PUBLIC-PRIVATE PARTNERSHIPS FISCAL RISK ASSESSMENT MODEL USER GUIDE

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Preliminary version

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BACKGROUND

This guidance note describes how to use the analytical tool Public-Private Partnerships Fiscal Risks Assessment Model (PFRAM) developed jointly by the IMF's Fiscal Affairs Department and the PPP-CCSA of the World Bank Group.

The PFRAM was developed as an analytical tool to assess systematically the potential macro-fiscal implications of Public-Private Partnership projects (PPPs). While there is wide consensus on the need to improve project evaluation techniques for PPPs to ensure that only the right projects are procured, better project evaluation techniques cannot, by themselves, ensure the budget affordability of a project. Typically, financing and funding conditions for projects are agreed under completely separate processes. Given the disconnect between project and financial evaluation techniques, governments may end up procuring projects that either cannot be funded within the existing budgetary envelope, or that expose the public finances to excessive fiscal risks. Based on international accounting and statistical standards, the PFRAM allows the user to estimate the macro-fiscal implications of PPP projects—i.e., their impact on the fiscal deficit, gross and net debt, and stock of contingent liabilities for government. It also provides a framework to identify fiscal risks linked to a PPP project, evaluate them, and discuss appropriate mitigation measures.

SCOPE OF THE PFRAM

PFRAM is flexibly enough to accommodate various types of PPP contracts and country specifics. It is an Excel-based tool with embedded macros that make it easy to use, update, and share between different users. It was designed to help country teams—and other fiscal analysts that are not PPP experts—identify which elements of a PPP contract are critical to determine potential fiscal costs and fiscal risks of a PPP project. Understanding the costs and risk arising of a project facilitates the communication with the authorities, refocusing the discussion on how to improve fiscal transparency and to design an appropriate risk mitigation strategy.

Although there is no universally accepted definition on PPPs, for the purpose of the PFRAM we refer to PPPs as long-term arrangements where the private sector supplies infrastructure assets and services that traditionally have been provided or financed by the government, where the public and private sectors share significant risks, and remuneration to the private is linked to performance. This includes two broad type of PPP projects:

- PPP projects in which the government pays the private partner for the assets and/or services provided (i.e., government-funded PPPs)
- Concessions in which users are expected to be the main source of revenue of the private partner (i.e., user-funded PPPs), even if the government provides additional support in the form of subsidies, guarantees, etc.

INTRODUCTION

PPPs exclude simple joint ventures, the sale of public assets or of public company shares—which are part of a privatization process—and arrangements in which the private partner is not required to finance investment. Some examples of PPP definitions used around the world are included in Box 1.

Box 1. Definitions of PPPs

United Kingdom: "PPPs are arrangements typified by joint working between the public and private sectors. In their broadest sense they can cover all types of collaboration across the private-public sector interface involving collaborative working together and risk sharing to deliver policies, services and infrastructure." [1]

The Netherlands: "A form of cooperation between government and business (in many cases also involving NGOs, trade unions, and/or knowledge institutions) in which they agree to work together to reach a common goal or carry out a specific task, jointly assuming the risks and responsibility and sharing their resources and competences."[2]

South Africa: "PPP is a contract between a public sector institution/municipality and a private party, in which the private party assumes substantial financial, technical and operational risk in the design, financing, building and operation of a project."[3]

World Bank PPP Reference Guide: "A long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance."[4]

European Commission (EC): EU law does not legally define PPPs. Yet, it identifies two type of PPPs used in member states: contractual PPPs and institutional PPPs, and in the Green Paper on PPPs, it sets up some elements characterizing them.[5]

[1] UK Treasury, *Infrastructure Procurement: Delivering Long-term Value* (2008).

[2] Ministry of Foreign Affairs of the Netherlands (2013).

[3] Republic of South Africa, National Treasury.

[4] Public-Private Partnerships, Reference Guide, Version 2.0. World Bank (2014).

[5] EC (2004), COM/2004/327 final, Green Paper, on Public-Private Partnerships and Community Law on Public Contracts and Concessions.

INTRODUCTION

WHAT DOES THE PFRAM DO?

Evaluates one PPP project at a time	PFRAM is designed to be used with one PPP project at the time—or a group of similar projects—building on readily available information from a PPP contract as well as analyst' estimates. It works best for bigger projects (or a group of similar projects), as it assesses systemic risks and macroeconomic impacts, but could be used for projects of any size.
It is suitable to evaluate both existing project and project ideas	PFRAM can be used to evaluate an existing PPP project at its different stages of the project cycle, as well as to evaluate an idea for a potential project. In the latter case, PFRAM can assist analysts in understanding a PPP project potential fiscal implications under different funding assumptions, risks sharing arrangements, and macroeconomic scenarios.
Estimates fiscal impact in line with international standards and best practices	The fiscal impact of a PPP project is estimated following IPSAS 32 (*International Public Sector Accounting Standards No 32, Service Agreements*). Main fiscal aggregates are presented in the GFSM 2014 format (*Government Finance Statistics Manual, 2014*) and in line with the PSDG 2011 (*Public Sector Debt Guidelines for Users, 2011*).
Estimates fiscal impact both on an accrual and cash basis	Although PFRAM is modeled following accrual standards (IPSAS 32), it estimates the impact of a project both on an accrual basis (i.e., income statement, balance sheet) and on a cash basis (i.e., cash statement). Therefore, PFRAM can be used in countries with different level of development in their accounting systems. PPP projects are typically not properly reported in headline fiscal indicators (i.e., deficit and debt), particularly in countries with cash-base accounting systems. This is because, at the beginning of a project, when the PPP-related asset is constructed by the private partner, the impact on the government's cash balances is usually marginal. Yet, on an accrual basis, as soon as the contract is signed, government commitments can be significant and may result in large fiscal risks. To provide clear perspectives on the actual fiscal cost and risk of a PPP project, the tool simulates the impact on fiscal deficit, gross/net debt, and contingent liabilities, using both cash and accrual accounting. The simulations can then be compared to country-specific reporting standards to evaluate how far/close they are from best practices.

Generates a summary Project Risk Matrix (PRM)	Following a structured questionnaire, PFRAM assists the users to identify main risks arising from a PPP project, its allocation, likelihood, impact, as well as potential mitigation measures. Information provided by the users is summarized in a Project Risk Matrix (PRM).
Allows for sensitivity analysis of both macro and project specific variables	PFRAM allows users to input alternative assumptions about key macroeconomic variables (e.g. GDP, inflation) and project parameters (e.g. contract termination). This is also useful when contract information is limited and/or when the PPP project is still under negotiation, allowing the user to check results based on alternative scenarios.

WHAT THE PFRAM DOESN'T DO

It is not suitable for evaluating a PPP portfolio	PFRAM is designed to evaluate one PPP project at a time. I can also be used to evaluate a group of similar projects, as if they were one big project. However, care should be exercised when aggregating the analysis of different projects in a PPP portfolio, given that risks arising from different projects could be—and typically are—correlated.
It does not substitute for a complete financial and economic project evaluation	PFRAM aims at estimating macro-fiscal implications of a PPP project based on a limited amount of information (typically included in the financial model of the project) and analyst' assumptions. As a result, it gives only a broad idea about the potential fiscal costs and risks of a project.

The PFRAM at work

In practice, assessing a PPP project involves both gathering specific project data and making judgments about the government's role at key stages of the project cycle. In making such an assessment, there are several key considerations that are difficult to disentangle in practice. The tool provides a structured process for gathering this information following a five steps decision-tree.

HOW DOES THE PFRAM WORK?

1. Who initiates the project?	PPP projects can be undertaken by the central government, sub-national governments, or state-owned enterprises. The impact on headline fiscal indicators varies depending on the country's institutional coverage (i.e., general government or total public sector).
2. Who controls the asset?	Simple standardized two questions assist the user in deciding about the public sector's ability to control the PPP-related asset—either through ownership, beneficial entitlement, or otherwise. If the public sector is regarded as controlling the asset, it should recognize it in its balance sheet, together with its corresponding liability, and revenues and expenses should be accounted accordingly.
3. Who ultimately pays for the asset?	PFRAM focuses on funding alternatives for developing the project, rather than looking at how the private partner finances construction and operation of the project (financing options). Three funding alternatives are considered: (a) the government pays for the asset using public funds—e.g., through availability payments; (b) the government allows the private partner to collect fees directly from users of the asset—e.g., tolls; and (c) a combination of the previous two. Each alternative will have a different fiscal impact.
4. How are payments done?	Government payments and user payments can be fixed or vary over time. Availability payments by government are typically fixed, but government can also commit to a string of payments with a particular adjustment mechanism (e.g., adjusted by inflation, nominal exchange rate). Similarly, user payments (e.g., tolls) are typically adjusted over time.

5.	**Is there any additional support provided by government?**	PFRAM estimates the impact of both firm and contingent liabilities arising from PPPs. Firm liabilities arise when the government controls the PPP-related asset; while contingent liabilities may also arise even when the asset is regarded as private. Typically, contingent liabilities refer to debt guarantees, minimum revenue guarantees. Other ways of government support considered include subsidized prices for asset-related services, equity injections, tax amnesties, among others.

BUDGETING, ACCOUNTING, AND REPORTING PPPS

Most countries deviate significantly from international best practices in terms of accountability and transparency of PPPs, limiting a proper and timely assessment of potential fiscal implications of PPP projects.

In addition, comparing national practices is complicated by the fact that data on PPPs can be generated and reported in different ways along a typical fiscal cycle. Box 2 describes a typical fiscal cycle, identifies the main type of fiscal reports generated during the cycle, and highlights the role of the accounting system in integrating fiscal data.

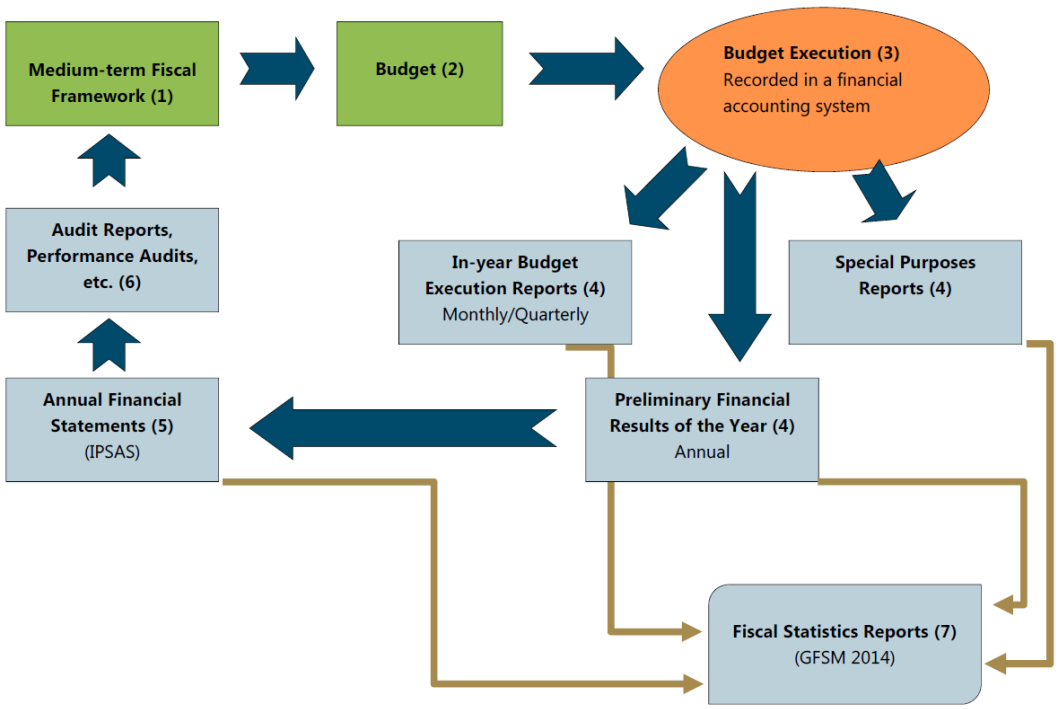
Ideally, PPPs should be embedded in the medium-term fiscal framework and annual budget process, while an integrated financial accounting system would provide the data to be included in various reporting formats during the fiscal cycle.

In practice, the way PPPs are reflected in the fiscal cycle is country and project specific depending on several factors. For example, PPPs may not be included in the fiscal cycle if the related asset procured during the project (e.g., the road, bridge, hospital) is regarded as being owned by the private partner (or owned by a company created specifically for this purpose that is typically classified as private sector).[6] Similarly, in countries where budgets and accounting systems are mostly on a cash basis, even if the asset procured by the PPP is regarded as belonging to a public entity, PPP operations would not be shown in fiscal reports at early stages of the PPP cycle (i.e. construction).[7] Moreover, countries may report PPP operations inconsistently among different fiscal reports. For example, PPPs can be excluded from budget execution reports (element 4 in Box 2), while the related assets and liabilities shown in the annual financial statements follow international accounting standards (IPSAS).

[6] Typically as Special Purpose Vehicle (SPV) created to finance and manage the PPP related asset.

[7] Given that there are no cash movements for the government at the construction stage of the project cycle.

Box 2. A Typical Fiscal Cycle and Fiscal Reports[8]



A fiscal cycle typically begins with a medium-term fiscal framework (**element 1**) that sets the premises on which the government's budget is prepared (**element 2**). As the budget in executed, transactions are recorded in a financial accounting system (**element 3**), which generates various budgetary reports (**element 4**), such as intra-year budget execution reports and preliminary annual financial results.

Following the end of the year, the final annual financial statements (**element 5**) are compiled and presented following public sector international accounting standards (IPSAS). Based on information generated up to this point in the fiscal cycle, audit reports (**element 6**) are compiled and presented to the legislature and other oversight bodies. Similarly, the budgetary and accounting reports (element 4 and 5) are the main inputs in the compilation of fiscal statistics reports (**element 7**) in line international statistical standards for government finance (GFSM 2014).

Finally, various other fiscal reports may be produced, drawing on the accounting system and other sources, mainly—but not exclusively—debt sustainability analysis, long-term projections, statements of fiscal risks, etc. All these reports inform the policy measures included in the medium-term fiscal framework of the next fiscal cycle (element 1).

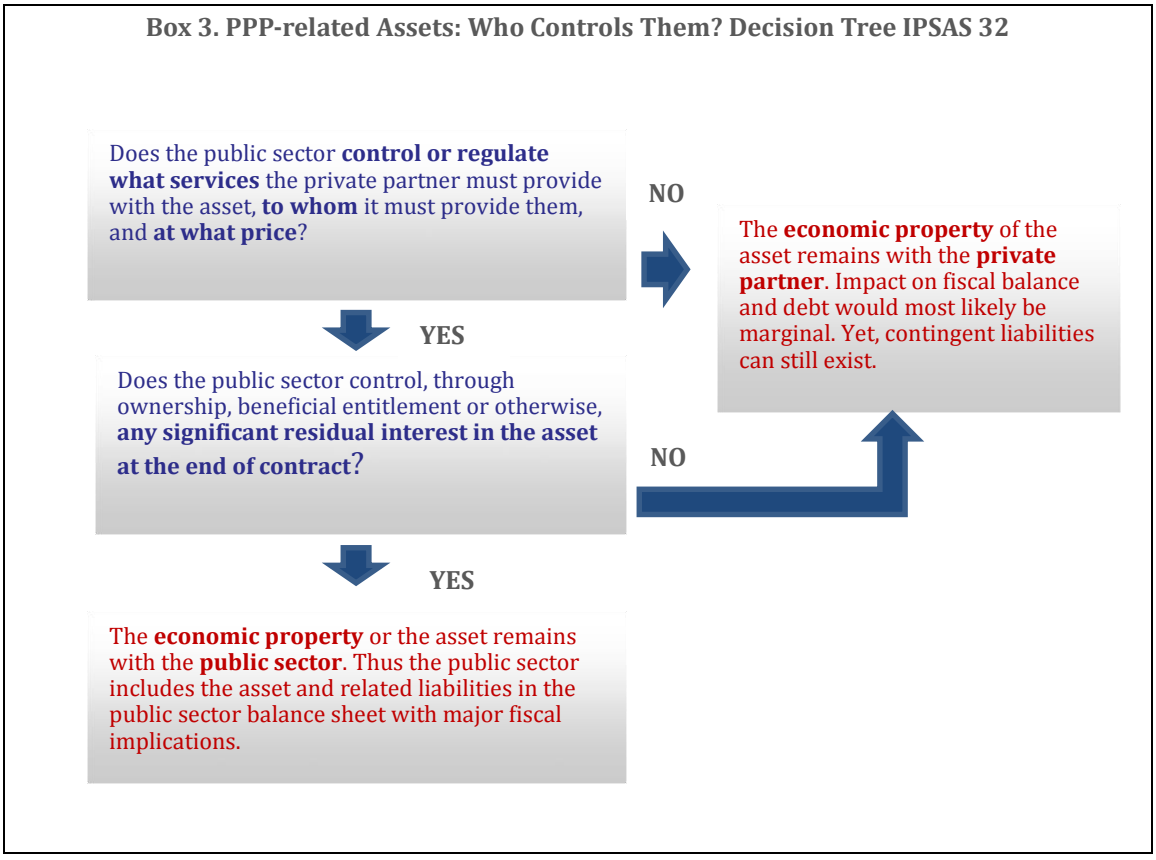
[8] The diagram presented in the box follows closely the description in the 2009 Fact Sheet, Government Finance Statistics (GFS) of the Statistics Department of the IMF.

PFRAM allows the user to decide whether the PPP-related asset belongs to the public or private partner. In doing so, it follows the control approach as specified in IPSAS 32 (see box 3 for details). If the user regards the PPP related asset as controlled by the public partner (e.g., central or subnational government) then it will have major fiscal implications that will be reflected in the various fiscal reports. On the other hand, if the PPP-related asset is controlled by the private partner, its fiscal implications will be shown only at the end of the PPP contract (See annex 1 for a brief summary of accounting of PPP contracts in government accounts).

If the PPP-related asset belongs to the public sector, PFRAM estimates and presents the impact of a PPP project in two reporting formats:

- Government annual financial statements (element 5 in diagram presented in box 2) in line with international accounting standards (IPSAS) both in accrual and cash;
- Government finance statistics (element 7 in diagram presented in box 2) in line with international statistical standards GFSM 2014.

Box 3. PPP-related Assets: Who Controls Them? Decision Tree IPSAS 32



FINANCING VS. FUNDING OF PPPS

When accounting for PPPs in government accounts it is critical to distinguish between *"funding"* and *"financing"* of a PPP project.

"Funding" of a PPP project refers to how investment costs are repaid over time, compensating those who provide the debt or equity for the project (i.e., the private partners).[9] Ultimately, public infrastructure can only be "funded" either by the users of the infrastructure (e.g., through direct user charges such as tolls in the case of highways), or by taxpayers (e.g., through government's periodic payments to the private partner).[10] PPP projects funded by users of the infrastructure are called "user-funded";[11] while those funded by taxpayers are called "government-funded".

"Financing" of a PPP project is about raising money upfront to pay for the design, construction and early operational phases of an infrastructure asset, whether through debt or equity instruments of a public or private nature. This is ideally the role of the private partner, even if the government provides some type of support (e.g., public equity, subsidy, and guarantee). Providers of financing (i.e., the private partner) will never knowingly fund an infrastructure project; they will only provide finance in the expectation that they will be repaid, including a rate of return commensurate with the risks they bear.

For recording a PPP in the government's accounts, what matters is the "funding" structure. Once the asset is considered to be controlled by the government, the funding structure of project—that is to say if it is user-funded, government-funded, or a combination of the two—determines the way it impacts the government' accounts (i.e., mainly deficit and debt). The "financing" structure determines the way the project is accounted for by the private partner, which is important to understand the viability of the project, but it does not affect the government' accounts, at least directly.

The PFRAM asks the user to provide both the "funding" and the "financing" structure of the PPP project. The funding is used to estimate the impact on the government' financial statements and statistical reports at different stages of the project cycle; while the financing is used to estimate the private partner cash flows during the whole life cycle of the project.

[9] IFWG 2012, Maddock 2013.

[10] A combination of the two options is also possible.

[11] Including concessions.

Detailed Description of PFRAM

The PFRAM is an Excel-based tool that is divided into 5 blocks. The first block contains a short description of the tool, a brief description of the project, and the data entry sheets. The second block performs the calculations of the fiscal impact of the project both on cash and accrual. The third block includes the output sheets, both in the format of tables and charts. The fourth block performs the sensitivity analysis presenting the results of alternative assumption for macro variables and contract termination. The fifth (and final) block compiles the project risk matrix (PRM) including project risk allocation, likelihood, fiscal impact, risk rating, and priority, as well as potential mitigation measures.

The spreadsheets is organized in a logical sequence: inputs, calculations, outputs. The 5 blocks described above comprise several sheets which are distinguished by a different tab colors. Apart from the instruction and description sheets ***<Read me>*** and ***<Project description>*** which are highlighted in white, all other data entry sheets in the first block are highlighted in green. The second block of the file, highlighted in orange, estimates the macro fiscal impact of the project both in cash and accrual and comprises two sheets: ***<3. Calculations>*** and ***<4. AUX_Annual projections>***. The third block containing the output sheets (project charts, macro charts, GFSM fiscal tables, macro summary, and project risk matrix) are highlighted in blue. The fourth block, presenting the sensitivity scenarios for macro variable and project termination are in tabs in light and dark red. Finally, the detailed assessment of the project risk matrix and a summary output are highlighted in purple**: *<IN_Detailed risk assessment>*** and ***<OUT_Project risk matrix>.***

Next sections below describe in detail each of the 5 blocks of the PFRAM.

FIRST BLOCK: INPUT DATA

As a first step, the user is required to enable macros to allow for the several macros included in the tool to run. This could take a few seconds, depending on the memory of the computer being used. Just wait for the "Enable Macros" message to disappear to start using the tool.

The first spreadsheet <***Read me***> contains a short description of the steps to navigate the tool. This sheet presents all the steps necessary to populate the entire tool as well as explains the several outputs derived from the calculations.

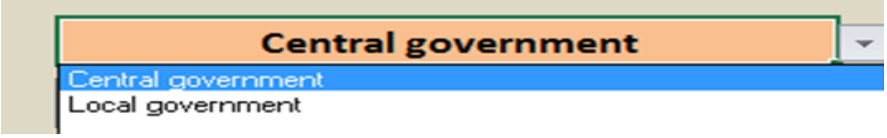
The second step is to populate the data entry sheets. These are four sheets called <***Project description>***, ***<1.1 INPUT_Project>, <1.2 INPUT_Macro>*****,** and ***<1.3 Sensitivity>.*** In the first sheet, the user should include a brief description of the PPP project following the proposed format as much as possible. This is just for documentation purposes.

In the second sheet ***<1.1 INPUT_Project>*** the user is guided through a list of questions and drop-down menus aiming at collecting the project information necessary to estimate its fiscal impact. The sheet is organized in the following blocks: control decision tree, construction phase, operation phase, financing of

the project company, and finally project funding. In all blocks, entry points—that require direct user inputs—are highlighted in different colors depending of the action required from the user. The color coding identifies clearly the cells that demand a response using the through drop-down menus (**orange**) from those that require direct input data from the user (**grey**). Orange and grey are the only cells that the user needs to manipulate to obtain the expected outputs from the tool. Other cells in the sheet with formulas are identified in green, so they don't require any entry/response from the user. The input sheet also gives the option to input total amounts or input detailed data when the breakdown is available.

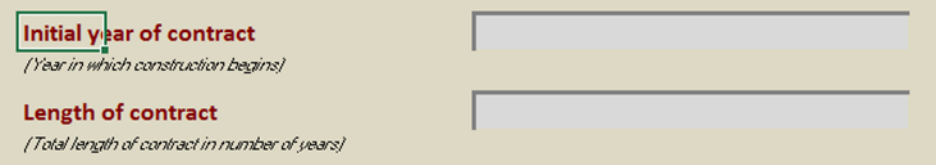
Orange cells:

Response using drop-down menu



Grey cells:

Entry data manually

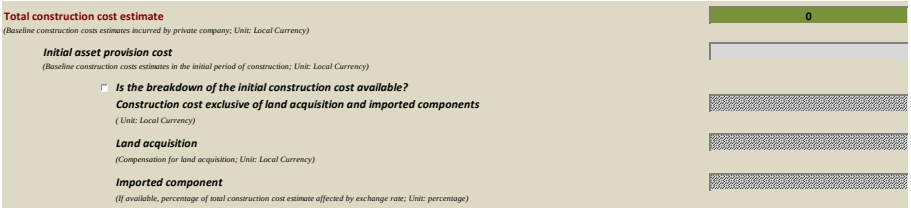


Green cells:

Automatic calculation

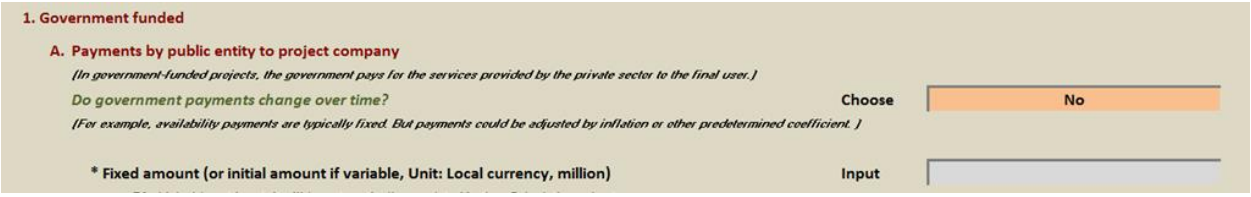
Input data breakdown:

Click on box

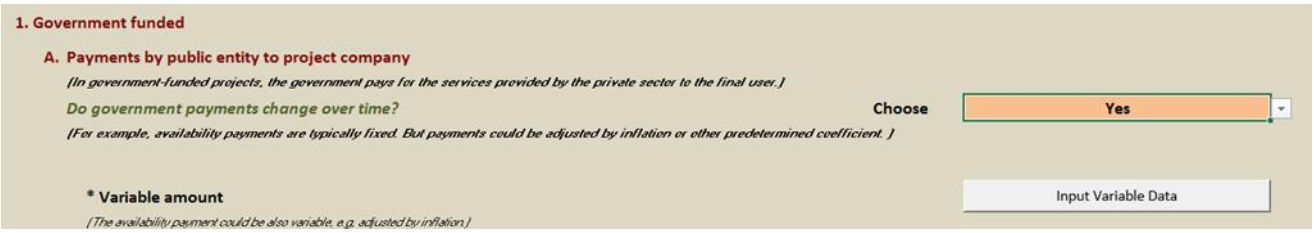


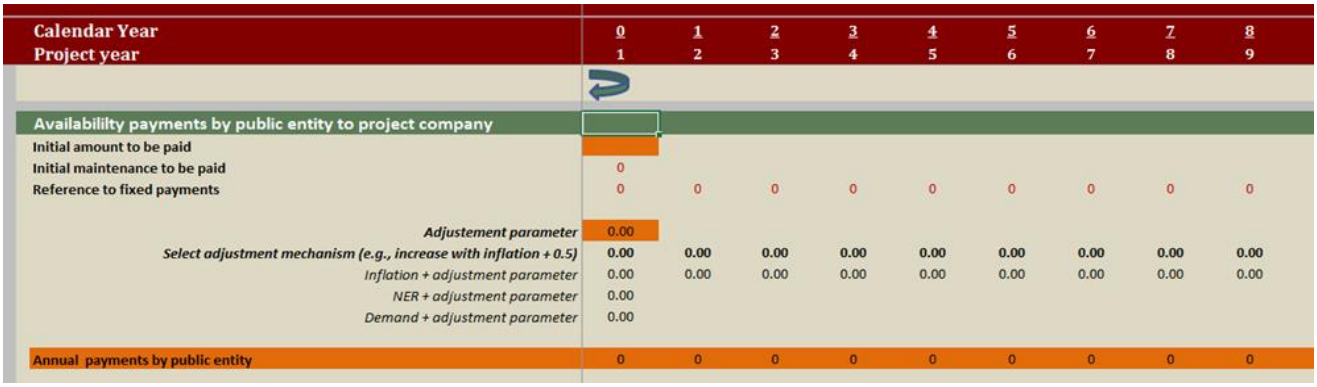
When the user needs to input a time series instead of a single entry, the tool allows to do so by responding YES/NO using the drop-down menus following the question: Are entries fixed or variable? Take a look at the following example. In a government funded PPP project, the tool asks the user: Do government payments change over time? If the user answers NO using the drop-down menu (right to the cell "Choose"),

the tool ask for a single data entry (right to the cell "Input").



However, if the user answers YES using the drop-down menu (right to the cell "Choose"), the user is prompted to a new sheet by clicking the button "INPUT VARIABLE DATA" ***(<Aux_Annual Projections>***) where he/she can input a series of expected payments by the government following optional adjustment mechanisms (e.g., inflation, nominal exchange rate). The user needs to input the initial value of the payment and then to adjust manually the payments over time (the tool includes a suggested adjustment but just for illustration purposes). Once the series of payments is inputted in the ***<Aux_Annual Projections>*** sheet the user should return to the ***<1.1 INPUT_Project>*** sheet by clicking in the  symbol to continue with input process.





Once the input process of the project information is finished, the user should click the "Submit" button at the end of the ***<1.1 INPUT_Project>*** sheet, and continue the process in the third input sheet.

In the third input sheet ***<1.2. INPUT_Macro>*** the user should input the country's macroeconomic data directly in the grey cells. [12]The PFRAM requires the input of projections for the whole contract period. As a

[12] An IMF user will have the capability to input macro data directly from the WEO data base by including the WEO country code and the selecting the option for the long-term projections. The IMF user can retrieve macroeconomic data

default, the PFRAM uses a ”trend” option, assuming that the long-term values of all macro variables follow the same trend observed up to the period to whom data is available (i.e., the tool takes the medium-term path for all macro variables as included in the WEO database).

The last input sheet ***<1.3 Sensitivity>*** allows the user to input the requested sensitivity simulations and will be discussed in the upcoming section on sensitivity analysis.

SECOND BLOCK: CALCULATIONS

The second block of the PFRAM comprises a single sheet **<3. Calculations>.** This sheet uses project data and macro assumptions inputted in the previous block and automatically calculates the impact of the PPP project on government fiscal aggregates: deficit and debt. In doing that the tool calculates the following: cash flows of the private project company (cash flows), government income statement (accrual flows), government balance sheet (accrual stocks), government change in balance sheet (accrual flows), and government cash statement (cash flows). Fiscal transactions recorded by the PFRAM during the whole life cycle of the PPP project are summarized in the appendix: “Accounting for PPP projects in Government’s Accounts”.

THIRD BLOCK: OUTPUTS

The PFRAM produces five main outputs, described as follows.

Cash flows of project company	Expected cash flows of the project company, i.e., the private partner. This is just for information purposes given that the tool’s main interest is the project impact on government’s accounts.
Fiscal impact charts and tables	The tool generates two set of panel charts and one summary table. The first panel charts focuses on the PPP project, showing its standalone impact on government assets, liabilities and deficit (both on accrual and cash). The second panel chart looks at the macro fiscal impact of the PPP project by showing the debt sustainable trend with and without the project, the government’s deficit with and without the project (both on cash and accrual), and the project firm and contingent liabilities. Finally,

series from the country's macroeconomic framework either from the WEO database or alternatively the data can be inputted directly. By clicking the “Refresh Data” button, a prompt menu asks whether it is an IMF user or not he/she would use the ”trend” option. The latter assumes that the long-term values of all macro variables follow the same trend observed up to the period to whom data is available (i.e., the tool takes the medium-term path for all macro variables as included in the WEO database).

	the tool generates a summary table with information of the project as well as macro variables with and without the project impact.
Government's financial statements	The third set of outcomes refers to the government's three financial statements (i.e., the income statement, the balance sheet, and the cash statement) presented in the GFSM 2014 format. They present the fiscal impact of the project on annual basis for whole lifecycle of the project.
Sensitivity analysis	The allows the user to perform sensitivity analysis of macro variables (i.e., GDP, inflation, nominal exchange rate) and one project scenario regarding contract termination. Other project scenarios, such as cost overruns and project delays, are not yet modeled by the PFRAM.
Project risk matrix	The tool generates a summary project risk matrix that highlights risks allocation by type of risk (i.e., which risks are retained by government), significance of the risks (i.e., whether a particular risk is significant or not for the project as a whole), and magnitude (i.e., where a particular risk is large or small from a macro perspective). Finally, it identifies potential mitigation measures depending of the type of risks identified before.

These outcomes can be combined in one summary output in the form of a consolidated report on fiscal impact and fiscal risks of the PPP project under review. This report could take the following format:

Description of the project	Based on information gathered in the input data block.
Expected fiscal impact	Selection of the main results in terms of this standalone project and its macroeconomic impact (charts, tables, etc.). Comparison of national accounting and reporting practices to international standards suggested by the tool; discussion of the magnitude of potential discrepancies and their implications for fiscal policy analysis.
Sensitivity to main macro and project variables	Selection of results from sensitivity scenarios relevant for the particular project. Implications for fiscal policy analysis.

Analyzing fiscal risks	Based on the detailed assessment of fiscal risks arising from the particular project. Identification of main risks, their allocation, significance, probability, and potential mitigation measures.
Recommended actions and mitigation strategy	Set of potential recommendations in terms of actions required to improve accounting and reporting of PPPs and risks mitigation measures.

FOURTH BLOCK: SENSITIVITY ANALYSIS

The PFRAM allows the user to perform two types of sensitivity analysis for the estimated fiscal impact of a PPP project. First, it allow for changes in main macroeconomic variables; second, it allows the estimation of the fiscal impact of the termination of the PPP project at any point in time.

The first step to perform a sensitivity analysis is to input relevant parameters in sheet ***<1.3. Sensitivity>***. Using the cell prompts the user can select the type of shock to simulate, enter the period for the shock to happen (e.g., starting in 2015 and ending in 2017), as well as its magnitude.

Sensitivity to Macroeconomic Variables

The current version of PFRAM allows for sensitivity in two macro variables: GDP, and nominal exchange rate. The output for each shock are presented in separate sheets: ***<OUT_GDP shock>*** and ***<OUT_NER shock>.*** In addition, the ***<Macro_sensitivity>*** sheet summarizes the main result. Shocks should be expressed in percentage change (e.g., -1.0 for a decrease in GDP growth rate of 1 percentage point, say from 4.0 to 3.0 percent increase in GDP). Once the magnitude of the corresponding shock is selected, the user should click on the "SUBMIT" button, which will prompt to the corresponding output sheet.

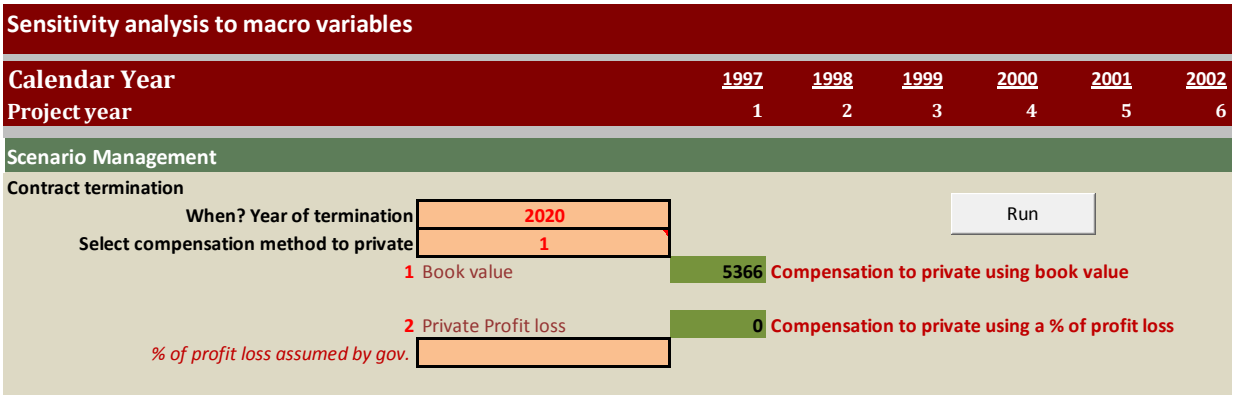
A GDP shock would affect the denominator of main aggregates expressed as a ratio of GDP, but can also affect main fiscal variables if the PPP-related flows are somehow linked to GDP. For example, in a government funded project where government payments are linked to the expected demand for services. The change in the latter can be estimated indirectly by the change in GDP. Lower/higher demand for services relative to that originally expected can have a negative/positive impact on main fiscal variables (deficit and debt), as well as the government exposure to potential fiscal risks.

Changes in the nominal exchange rate are supposed to impact primarily the construction cost of the PPP asset, depending on its import component. Thus, if the construction of the specific asset relies heavily on imported goods, project cost overruns will most likely have to be absorbed by the public sector to avoid

project failure.[13] In that case, the overall cost of the project increases together with the value of the government's liabilities and related-assets. The nominal exchange rate can also affect the operational period of the PPP contract (e.g., increasing the operational costs), but this is not currently modelled in PFRAM. Similarly, changes in inflation will affect the fiscal impact of the PPP if project flows are somehow linked to inflation (e.g., price adjustment mechanism linked to inflation).

Project Sensitivity

PFRAM simulates only one project scenario which is the termination of the PPP contract at any given point in time. In order to input the data to perform this simulation the user can start from sheet ***<1.3. Sensitivity>*** and click on the "GO" button. This will prompt the user to sheet ***<Project scenarios>*** where the following information is required. First, the year for the contract termination. Second, the user should select how the government is supposed to compensate the private partner (it should be stated in the PPP contract). The tool models two options for government compensation: by the book value of the asset, or by a percentage of the private partner's profit loss.



The book value of the asset corresponds to the amount at which the asset is included in the balance sheet of the government, that is to say, construction costs, minus depreciation (please note that no revaluations of the asset are being considered). On the other hand, the government could also compensate the private by a percentage of its potential forgone profits. In this case, the user should select option 2, and input the percentage (e.g., 0.5 for 50% in cell B20) for the file to calculate the private project loss.

Once the information is enter, the user should click in the "RUN" button. The file with automatically show the results in sheet ***<OUT_Contract termination>.***

[13] This is an assumption of the PFRAM.

DETAILED DESCRIPTION OF PFRAM

FIFTH BLOCK: PROJECT RISKS MATRIX

The fifth—and final—block of PFRAM includes a detailed assessment of the risks arising from the specific PPP project. PFRAM assists the user in assessing risks allocation, likelihood, fiscal impact, risk rating, mitigation measures, and finally a sense of priority of required actions. The logic of the risk assessment follows that used in the rest of the file: inputs, calculations, outputs.

Inputting data

In the input sheet ***<IN_Detailed risk assessment>***, the tool guides the user through a systematic set of questions for each of the 11 main risk categories assessed, broken down into 52 sub-categories. The main risk categories, as well as the risks sub-categories included in the PFRAM are presented below (and explained in details in the next chapter).

TABLE 1. ACCOUNTING FOR PPP PROJECTS IN GOVERNMENT' ACCOUNTS

MAIN RISK CATEGORY	NUMBER OF RISKS SUB-CATEGORIES ASSESS IN PFRAM
1. Governance Risks	3 detailed risks
2. Construction Risks	19 detailed risks
3. Demand Risks	10 detailed risks
4. Operation & Performance Risks	7 detailed risks
5. Financial Risks	4 detailed risks
6. Force Majeure Risks	No detailed risks
7. Material Adverse Government Actions (MAGA)	No detailed risks
8. Change in Law	No detailed risks
9. Rebalancing of Financial Equilibrium	3 detailed risks
10. Renegotiation Risks	No detailed risks
11. Contract termination Risks	2 detailed risks

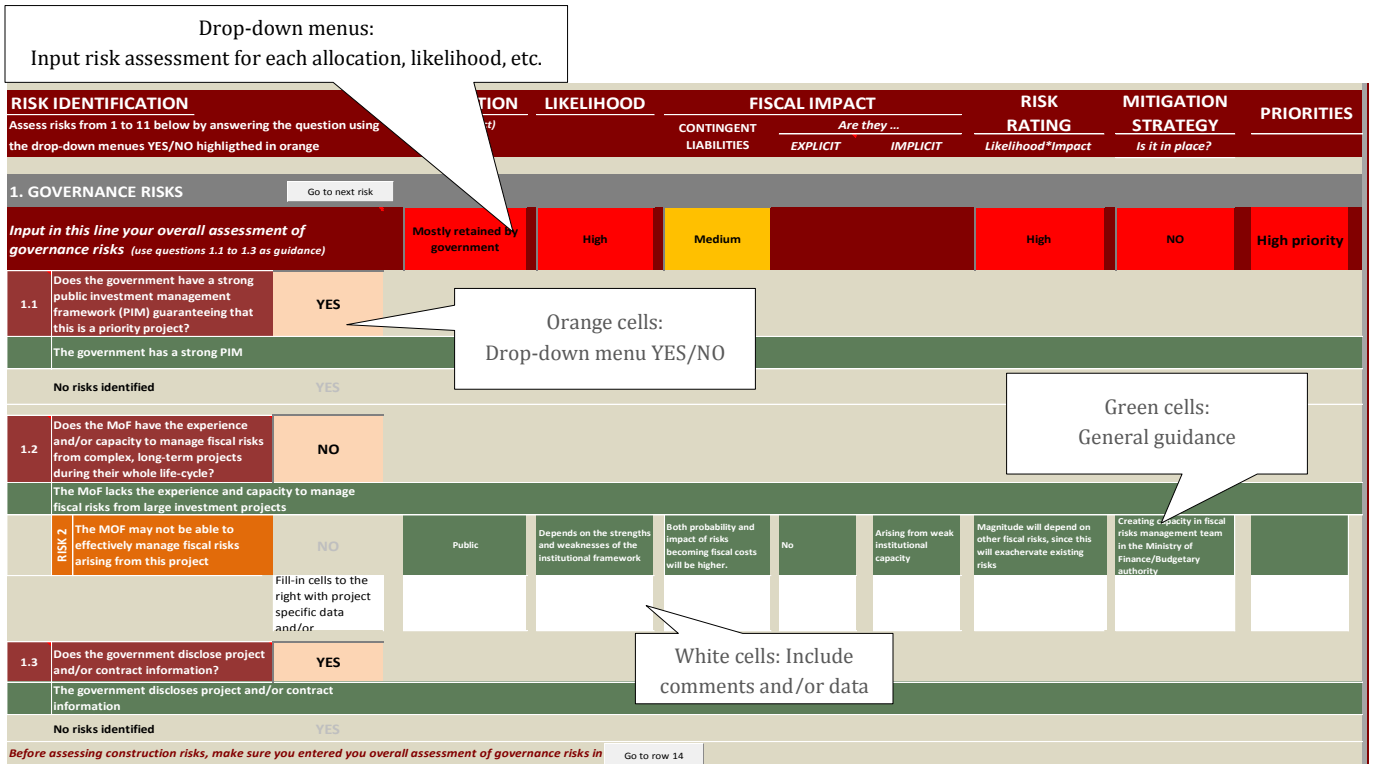
The PFRAM does not assess all potential risks that can arise during the project cycle of a PPP project. Instead, it only focuses on those risks that may have significant fiscal implications. In doing so, it looks into both contractual risks, and other risks not allocated directly by contract (e.g., risks arising from the governance structure, legal framework, government institutional capacity).

There are two main levels in the input data process in this project risk matrix: at the main category level (i.e., the main 11 risks identified in table 1); and at the subcategory level for each main risk (i.e., for the 52 subcategories of risks as stated in Table 1). In practice, the user could only enter his/her assessment at the

main risks level, generating a summary project risks matrix. However, the PFRAM encourages the user to look deeper into each of the main risks categories to get a better understanding of the overall government risk exposure arising from the project. .So we encourage the user to look first into the detailed subcategories of risks, and then make his/her assessment for each of the 11 main risks. The suggested steps are described below.

First, the user is encouraged to use the drop-down menu (orange cells) to respond detailed questions at each main risk level (e.g., questions 1.1 to 1.3 for governance risks, as show below) to **identify the risks relevant for the PPP project under evaluation**. The drop-down menus provide for a YES/NO option, and guide the user to the risk sub-categories with potential macro fiscal implications. For example, a positive response to question 1.1 suggest that there are no significant risks arising from this risk sub-category (i.e., having a strong public investment management system in place indicates no risks in this area). However, a negative response to question 1.2 suggest that there is a risk of government not having enough capacity or experience to effectively manage fiscal risks arising from the PPP project. Once the risk sub-component is identified, the tool requires the user to input detailed documentation/notes in the white cells about its allocation, likelihood, fiscal impact, and potential mitigation strategies. The PFRAM provides some general guidelines in the cells highlighted in green based on experience. For example, governance risks are typically assumed by the public partner. Thus, the information included in green cells it aims at guiding the user of what type of information is supposed to look for and input in the white cells (i.e., documentation).

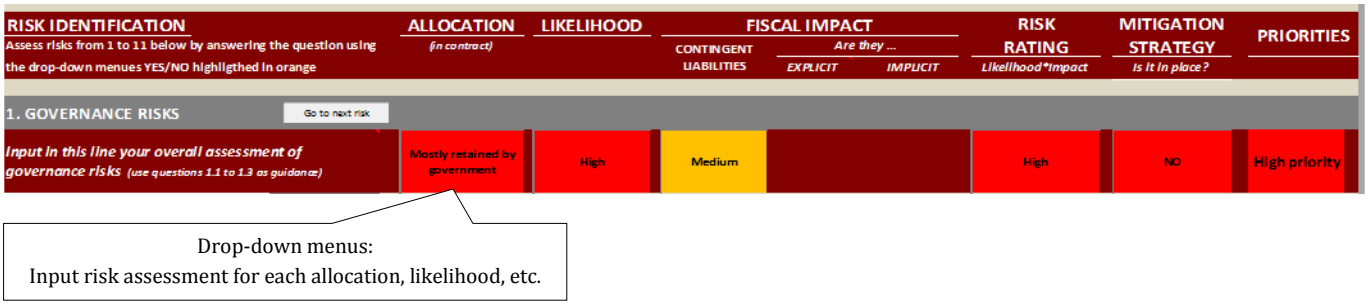
Second, after understanding all the risks arising at the sub-category level, the user is encouraged to **assess the core risk under evaluation.** Therefore, the risk assessment should be done initially at the sub-category level, and as a second step at the main risk category level. For example, after answering questions 1.1 to 1.3 in governance risks in governance risks, the user would input his/her assessment in drop down menus for each category of allocation, likelihood, fiscal impact and mitigation strategies (following the structure explained in the next section).



It should be noted that, as was explained above, while in practice the user could only input his/her assessment of the main risk categories, without looking that the sub-categories, this is not recommended. Only by understanding the sub-categories of risks included in each main risk, can the user assess the actual overall risk exposure of the government.

Assessing risks

How can the user assess each risk? As explained in the previous section, the user should input his/her assessment at least at the main risk level, for each category described: allocation, likelihood, fiscal impact, and mitigation strategy.



The overall assessment of fiscal risks of a PPP project follows a seven-step approach, as summarized in the figure below.

ASSESSING FISCAL RISKS IN PPP PROJECTS

Identification	• 11 risk classes identified, 52 detailed risks
Allocation	• Risks mostly allocated to private, shared, or mostly allocated to government
Likelihood	• Low, Medium, High
Fiscal impact	• Low, Medium, High
Risk Rating	• Equal to [Likelihood * Fiscal Impact] • Irrelevant, low, medium, high, critical
Mitigation measures	• Is mitigation measure in place? YES/NO
Priority actions	• Function of Rating and Mitigation • No action, low/medium/high priority, critical

Sources: Staff proposal based on standard risk methodology.

After identifying the risks relevant for a PPP project (as detailed in the previous section), PFRAM requires the user to assess:

a. **Allocation.** How risk are allocated "in the contract" between the public and the private sector (i.e., risk sharing arrangements specified in the PPP contract). Contract risks can be allocated mostly to the public sector, to the private or shared between both of them.

b. **Likelihood.** What is the likelihood of such risks materializing in the future? Here we are not asking the user to be over-precise in his/her estimate. Identifying whether the likelihood is low, medium, or high is sufficient. There are a number of factors that can help determine the likelihood. For example, the following logic could be followed:

Scale	Likelihood
Low	• Very unlikely but not negligible • Would require highly unusual circumstances • There are effective mitigation measures in place
Medium	• Likely, and possible • Not unprecedented • There are mitigation measures in place but they are not effective and/or are not applied consistently
High	• Very likely, almost certain • Extensive precedents • No mitigation measures in place to prevent them

c. **Fiscal impact**. What would be the potential fiscal impact if such risk materialize? When considering the impact of a specific type of risk, it is important to realize that PFRAM mostly focuses on the macro fiscal implications of such risks. That does not mean that these are the only implications of such risks. For example, the fiscal implications of governance risk materializing would be reflected not only at a macro fiscal level (e.g., on government's deficit and gross debt), but also in terms of government's loss of reputation, efficiency, availability, and transparency—among others. To the extent possible, the user should evaluate the potential fiscal impact of a particular risk in a holistic manner, providing as much information as possible to support his/her assessment of low, medium, or high. A possible practical example is shown below:

Scale	Value	Fiscal Impact
Low	Up to 0.5% of GDP	• Impact on government deficit and debt is lower than 0.5 % of GDP (accumulated construction cost of the asset) • Minimal damage to government's reputation, service availability, and operational
Medium	Between 0.5% - 1.0% of GDP	• Impact on government deficit and debt between 0.5-1.0 % of GDP (accumulated construction cost of the asset) • Limited damage to government's reputation, service availability, and operational
High	Above 1.0% of GDP	• Impact on government deficit and debt above 1.0 % of GDP (accumulated construction cost of the asset) • Significant damage to government's reputation, service availability, and operational

d. **Risk rating**. How severe are the risks being assessed? In this step the likelihood and the fiscal impact are put together to estimate the overall risk rating (typically called the severity of the risk).

This is done by combining the likelihood and fiscal impact as show below. Risks assessed as having a high likelihood and a high fiscal impact, would be regarded as "critical" (and highlighted automatically in the file in deep red). A "high" risk rating would be the result of a high likelihood and a medium fiscal impact, as well as a medium likelihood and a high fiscal impact (and highlighted with a clear red). Following a similar logic, risks would be assessed as "medium" (orange), "low" (green), or "irrelevant" (grey). PFRAM automatically generates the risk rating assessment and color coding (i.e., it is formula based) given the user's inputs for likelihood and fiscal impact.

Risk Rating = Likelihood x Fiscal Impact				
Fiscal Impact	HIGH	Medium	High	*Critical*
	MEDIUM	Low	Medium	High
	LOW	Irrelevant	Low	Medium
		LOW	MEDIUM	HIGH
		Likelihood		

e. **Mitigation measures**. Does the government have mitigation measures in place? PFRAM requires the user to assess only whether mitigations measures are in place or not (no mitigation measures are color coded in light red, while if they exist the answer is automatically color coded in green). Mitigation measures vary from risk to risk. For example, in financial risks a sub-category deals with the risks of the private partner not being able to cope with excess volatility of interest rate. In this case, the PFRAM suggest a typical mitigation measure: "*Proper due diligence on private bidders' financial conditions and their ability (technical and managerial) to conduct the project. Establish adequate qualification requirements, bid bonds and performance bonds will discourage adventures from bidding for PPPs"*. Therefore, the user should not only answer whether mitigation measures are in place for those risks linked to the PPP project under evaluation, but can also compare existing measures with those suggested by the tool. PFRAM suggestions are not meant to be exhaustive. They are typical mitigation measures based on international best practices.

f. **Priority actions**. Deciding what to fix. After the risks have been identified, rated, and mitigation measures checked, PFRAM assist the user to develop a prioritized list of required actions. As a general rule, the more severe risks (i.e., those with high rating) should be addressed first. Addressing the less important risks, even if they are an easy fix, does not improve the overall risk profile of the project and thus, does not reduce the risks for government. Not all risks are worth addressing, and some loss for government is not only expected, but admissible based on the cost of

fixing the issue. PFRAM identifies priority actions by looking at both risk rating and mitigation measures, as shown below. Those risks assessed as irrelevant would never trigger a priority action, regardless of whether mitigation are in place or not (color-coded in grey). On the contrary, risks rated as critical paired with no mitigation measures in place, would result in the need to implement a "critical" priority action (deep red); while the priority would be considered a "high priority" if mitigation measures exist (light red).

Priority Actions = Risk rating x Mitigation measures						
Mitigation measures	NO	No action	Medium priority	High priority	High priority	*Critical*
	YES	No action	Low priority	Medium priority	Medium priority	High priority
		IRRELEVANT	LOW	MEDIUM	HIGH	CRITICAL
		Risk Rating				

Output data

Based on the user's assessment of each main and sub-category of project risks, PFRAM automatically (i.e., formula based) generates a summary project risk matrix in sheet ***<OUT_Project risk matrix>***. An example is shown below. The color coding is in line with the one discussed in the previous section.

DETAILED DESCRIPTION OF PFRAM

POPULATED BASED ON DETAILED RISK ASSESSMENT IN SHEET "IN_DETAILED RISK ASSESSMENT"

PROJECT RISK SHARING ARRANGEMENTS

	IDENTIFICATION OF RISKS		ALLOCATION	LIKELIHOOD	FISCAL IMPACT	RISK RATING Likelihood*Impact	MITIGATION STRATEGY	PRIORITY Rating*Mitigation
1	Governance risks	Details	Public	High	Medium	High	NO	High priority
2	Construction risks	Details	Shared	Medium	Medium	Medium	NO	High priority
3	Demand risks	Details	Private	High	High	*Critical*	NO	*Critical*
4	Operational and performance risks	Details	Shared	Low	Low	Irrelevant	NO	NO action required
5	Financial risks	Details	Private	Medium	Low	Low	YES	Low priority
6	Force majeure	Details	Shared	Low	High	Medium	NO	High priority
7	Material adverse government actions	Details	Public	Low	Low	Irrelevant	NO	NO action required
8	Change in law	Details	Public	Low	Medium	Low	YES	Low priority
9	Rebalancing of financial equilibrium	Details	Private	Low	High	Medium	NO	High priority
10	Renegotiation	Details	Shared	Medium	High	High	YES	Medium priority
11	Contract termination	Details	Shared	Low	Medium	Low	NO	Medium priority

Main results of the risk matrix are presented in the form of a heat map, to provide a synthetic view of the vulnerability of the government to risks arising from the PPP project. Risks that are mostly allocated to government, that have a large likelihood of occurrence, and might result in a significant fiscal impact, and for which the government lacks a mitigation strategy, would raise a flag and require immediate attention and/or action from government. Similarly, even risks allocated to the private partner through the contract can pose significant risks for government, given that—depending of their likelihood—the private partner may not be able to cope with them and thus result in a potentially large fiscal impact.

The next chapter presents the detailed description of the main risks include in the PFRAM project risk matrix.

A Detailed Fiscal Risks Matrix for a PPP Project

INTRODUCTION

Risk allocation is a centerpiece of structuring a PPP contract. The basic principle is that each risk should be allocated to the party best able to manage it; accessorily, the ability of that party to cope with the consequences of risk should be carefully assessed, in particular when that party is the private partner (usually a special purpose entity, with limited liability). Risks may be allocated to one or the other party, or shared in a specified way. In principle, a PPP contract defines a complete allocation of project risks, and on the basis of that contract the contracting authority's contract manager creates a risk matrix and a risk register, documenting the evaluation of risk likelihood and risk impact, as periodically assessed by the contracting authority.

However, the total set of fiscal risks is wider than the one resulting from the project risks allocated to the procuring authority and other public sector entities.

Fiscal risks may result from risks not identified in the contract, or not clearly allocated in the contract. The most obvious is the risk that the private partner cannot have the managerial capacity to implement the project or face the stipulated risks, culminating in its bankruptcy. Project finance solutions, with limited or no-recourse to the assets of the borrower, require a careful assessment of the capital and private-sector guarantees needed for sound project execution, spreading risk among a variety of investors, insurers and diverse financial entities.

Also some project risks may not have been identified and allocated, creating additional fiscal risks for the government.

The global experience shows also that under some circumstances private partners have the ability to transfer some risks (contractually allocated to them) back to government. The two most common motives for this are project changes or policy changes introduced by government during the term of the contract, and exogenous change brought by technological evolution, demographic movements, or changes in the preferences of consumers. The first motive calls for a careful understanding of the impact of government-initiated change upon PPPs, and for mechanisms for moderating the will for change, pondering the costs and benefits of each change. The second motive calls for a continued management of the consequences of exogenous change, with a pro-active behavior that mitigates impact upon projects and provides solutions to challenges. In both cases, poor fiscal risk management by government allows the private operator to use change in order to pass to government some unrelated costs.

A typical example is transferring to government some cost overruns, when government asks for changes in project design; another example, in projects funded by users, is recovering private partner's losses derived from poor demand, when government decides to renegotiate the contract in order to change the user-fee structure. Regarding exogenous change, examples are swift technological evolution in information technologies, rapid urban growth, and massive increase in the use of available broadband.

Preventing some of these risks requires better project selection, avoiding using PPPs for some projects, or avoiding the use of some PPP modalities for those projects. Other risks simply require better PPP structuring, or a somehow different project scope. Still other risks require better fiscal risk management and institutional improvements. In extreme cases, lack of government integrity may allow for decision makers to initiate government action that creates rents for private partners, through the generation of opportunities for transferring back to government costs and risks contractually allocated to the private partner.

PFRAM invites the user to review a battery of fiscal risks, covering 11 classes of risk. Some of those risks are explicitly allocated to government (i.e. to the contracting authority or to public-sector third parties), but many others are implicit fiscal risks, resulting from the absence of explicit allocation or from opportunities for transferring risk back to government. Implicit fiscal risks need to be assessed and managed, even under the threat of moral hazard. All risks should be managed, particularly when government can prevent occurrence or mitigate impact—for instance, the possibility of private-operator bankruptcy should be dealt with plans for rescuing the project without rescuing the operator (and so avoiding moral hazard).

The following session present each class of risk considered by PFRAM, and the main risks in each one.

CONSTRUCTION RISKS

Every PPP contract allocates construction risk to the private partner. Even in brownfield contracts (where there is an already existing asset) the private partner is required to put the assets up to standard, at its own risk. But even in this area, governments may face significant fiscal risks.

One possible source of risk comes from explicit exemptions to the above general rule. Some projects allocate a few specific risks to government: geological risks, some input with price particularly volatile, or issues related to land (e.g. obtaining land, decontaminating land, relocating people and activities). Most governments accept the risks related to the protection of archeological findings, or to unexpected environmental issues that are outside the control of the private partner.

Another source of risk comes from the possible inability of the private partner (or its contractors) to cope with the consequences of construction risks contractually allocated to the private entities. They may relate to the inability to implement the project, or to the inability to cope with some of the construction risks when really significant (e.g. cost overruns in buying land, unexpected geological conditions).

DEMAND RISKS

Many projects funded by the users create significant demand/volume risks for private partners (except when fees are collected on behalf of government, with project costs covered by availability payments from government to the operator). But projects fully funded by government may also create significant demand/volume risks, when payments are linked to the volume of service provided.

Many PPP contracts allocate demand risk to the private partner, therefore incentivizing it to give the project high quality in order to attract demand and be able to recover costs. Demand risk is also important for using the private sector interest in projects as a mechanism for filtering poor projects (having business rationality

checking the usual optimism bias of government). But demand risk may be too high for private partners, creating implicit fiscal risks for government.

Demand risk may be contractually kept in government hands; or explicit allocated to government in extreme cases, through minimum demand guarantees (e.g. minimum traffic guarantees) or even minimum revenue guarantees. In those cases, the risk should be carefully scrutinized ex-ante, and then monitored during the life of the contract. In a relevant number of cases, demand risk ends up being a significant fiscal risk.

OPERATION AND PERFORMANCE RISKS

A PPP contract always allocate maintenance risks to the private partner—the goal is guaranteeing that the responsibility for designing and building the infrastructure assets will never create incentives for the private partner to "cut corners" and create performance issues later. Maintenance should be done (and assets should be designed and built) in such a way that satisfies a set of reference levels for a battery performance indicators. Many contracts do also allocate to the private partner the responsibility for operating the infrastructure assets and deliver services to users (e.g. operating a highway, including all safety, emergency, fuel, and catering services along the road; or operating a hospital).

When optimally structured, maintenance costs are low relative to initial investment costs. But they will be delivered over a long period, creating potential issues related to future price levels of inputs and outputs.

If full operation of the asset is included in the contract, its cost may be very high relative to the initial investment (for instance, the annual cost of operating an acute service hospital is usually as high as the initial investment in construction and equipment), and risks will be also high.

FINANCIAL RISKS

Private partners are typically allocated the responsibility for obtaining finance for the project, and for facing interest rate risk and other financing risks. Exchange rate risk may be allocated to one or the other party, or shared in a specified way.

The current higher risk aversion in financing parties is creating the need for government to provide some public finance, or debt guarantees. More public capital, or more debt guarantees, reduce incentives for efficiency in PPPs, and should only be accepted as necessary conditions for bankability—and only if the net benefits of the project, and of the PPP option, require so.

FORCE MAJEURE

Force Majeure provisions specify the contractual consequences of certain circumstances that are beyond the control of the parties, and result in the impossibility for the affected party to perform its contractual obligations. In general, the purpose of a Force Majeure clause in a PPP Contract is to: (a) define what events or circumstances the parties agree should be construed as Force Majeure; (b) provide relief from liability to the affected party and excuse it from further performance of its obligations under the PPP contract while the Force Majeure Event is continuing; (c) provide for the obligations of the parties in relation to the Force

Majeure Event (typically, information and mitigation); (d) provide for termination rights in case of a Force Majeure Event lasting more than a certain period of time; and (e) specify the allocation of costs resulting from the Force Majeure Event and determine termination payments.

The typical assumption when negotiating Force Majeure provisions is that the risk of occurrence of a Force Majeure Event is beyond the control of the parties and should not be allocated to a single party. Accordingly, the financial consequences resulting from the occurrence of a Force Majeure Event should be shared. Force Majeure allows the private partner to claim relief from its obligations under the PPP contract; and both Parties would typically have the right to terminate the PPP contract if Force Majeure lasts longer than a certain period of time (generally between 6 to 12 months).

Force Majeure provisions should also be distinguished from hardship clauses, which deal with unexpected circumstances under which performance becomes more onerous without being impossible.

The drafting of any Force Majeure provision should be preceded by an analysis of the contractual freedom the parties have when (i) defining the concept of Force Majeure in the PPP contract and (ii) specifying its consequences, and whether there are any implied terms or overriding provisions under the relevant applicable law which will impact the contractual agreement of the parties. Another point to consider is whether there is a need to have a list of events constituting Force Majeure. Depending on the jurisdiction, such a list may not be necessary and a catch-all definition will be sufficient. Having an itemized list is however advisable in certain jurisdictions where the courts are unlikely to expand on the contractual definition given by the parties. A widely used drafting device is to define Force Majeure Events by reference to a set of criteria to be satisfied, and to include an indicative but not limitative list of events which the parties agree should constitute Force Majeure Events (to the extent that they otherwise satisfy the criteria set out in the definition).

The parties should also consider the impact of insurability of a Force Majeure Event: one approach could be to split the potential events between insurable risks and uninsurable risks. Only the uninsurable risks would then be regarded as potential Force Majeure events. However, contracting authorities should be cautious with this approach as it requires a specific expertise and monitoring of the insurance market which can fluctuate during the term of the PPP contract. If this approach is chosen, the Force Majeure provision should be drafted in conjunction with the "Insurance" provision and particular attention should be given to the provisions governing risks that were insurable at the time of execution of the PPP contract but become uninsurable later.

MATERIAL ADVERSE GOVERNMENT ACTIONS

A Material Adverse Government Action (MAGA, also called “political force majeure”) means any act or omission by the Contracting Authority or any relevant public authority, which occurs during the term of the PPP Contract and which (i) renders the private partner unable to comply with all or a material part of its obligations under the PPP contract and/or (ii) has a material adverse effect on the cost or the profits arising from such performance.

As in Force Majeure situations, MAGA allows for private partner to claim relief from its obligations under the PPP Contract, and both parties would typically have the right to terminate the PPP contract in the event of a MAGA lasting longer than a certain period of time (generally between 6 to 12 months). However, in PPP contracts the risk of occurrence of a MAGA is allocated to the contracting authority, implying that the private partner will be entitled to claim for losses incurred as a result of the occurrence of the MAGA, and that the amounts payable to the private partner in case of termination further to a MAGA should, arguably, be similar to those payable upon default by the contracting authority—therefore mitigating opportunistic behavior by government.

CHANGE IN LAW

In a strict sense, "Change in Law" means, after the date on which the successful bidder submitted its bid, any of the following events: (i) the enactment of any new applicable law; (ii) the repeal, modification or re-enactment of any existing applicable law; (iii) a change in the interpretation or application of any applicable law; (iv) the imposition by any government entity of any material condition in connection with the issuance, renewal or modification, or the revocation or non-renewal (other than in accordance with the existing applicable law) of any approval; or (v) the imposition or levying of any new taxes on the private partner or the increase or decrease in the rate or classification of any taxes.

Changes in Law may work to the benefit or detriment of either or both parties, while MAGA – by definition – can only arise where there is an adverse impact upon the private partner.

Changes in Law are usually addressed in such a way that opportunistic legislative changes allow for compensation, while general legislative changes (affecting all economic operators) do not. For instance, some changes in the tax system allow for compensation (e.g. a change in the value added tax), others not (e.g. changes in the tax rate structure for income taxation).

REBALANCING OF FINANCIAL EQUILIBRIUM

Some contracts (or jurisdictions) allow for the rebalancing of the financial equilibrium of the project, when affected by several events. Whenever the legal framework allows flexibility in the definition of those events, the contract should exhaustively list all events that are susceptible of configuring a reason for rebalancing, therefore mitigating fiscal risks and preventing strategic behavior by the private partner.

Also the procedures for rebalancing, and methodologies for identifying the impact of triggering events, should be closely assessed.

RENEGOTIATION RISKS

In this context, Renegotiation Risk does not refer to the events that lead to renegotiation, but to the risks associated to the renegotiation process itself. Many types of risks do potentially lead to renegotiation. But renegotiation itself creates an opportunity for transferring back to government some costs and risks that originally had been allocated to the private partner.

Renegotiation may be formal (with the opening of the prescribed process, according to the contractual or legal rules), or informal (with the simple change of a core contractual parameter, or a set of parameters).

Renegotiation is, by definition, done without competitive pressure. Therefore, it requires the use of benchmarking for obtaining reference levels, and a continuous evaluation of the bargaining position, always measuring the current position against the departing point and (when viable) against the alternative of breaking the negotiation and canceling the contract.

Renegotiation (formal or informal) is a focal point for rent-seeking practices — its governance should be carefully scrutinized, and full disclosure (of the original contract, and of any additions or changes) adopted.

CONTRACT TERMINATION RISKS

Termination payments are a key element of the risk allocation in the PPP contract, and are crucial in determining whether the PPP project will be bankable. They cover cases in which the PPP contract may be terminated prior to the normal term of the PPP contract, either (i) by the contracting authority in the event of failure by the private partner to comply with its obligations or for public policy, (ii) by the private partner in case of occurrence of a failure of the contracting authority to comply with its obligations, or (iii) by either party in the event of prolonged Force Majeure Event, MAGA or Change in Law. Termination provisions define the rules for computing the amount which will be payable by the contracting authority to the private partner.

The list of events under which the PPP Contract can be terminated will vary from one PPP contract to another, as it will need to be tailored to take into account specific risks and obligations of each PPP project, as well as the overriding provisions of applicable law (for instance, some jurisdictions will always provide for a right of the contracting authority to terminate for reasons of public interest).

Contracting authority's contract managers should have a clear notion of the volume of payments required in each contractually prescribed case of early termination. And that information should be communicated to the Ministry of Finance, for fiscal risk management purposes.

APPENDIX: ACCOUNTING FOR PPP PROJECTS IN GOVERNMENT' ACCOUNTS

Appendix: Accounting for PPP projects in Government' accounts

TABLE 1. ACCOUNTING FOR PPP PROJECTS IN GOVERNMENT' ACCOUNTS

TRANSACTIONS	ACCOUNTING TREATMENT ON ACCRUAL BASIS	IMPACT ON GOVERNMENT' DEFICIT		IMPACT ON GOVERNMENT' BALANCE SHEET		ACCOUNTING TREATMENT ON CASH BASIS	IMPACT ON GOV. CASH DEFICIT
		Net Operating Deficit 1/	**Overall Deficit** 2/	**Gross Debt**	**Net Worth** 3/		
A. Construction the PPP asset (both for government and user-funded PPPs)							
1.Recognition of gov. non-financial asset and liability	• Increase in non-financial assets (equal to construction costs); • Increase in liabilities equal to full value of the asset (a financial liability in gov-funded, and a non-financial liability in user-funded)	None	Increases by the full value of the non-financial asset (net acquisition of non-financial asset)	Increases by the full value of the liability (equal to the non-financial asset)	None (increase in non-financial asset compensates increase in liability)	None (there are no government cash changes during construction)	None
B. Contract operation in government-funded PPPs							
2.Payment to operator to compensate for operational costs	• Expense, purchase of goods and services (G&S); • Decrease in stock of cash	Increases, due to expense in purchases of G&S	Increases, due to expense in purchases of G&S	None	Decreases, due to decrease in stock of cash	• Expense, purchase of G&S; • Decrease in stock of cash	Increases, due to expense in purchases of G&S
3.Payment to operator to compensate for financial charges 4/	• Expense, interest; • Decrease in stock of cash	Increases, due to expense in interest	Increases, due to expense in interest	None	Decreases, due to expense in interest	• Expense, interest; • Decrease in stock of cash	Increases, due to expense in interest
4.Payment to operator to compensate for capital investment (amortization of gov. liability)	• Decrease in liability; • Decrease in stock of cash	None, financing transaction	None, financing transaction	Decreases due to amortization	None	• Decrease in liability; • Decrease in stock of cash	None, financing transaction

APPENDIX: ACCOUNTING FOR PPP PROJECTS IN GOVERNMENT' ACCOUNTS

TRANSACTIONS	ACCOUNTING TREATMENT ON ACCRUAL BASIS	IMPACT ON GOVERNMENT' DEFICIT		IMPACT ON GOVERNMENT' BALANCE SHEET		ACCOUNTING TREATMENT ON CASH BASIS	IMPACT ON GOV. CASH DEFICIT
		Net Operating Deficit 1/	**Overall Deficit** 2/	**Gross Debt**	**Net Worth** 3/		
5.Depreciation of the non-financial asset	• Expense, consumption of fixed capital; • Decrease in non-financial assets	Increases, due to consumption of fixed capital	None, internal transaction 5/	None	Decreases, due to consumption of fixed capital	None, depreciation is not supported in cash based	None
C. Contract operation in user-funded PPPs							
6. Revenue recognition and reduction of government liability	• Decrease in non-financial liability; • Imputed revenue, capital grant	Decreases, due to imputed revenue	Decreases, due to imputed revenue	Decreases, due to amortization of non-financial liability	Increases, due to imputed revenue	None, imputations not supported in cash based	None
7. Depreciation of the non-financial asset	• Expense, consumption of fixed capital; • Decrease in non-financial assets	Increases, due to consumption of fixed capital	None, internal transaction	None	Decreases, due to consumption of fixed capital	None, depreciation is not supported in cash based	None
D. End of contract (both for government and user-funded PPPs)							
8. End of service provision by the operator	• Revenue, capital grant (residual value of the asset); • Net acquisition of non-financial asset	Decreases, due to revenue grant (residual value of asset)	None, due to compensation of both transactions	None	Increases, due to capital grant	None	None

1/ The net operating deficit excludes net spending on nonfinancial assets (acquisitions minus disposals). It is closer to the IPSAS definition of deficit than the statistical concept of overall deficit.
2/ The overall deficit corresponds to net lending/borrowing according to GFSM 2001 methodology.
3/ Net worth equal total assets (financial and nonfinancial) minus total liabilities (debt liabilities and others).
4/ Splitting asset and service component of service concession arrangements by fair value (estimation techniques).
5/ The increase in expenses—consumption of fixed capital—is compensated by the reduction in nonfinancial assets by the same amount, so net lending/borrowing is not affected.

APPENDIX: ACCOUNTING FOR PPP PROJECTS IN GOVERNMENT' ACCOUNTS

TABLE 2. ACCOUNTING FOR GOVERNMENT'S CONTINGENT LIABILITIES IN PPP PROJECTS

TRANSACTIONS	ACCOUNTING TREATMENT ON ACCRUAL BASIS	IMPACT ON GOVERNMENT' DEFICIT		IMPACT ON GOVERNMENT' BALANCE SHEET		ACCOUNTING TREATMENT ON CASH BASIS	IMPACT ON GOV. CASH DEFICIT
		Net Operating Deficit 1/	**Overall Deficit** 2/	**Gross Debt**	**Net Worth** 3/		
A. Government guaranteeing private partner's debt							
1. Government provides guarantee.	Off-balance sheet. Include memo item. 1/	None	None	None. Memo item	None	None	None
2. The debt guarantee is called.	Government assumes the part of the guarantee called and pays it immediately in cash.	Increases by payment of guarantee being called.	Increases by payment of guarantee being called.	Increases by guarantee assumed and not paid.	Decreases by payment of guarantee being called.	Only part of guarantee called and paid	Increases by payment of guarantee being called.
B. Government guaranteeing a minimum revenue to the private partner (MRG)							
1. Government provides a MRG.	Off-balance sheet. Include memo item. 2/	None	None	None. Memo item	None	None	None
2. Private partner revenues fall below MRG threshold.	Government assumes the part of the guarantee called and pays it immediately in cash. 2/	Increases by payment of guarantee being called.	Increases by payment of guarantee being called.	Increases by guarantee assumed and not paid.	Decreases by payment of guarantee being called.	Only part of guarantee called and paid	Increases by payment of guarantee being called.

1/ PFRAM estimates the stock of the government's contingent liability related to a debt guarantee as the private partner stock of debt weighted by the percentage being guaranteed by government.

2/ PFRAM provides two simple estimations of the stock of government's contingent liabilities arising from a MRG; (i) the simple accumulation of expected private partner's revenues at the time of contract awarding (no discount rate is used for simplicity purposes); (ii) the simple accumulation of the expected cash payments by the government once the MRG is trigger (that is to say, once the effective revenues of the private partner fall below the MRG threshold). Each of them provide an upper and lower bound broad estimation. The first, overestimates the real value of government's contingent liabilities, given that it assumes that revenues of the private operator would be zero. The second, underestimates the exposure of the government if the guarantee is not triggered (given that it will always be zero by construction), but may overestimate it once the guarantee is triggered (given that it assumes that the event triggering the guarantee will remain for the rest of contract, and calculates a simple accumulation of all the expected cash payments). In practice, countries would estimate a probability of the MRG to be called and calculate the stock of the government's guarantees as the discounted value of the expected government cash payments weighted by such probability.

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