

Translating Risk Allocation into Contract Structure

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Much of the PPP literature focuses on risk allocation. Some of it can give the impression that, once a preferred risk allocation has been settled, this can somehow translate smoothly into a detailed contract. Such an impression may be misleading. Many experienced PPP practitioners will go through an intermediate step in which they define other elements of the contract structure such as: “who will do what”?, and “how will the payments flow”? Unfortunately, relatively few resources describe how the risk allocation translates into an overall contract structure.

The **World Bank's Toolkit for PPP in Water Services** ([PPIAF 2006](#), 97–124) is an exception. It sets out a process for allocating responsibilities and risks together—each responsibility being associated with a bundle of risks. For example, the private party may be responsible for revenue collection, which carries the risk that some customers will not pay. The private party may be responsible for construction, which entails a series of risks. Labor costs, the timing of equipment delivery, and the cost and time to obtain permits can affect total costs and construction times, positively or negatively.

The toolkit sets out an approach to contract structuring, starting with identifying the major areas of responsibility, or functions: design and construction of new assets, finance, operations, and maintenance (for more on these functions see [What is a PPP: Defining 'Public-Private Partnership'](#)). For each function, specific responsibilities can then be defined, and risks identified that are associated with each responsibility.

The toolkit also describes the linkage between defining the details of the payment mechanism—in this case, tariff review mechanisms, since the toolkit focuses on user-pays projects—and risk allocation. [Payment Mechanism](#) goes into more detail.

Generalizing from this approach suggests that it may be helpful to think of arriving at a PPP type (see [What is a PPP: Defining 'Public-Private Partnership'](#)) from considering whether the public or private party is better able to carry out the key functions (*Design, Build, Operate, Maintain, and Finance*). This allocation of functions may be based on an analysis of which party is best able to bear the risks naturally associated with each function. Consideration of institutional linkages and political constraints will also come into play when deciding on which party can best perform which function.

Once a basic PPP type is chosen, the remainder of the risk allocation can be thought of as fine-tuning the basic function allocation. For example, if the private party is to be responsible for the *Build* function, but the public party is to retain geotechnical risk, this would be included in the contract design as an exception to the basic functional principle that all construction-related risks are for the private party to manage and absorb.

Beside allocation of functions, another key element in contract structure is how the payments flow. Payment mechanisms may follow from the allocation of functions and risks. For example, if the private party is better able to manage collection risks and demand risks, then the private party will likely be remunerated directly from user charges. However, if the private party can manage collection risk but is not asked to take demand risk, then the payment structure may involve the private party collecting user charges and remitting them to the public authority, while the public authority then pays the private party for asset availability, with a bonus for achieving high levels of collections.

Finally, a necessary complement to defining the payment mechanism is defining how performance will be measured, monitored, and enforced. For example, the government's payment may be conditional on the availability of the asset, with a view to transferring most operating risk to the private sector. This risk transfer can only be achieved in practice if the standards defining “availability” are clear and practicable.

[Performance Requirements](#) provides more details.

The following resources provide further guidance on the linkages between responsibilities, risks, rights, and payment mechanisms, which can inform development of the contract structure:

- **Irwin** ([Irwin 2007](#), 61) briefly describes how responsibilities, rights, and risks should be allocated together. This follows from the principle of risk allocation that a risk is allocated to the party best able to manage it: the rationale only holds if the party is also given the right and responsibility to make decisions related to that risk.
- **Iossa et al** ([Iossa et al. 2007](#), 26–31) describes how different PPP contract types—with different functions allocated to the private party and different payment mechanisms—typically correspond to different risk allocations. The authors also describe (33–34) how output specifications, payment mechanisms, and risk allocations need to be closely aligned.
- **India's online PPP Toolkit** ([IN](#)) Module 1: *PPP Background* has a section on PPP model variants which describes typical risk allocations under different PPP contract types, thus giving a guide to how risk allocation can translate into choice of basic contract structure.

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