likely to lie 90 percent of the time). However, producing useful results requires a lot of information on the underlying risk variables.

Scenario analysis is the simpler form of risk analysis, and gives a sense of the range of possible outcomes, but not their likelihood. In practice, most governments use scenario analysis, if anything, to assess the possible cost of contingent liabilities. A probabilistic approach requires more input data, and complex statistical analysis. In practice, only a few governments have used probabilistic analysis to assess a few types of contingent liabilities.

Irwin's book on government guarantees (Irwin 2007) provides a comprehensive discussion of why and how governments accept contingent liabilities under PPP projects by providing guarantees, and how the value of these guarantees can be calculated. The following resources provide more guidance and example of how particular countries approach this problem:

- **Colombia's Ministry of Finance** has defined its approach to assessing the financial and economic implications of contingent liabilities; accounting, budgeting and assessing the fiscal implications of contingent liabilities; and identifying, classifying, quantifying and managing contingent liabilities. This approach is set out in a presentation on management of contingent liabilities (CO 2012b).
- In **Chile**, the Ministry of Finance has developed a sophisticated model for valuing minimum revenue and exchange rate guarantees to PPPs. This valuation is updated on an ongoing basis for all PPP projects, and reported in an annual report on contingent liabilities (CL 2016). The report includes a brief description of the techniques used in Chile to analyze and value guarantees extended to PPP projects. **Irwin and Mokdad's paper on managing contingent liabilities from PPP projects** (Irwin and Mokdad 2010, Appendix 1) also describes the Chilean methodology in more detail.
- **Peru's Finance Ministry** has also published a methodology for valuing contingent liabilities under PPPs—available on the Ministry's website section on managing contingent liabilities (PE Pasivos).

Defining and publishing a methodology for valuing contingent liabilities from PPPs is only part of the solution—implementing such methodologies in practice can be demanding. Governments may need to strike a balance between building capacity in risk analysis, and adopting sufficiently straightforward and simple approaches to this assessment that can be implemented in practice.

Having estimated the cost of contingent liabilities, the government can assess whether they are affordable given fiscal constraints. For example, as described in Controlling Aggregate Exposure to PPPs, this could include considering the implications of PPP contingent liabilities in the context of overall debt sustainability

analysis, or specific limits on PPP liabilities. A few countries, such as Indonesia, have introduced contingent liability funds to ringfence and budget for these liabilities. The **EPEC publication on State Guarantees in PPPs** (EPEC 2011a) also provides a helpful overview of different approaches to managing the fiscal implications of PPP contingent liabilities.

Check out Assessing Fiscal Implications of a PPP Project.

Related Content

- **INTRODUCTION**
- **PPP BASICS: WHAT AND WHY**
- **ESTABLISHING THE PPP FRAMEWORK**
- **PPP CYCLE**
- **Identifying PPP Projects**
- **Appraising Potential PPP Projects**
- **Structuring PPP Projects**
- **Designing PPP Contracts**
- **Managing PPP Transactions**
- **Managing PPP Contracts**
- **Dealing with Unsolicited Proposals**

- **Key References - PPP Cycle**

Additional Resources

- Managing the Fiscal Implications of Public-Private Partnerships in a Sustainable and Resilient Manner: A Compendium of Good Practices and Lessons Learned from the COVID-19 Pandemic
- Public-Private Partnerships Fiscal Risk Assessment Model (PFRAM) (2019) : Version 2.0

Find in pdf at PPP Reference Guide - PPP Cycle or visit the PPP Online Reference Guide section to find out more.

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