

**G:ENESIS**

**Ghana Global Public-Private Partnership  
Conference**

Structuring PPP projects

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## Introduction

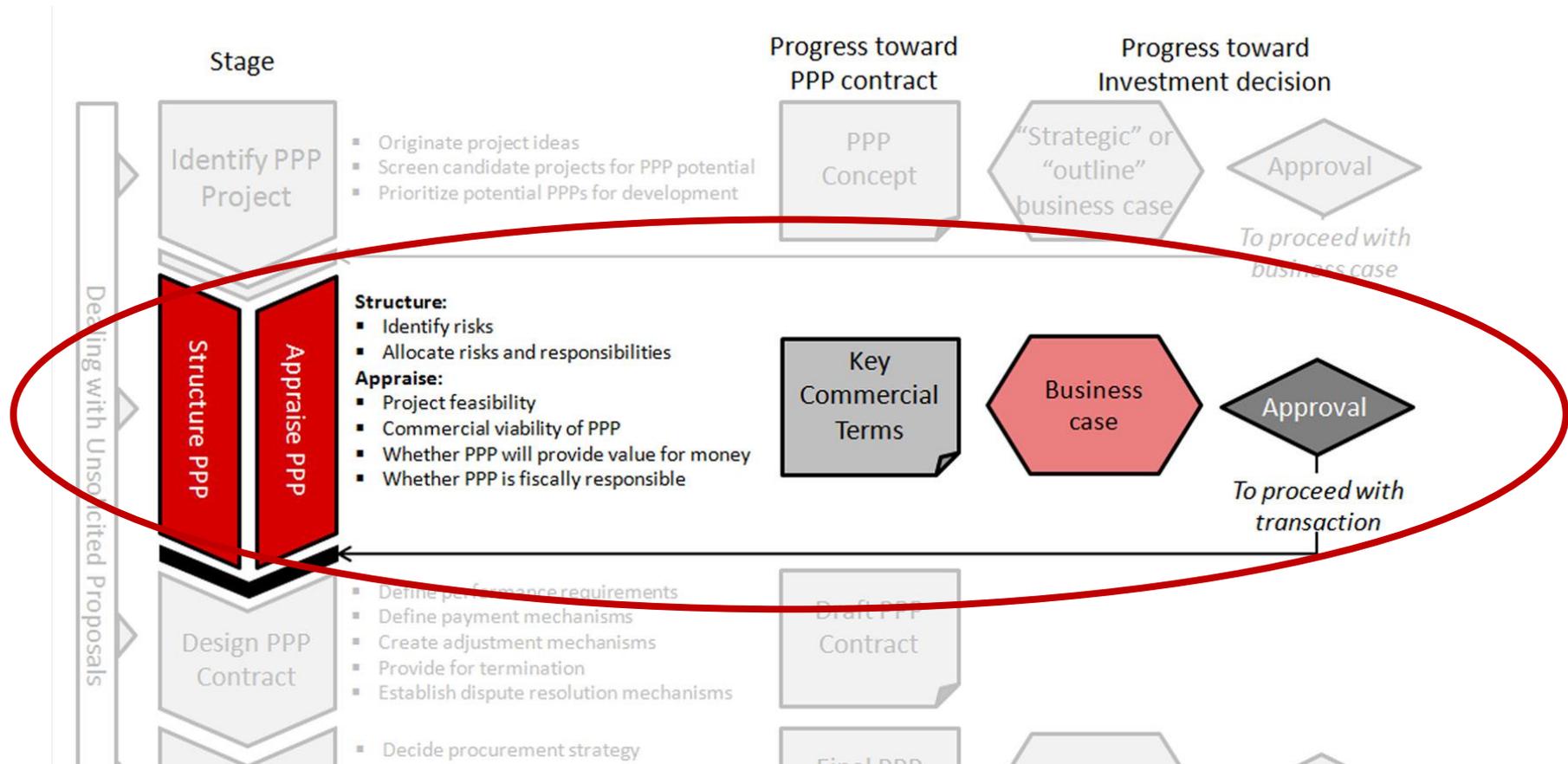
- One of the fundamental causes of project failure, for both traditional public sector procurement and PPPs, is often a lack of clarity on the part of the public authority regarding the exact scope and requirements of the project.
- Structuring a PPP project involves formulating the most effective and efficient structure for delivery of the infrastructure asset and/or service through a PPP
  - It means allocating responsibilities, rights and risks to each party
- The aim is to structure a PPP that will meet the GoG's appraisal criteria – technically feasible, economically and commercially viable, fiscally responsible and provide value for money

***“The key problem is not a lack of funding, as might be expected, instead, it is the lack of packaged, bankable projects – which in turn points to a need for more and better project preparation.”***

***- World Bank/PPIAF***

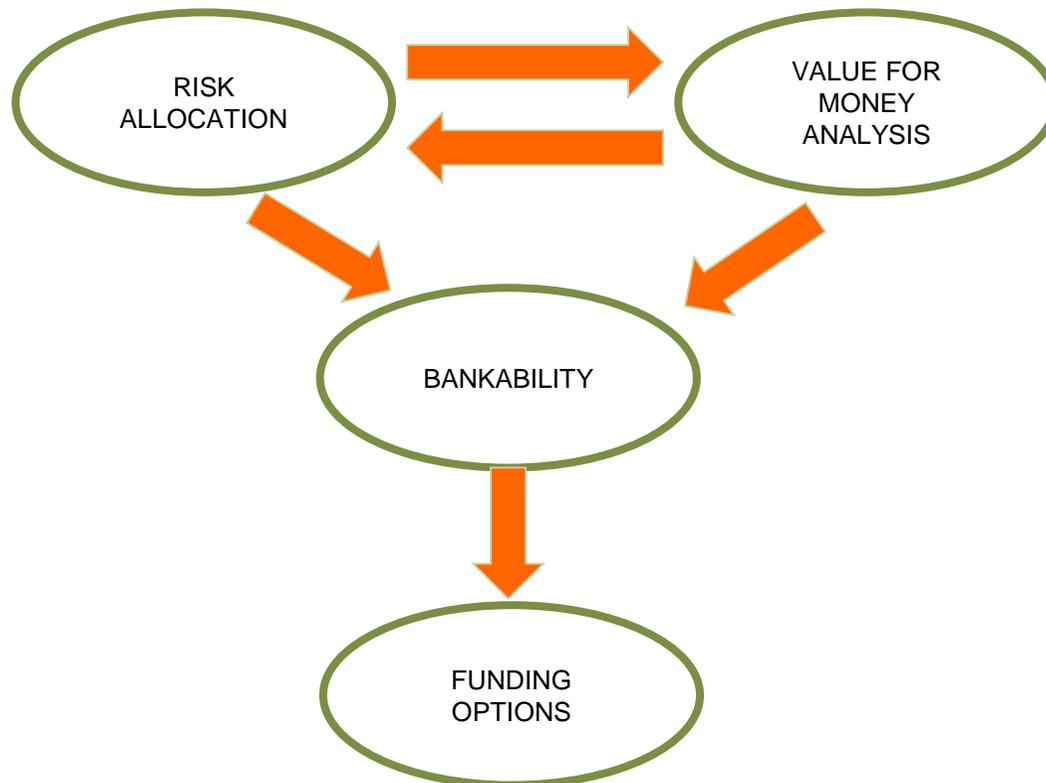
# Introduction – Where PPP structuring fits in the process

- PPP structuring occurs after the project identification phases and feasibility studies have been completed



# Overview of PPP structuring

- There are 4 core components of developing an effective PPP structure:
  - Risk Allocation
  - Value for Money analysis
  - Bankability
  - Funding options



- **The PPP structure is developed iteratively**
- **The Risk Allocation and Value for Money analysis, while separate are closely linked and feed into each other**
- **The tools required to complete the structuring are:**
  - **A bankable feasibility study**
  - **Risk Matrix**
  - **PSC model**

## Risk identification and allocation

- What do we mean by Risk?

**A risk is an unpredictable variation in the project's value, arising from a given underlying risk factor.<sup>1</sup>**

- PPP risks vary depending on the type of the project and the assets and services involved.
- Risks also vary over the various phases of the project – construction, commissioning, early operation, maintenance
- A detailed, accurate identification and allocation of **all** relevant risks to a project is crucial to developing an effective and sustainable project structure
- Other components of the PPP structure flow from the risk identification and allocation.

## Risk identification

- The first step in the process is to identify the universe of risks that could affect the project's success
- The most common types of risk include the following:

### Project

- Uncertainties in relation to project design, construction, completion, operation and financing that result in adverse consequences on cost and /or service delivery

### Demand/ volume

- Demand or the price for a service may vary from that initial projections, impacting the revenue derived from the project

### Financial

- Risks that private finance maybe unavailable or insufficient or project may prove to be financially unviable. This also includes the risk of exchange rate appreciation/depreciation, changes in interest rates and tax rate changes that could substantially impact costs and revenues

### Regulatory

- Risks arising from the lack of a suitably developed regulatory system which, for example, ensures regulatory independence from the government and regulations for the participation of the private sector in infrastructure, appropriate periodic review of tariffs

## Risk identification – cont.

### Social /Environmental

- The project has an adverse impact on the surrounding society (e.g. pollution, relocation)

### Legal

- Risks from a breach of contract from either party, delivery delays or not meeting quality standards

### Political

- Risks that arise from wars, civil disturbances, terrorism, a currency transfer restrictions, breach of contract, expropriation or nationalisation of the private party assets

### Force majeure

- Events beyond the control of either party (either natural or man-made) that may have a catastrophic effect on either party's ability to perform its obligations under the contract.

## Risk allocation

- Involves allocating the responsibility for dealing with each risk among the Local Government and private sector
- The objective is to allocate the risk to the party in the best position to manage that risk.
- For each identified risk, three principles should guide which party is best placed to manage the risk:

The party best able to control the likelihood of the risk occurring

The party best able to control the impact of the risk on project outcomes

The party best able to absorb the risk at lowest cost

# Risk allocation

- The allocation of risks is between the public and private sector

Public sector

Regulatory

Political

Social/Environmental

Force majeure

Private sector

Project

Demand/volume

Financial

Force majeure

## Tools for effective risk identification and allocation & Value for Money

### Bankable Feasibility Study

- To assess a project's feasibility, the Local Government promoting the project needs a clear picture of the feasibility of the project
- A bankable feasibility study is a detailed analysis of the technical, commercial, and economic components of the project
- It is the tool through which the risk identification and allocation, as well as the value for money analysis occurs
- Elements of a Bankable Feasibility Study:
  - Define the technical components of the project
  - Specify the value for money and the PSC if required;
  - Analyse the various Project Delivery Options identified
  - Outline risk sharing arrangements

### Risk Matrix

- A risk matrix is used to identify, allocate and track risk allocation through the project structuring until financial closure.
- It consolidates all identified project risks, their impacts and possible mitigation measures.
- The risk matrix will be a vital input into the calculation of the associated costs of all risks to the Local Government and private sector

## Risk allocation – Example of risk matrix

**EXAMPLE**

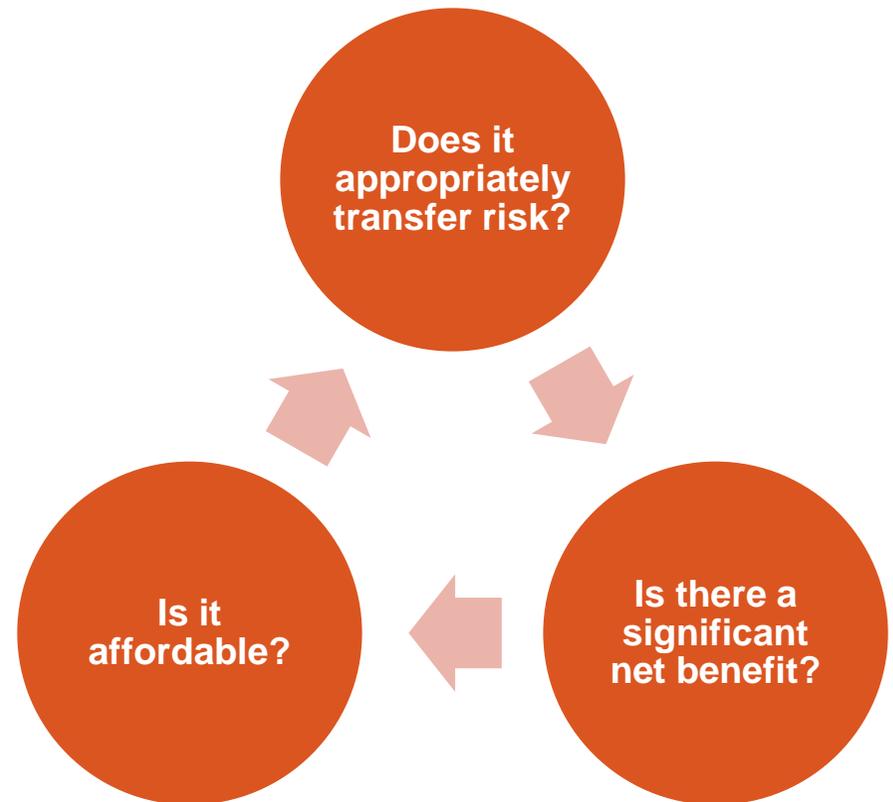
CATEGORY	ITEM	IDENTIFIED RISK	POSSIBLE RISK MITIGATION MEASURES	RISK ALLOCATION
<b>Construction</b>	Design	Over-design or under-design	Design consultant must be available at the bidding stage	Private Party
	Construction	Geological conditions	Select a consortium of contractors with complementing specialist skills	Private party
		Delay in approvals	Fast track put in place for processing planning applications	Government
<b>Operation</b>	Revenue	Wrong demand estimates Inequitable tariff	Regulatory changes (e.g. mandatory courses at the DETC) to support some of the services offered Setting fees according to the value customers perceive a service to have	Private Party Government
	Operating cost overruns	High maintenance cost	Maintenance cost should be based on agreed performance parameters	Private party
	Social acceptability	Non acceptance of fee structure	The objectives of the DETC should be publicised through a marketing and advertising strategy	Government
<b>Financial</b>	Exchange rate	Devaluation	Hedging mechanism	Private party/ Government
	Interest rate	Increase	Loans raised on fixed interest rate	Private party/ Government
<b>Political</b>	Tax, legislation and policy	Change in legislation or Government policy affecting negatively the project viability	A regulatory body should be empowered to take independent decisions	Government
<b>Force Majeure</b>	Act of God	Loss due to the force majeure happening	Explicit definition of force majeure and make use of insurance covers to address those risks	Private party/ Government

# Value for money

- What do we mean by Value for Money (VfM)

**VfM means that the provision of a public sector function by a private party results in a net benefit to the public sector, defined in terms of cost, price, quality, quantity, risk transfer, or a combination of these.<sup>1</sup>**

- The VfM analysis allows the local Government to assess whether the PPP procurement is the best choice for the project.
- Three important questions need to be answered:



## Value for Money – appropriate risk transfer

- The key question here is that in light of the risk analysis and allocation, is there sufficient value for money (VfM) to proceed?
- By improving the identification of a project's long-term risks and the allocation of those risks between the public and private sectors, the PPP process enables a more efficient use of resources.
- It is important to note that risk allocation does not mean that the maximum amount of risk should be transferred to the private sector
  - This will make the project unattractive for investment
  - This will make the project more expensive (higher risk, higher return expected)
- This assessment revisits the risk identification and allocation. It is thus an iterative process.

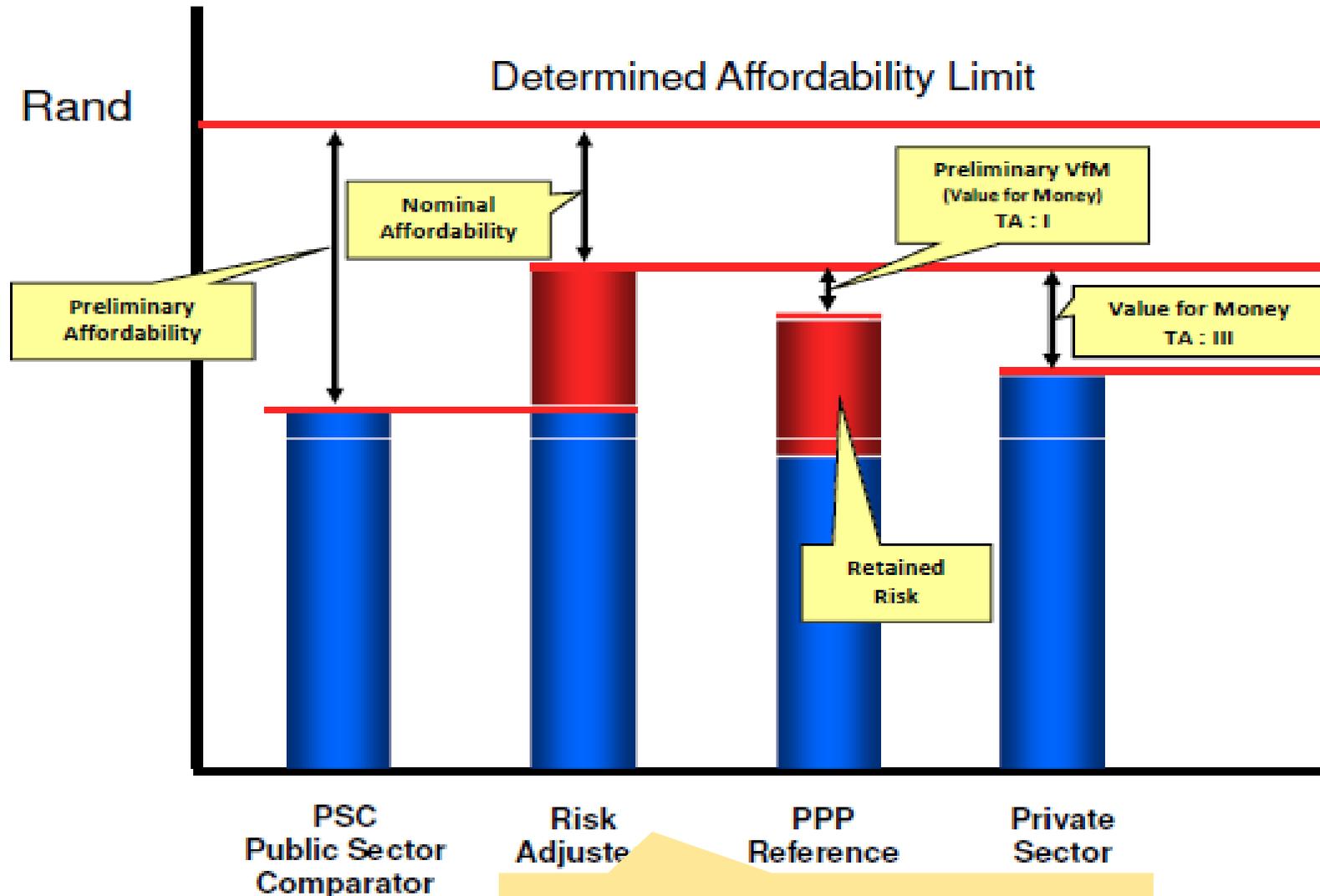
## Value for Money – Significant net benefit

- The VfM analysis must demonstrate that the cost of providing the infrastructure service through a PPP is notably lower than if provided fully by the Local Government.
- This is usually done through the Public Sector Comparator (PSC) analysis.
- The PSC model reflects the full costs to the Local Government of delivering the required service
- Key characteristics of the PSC model

### Characteristics of PSC Model

- Its includes all capital and operating costs
- Expressed as the net present value (NPV) of a projected cash flow based on the appropriate discount rate
- Based on the costs for the most recent, similar, public sector project (or a best estimate)
- Costs expressed as nominal costs
- Depreciation not included (cash-flow model)

# Value for Money - PSC



A risk-adjusted PSC includes a costing for all the risks associated with the project. (Refer back to risk identification and allocation)

## Value for Money – The link with Affordability

- A proposed PPP project may provide VfM, but may be unaffordable if the specifications are too high.
- Affordability is often assessed separately as a distinct consideration, but is also relevant in the VfM considerations
  - **It is essentially the last hurdle that a project must pass through**
- If the risk allocation to private investors implies that they will be prepared to assume such risks at a significantly high cost to the project, this affects the cost to the user or Local Government
- If the Local Government is unable to raise prices to consumers and has to absorb the higher costs, the affordability constraint becomes particularly important.
- If a project is unaffordable it undermines the local Government's ability to deliver other services and it should not be pursued

## Value for Money – Some guiding principles

- The likelihood that a PPP project will provide value for money is enhanced when all or most of the following conditions are met:

There is major investment involved

The private sector has the expertise to design and implement complex projects

the public sector is able to define its service needs as outputs that can be written into the PPP contract

risk allocation between the public and private sectors can be clearly identified and implemented

it is possible to estimate on a whole-life basis the long-term costs of providing the assets and services involved

The technological aspects of the project are reasonably stable

# Bankability

- What do we mean by Bankability?

**A bankable project is one that is suitably structured to attract private investment.<sup>1</sup>**

- PPP typically work through the traditional project financing model – based on an asset with associated cash flows.
- Financiers of PPP projects usually look to the project's cash flows as the principal source of security. The two important elements of the cash flow is that they must be **sufficient** and **secure**.

**Sufficient**

- Operating cash flows need to be high enough to cover debt service, plus an acceptable margin.

**Secure**

- Risk of variation to the cash flows must be minimal and likely to stay within an acceptable margin

# Bankability

- Important considerations of financiers

## Is there a secure cash flow?

- The project has a clearly outlined revenue streams (e.g. PPA)
- Cash flow uncertainties are minimised (Guarantees possibly provided)

## Is there legal recourse for default?

- The PPP structure clearly outlines responsibilities for the project risks, and recourse for default

## Is there an appropriate institutional structure

- The public sector agency has the right legal standing to contract with the private sector
- The Local Government agency is able to isolate and clearly account for the cash flows
- The appropriate governance and institutional capacity exists

## Is there political will?

- The project has the signoff at the right political level
- Political risk insurance instruments are available (e.g. Multilateral International Guarantee Agency (MIGA) of the World Bank)

## Is there a sustainable business model

- The project has a sustainable market it services
- The right management and technical expertise are in place to manage the project

## Funding options

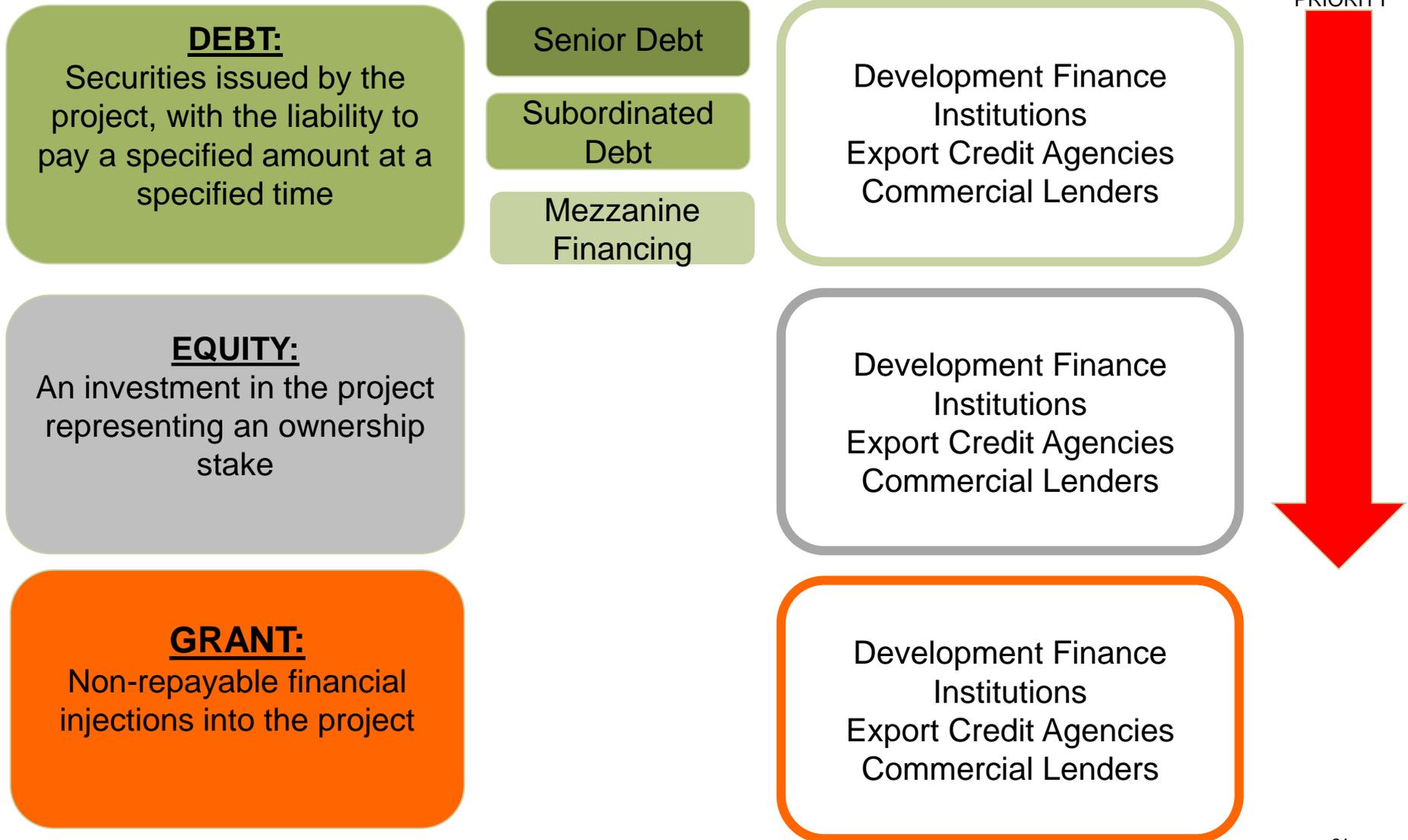
- PPP projects are usually funded through **project funding**, not corporate funding.
- Project Finance is typically viewed as a contractual network that revolves around the Special Purpose Vehicle (SPV).
  - The SPV is created to deliver the project and importantly, access finance for the project on a limited recourse basis

### Advantages of project finance for the public sector

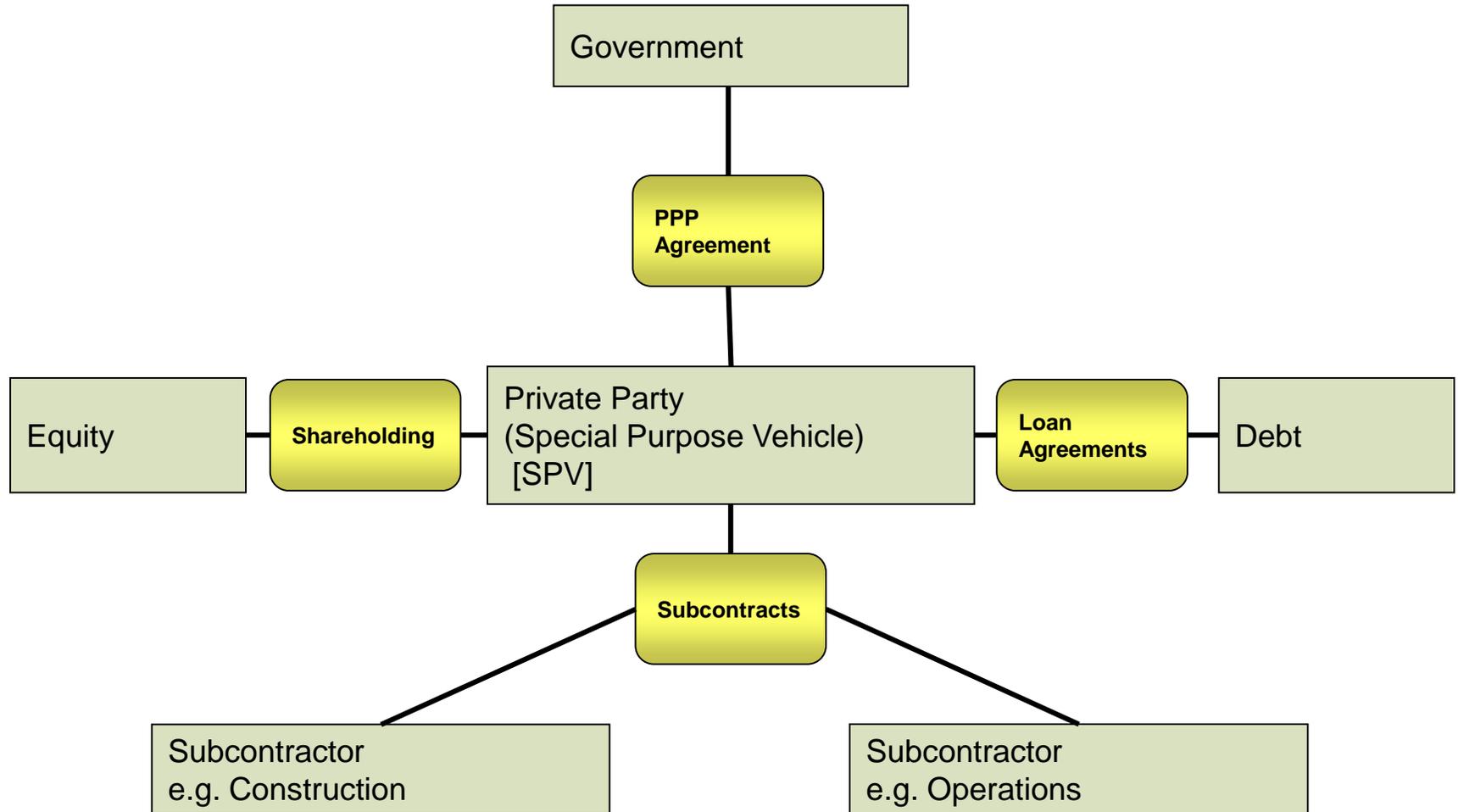
- Off balance sheet financing ensures sponsors release debt capacity for additional investments
- Public sponsors (governments) lessen fiscal imbalances through off balance sheet financing
- Lenders have limited recourse to assets outside of the SPV
- Higher levels of risk allocation support greater D/E ratios
- Though contracts between sponsors and the SPV are essentially commercial guarantees, they are not reported statutorily.

## Funding options

- PPP projects are typically funded through a combination of debt and equity, and occasionally grant funding



# Generic Project Finance Structure for PPPs



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# Typical PPP sectors

- Transportation
  - Roads / bridges / tunnels
  - Rail / mass transit
  - Ports
  - Airports
- Social Infrastructure
  - Education
  - Health
  - Prisons
  - Public housing
  - Public buildings (administration)
- Military equipment
- Water, Sanitation & Waste
  - Water supply / distribution
  - Sanitation
  - Solid waste / sewage
- Power generation / distribution

Usually user-paid  
= concessions

Usually public-sector paid  
= PFI Model

Various models –  
may be privatised  
rather than PPPs