Optimising project finance solutions in the water sector
Mandri-Perrott, Xavier Cledan

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7. FUNDING AND FINANCE

7.1 Introduction

This chapter summarizes the more important funding and finance issues which are likely to arise in water PPP projects. Water PPP projects are expensive and developing strategies for sourcing funding (both public and private) need to be an integral part of the PPP strategy that is devised (Nickson and Franceys, 2003). Typically under PPP schemes there are three primary sources for funding projects:

- **Debt**: through commercial bank loans (local and international banks), publically traded bonds, private debt placement, loans from project sponsors, supplier credit, export credit financing, loans from international financial institutions (IFIs) or development organizations.\(^{66}\)
- **Equity**: typically sourced from consortium partners, passive investors, investment funds (eg emerging market, infrastructure or sector specific equity funds), domestic public entities, local property developers, international financial institutions (IFIs) or development organizations.
- **Grants**: often provided by public institutions (local, national or supranational), local property developers, international donors or other groups benefiting from project implementation.

Decisions made on policy, management, technology and commercial issues during the development of water PPP projects may affect the availability of some of these funding sources. For example, grant funding may only be available to water PPP projects that aim at accomplishing selected policy goals. Similarly, large amounts of private debt financing may not be available where private concessionaires must assume the entirety of certain major risks (eg full commercial and collections risk). Understanding the implications that project structure has on funding and finance is a critical component of effective planning.

7.2 Considering Bankability

Water PPP planners face a daunting challenge when planning for project funding and financing requirements. Finalizing a project’s financial structure usually occurs during later stages of planning and procurement - after many key decisions have already been made. Revisiting public approval processes along the way can result in substantial delays and lost confidence when amending earlier decisions. Therefore, it is imperative that early decision making takes into account such requirements and their impact on a project’s future financial and commercial structure. ‘Road shows’ and other events designed to test market interest can help planners get a sense for the market’s perception of proposed risk allocations and other

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\(^{66}\) Terms such as ‘leverage’ or ‘gearing’ describe the relative proportion of debt in a projects capital structure. Highly ‘geared’ or ‘leveraged’ projects involve greater proportions of debt to equity– this has the effect of increasing lender project risk and reducing sponsor/equity investor project risk.
Bankability generally depends on four broad criteria:

- Creditworthiness
- Legal viability
- Economic viability
- Technical feasibility

The following table summarizes many of the key questions investors/lenders will ask in order to assess a project’s bankability and determine their level of interest in a project. Concepts discussed in Chapter 6: Understanding and Allocating Risk relate to many of these issues.

<table>
<thead>
<tr>
<th>Project Aspects</th>
<th>Questions for Determining Bankability</th>
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| Credit Worthiness: | Are project cash flows sufficient to support envisaged levels of debt?  
How risky are project cash flows?  How certain are project revenues?  Who bares revenue collection risk and how realistic are demand forecasts?  Is there potential for regulatory ‘claw back’ if actual numbers exceed estimates?  Will the regulator be isolated from political pressures?  
Can the Grantor meet its financial obligations to the project?  
Does the project benefit from any Grantor or sovereign guarantees; will the project benefit from guarantees/insurance on its debt (eg partial risk or credit guarantees, political risk insurance)?  
Is there sufficient equity cushion to protect lenders if the concession’s value decreases?  Do project developers have sufficient ‘skin in the game’ (i.e. value at risk)?  
In the event of termination, what mechanisms guarantee debt repayment and what proportion of the debt will be covered?  
Do project developers have adequate capacity and incentives to deliver sustainable long term operational performance?  Do they derive significant value from ancillary activities outside of the concession company (eg local property development, turnkey construction contracts, etc.)?  
Do the project’s financial ratios meet lender expectations (eg principal and interest cover ratios, debt service cover ratio, loan life ratio, debt/equity ratio)? |
| Legal: | Does the Grantor have the authority to grant the concession?  
Will the project require any additional legislation (eg sector law, PPP law)?  
How strong are the project’s contractual arrangements with input suppliers (i.e. rolling stock suppliers)?  
What legal protections/channels for recourse do investors have in the project’s jurisdiction (eg access to international arbitration)?  
Are legal decisions enforced in the project’s jurisdiction (rule of law)?  
How strong are property rights in the project’s jurisdiction? |
| Economic: | Is there a market for the project’s services?  
Does regulation protect against the threat of new market entrants?  How stable is that regulatory environment?  
Are project inputs (eg electricity, rolling stock, etc.) available at reasonable prices?  
How stable are input supplies?  
How stable is the project’s macroeconomic environment?  How would changes in inflation, foreign exchange, interest rates, etc. impact project cash flows?  How will such risks be mitigated in the PPP contract?  Have any standby credit facilities been
### Project Aspects

<table>
<thead>
<tr>
<th>Questions for Determining Bankability</th>
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<tbody>
<tr>
<td>arranged to deal with potential lags between financial shocks and tariff adjustments?</td>
</tr>
</tbody>
</table>

#### Technical:

- Are construction costs reasonable and realistic?
- Is the construction and commissioning timetable realistic?
- Does the project rely extensively on proprietary technology?
- How flexible is the systems design?
- Is the proposed technological solution appropriate for local conditions and the availability/scarcity of skilled labour?

### 7.3 Structuring Finance for Water PPP Projects

Financing for water PPP projects may take the form of either corporate or, more commonly for large projects, project finance structures. The primary difference between corporate and project finance is the means by which lenders derive security for repayment. Project finance structures will involve a Special Purpose Vehicle (SPV, an independent legal entity established for the purpose of undertaking the project) into which lenders and project sponsors contribute debt and equity to fund project costs. As Special Purpose Vehicles are legally separated from project sponsors, lenders are said to have ‘limited or no recourse’ to sponsors regarding their debt investments. Limited recourse is the more usual variation and is employed in financings, where recourse is limited to either a fixed monetary amount (eg USD 50 million) and/or is subject to certain performance criteria (eg cost and time overruns during construction, revenue/cash shortfalls during operations when developers commit further capital toward debt service). Project financings rely solely on project cash flows for repayment, with the project’s assets, rights and interests held as secondary security or collateral. Project finance structures are very common for water PPPs that require substantial upfront private investments; such investments exceed the capacity of developers’ balance sheets.

Project finance has a number of key characteristics:

- It requires cash flow certainty: this underpins the structure and risk allocation
- Credit intensive: with the multitude of stakeholders and types of risk, project financing requires a multi-disciplinary and rigorous approach to risk allocation and management
- International: most major projects in developing countries tend to have extensive international involvement (lenders, investors, developers, contractors, operators, suppliers etc)
- Long-term: repayments are usually over extended periods (10 years or more) to accommodate high capital costs and subsequent operating margins
- Highly structural: project financing risk allocation means rigorous and comprehensive structuring among the parties
- Large: high development/transaction costs can usually only be supported or justified on large transactions
- Mature: particularly in developed countries there are many experienced participants in the international PPP markets. Projects can, therefore, be smoothly structured by experienced financiers and advisors. For developing countries the challenge is often to attract such experienced participants and financiers.

Other characteristics of project finance structures include (Vives, 1997):
Financing is provided through a special purpose legal entity whose only business is the project;
Typically raised for green-field development or larger extensions to existing systems;
Project capital structures typically involve greater leverage (typically in the range 60-90% debt);
Debt is typically ‘non-recourse’ or ‘limited-recourse,’ meaning that lenders rely primarily on future project cash flows for repayment;
Lenders derive security from the concession contract or PPP Agreement;
Financing reflects the concession contract’s time-bound nature. The tenor of project debt will be less than the concession’s life, but usually linked to it.

In contrast to project finance, lending for corporate finance projects derives security for debt repayment from the sponsors’ or shareholders’ balance sheets or other non-project security. Corporate finance lenders typically would have rights to all the borrower’s assets in the event of default. Characteristics of corporate finance include:

- Contractual arrangements between a Grantor and a legal entity which derives its financial strength directly from the sponsors’ or shareholders’ balance sheets
- Generally smaller investment amounts compared to project financed alternatives
- Absent or substantially reduced lender due diligence on the project, since the lender is taking the sponsors’ credit risk, as opposed to project risk - lender security is outside of the investment being financed. It is important to note, however, that this characteristic only applies if the sponsor is considered to be a good credit risk– it not then project finance type due diligence will still be needed.

The relative merits of either structure will depend upon the size and risk profile of the project in question. Larger, green-field water investments will almost always take on some form of project finance in order to limit the liability of developers and raise sufficient capital. Nevertheless, smaller water investments (eg minor extensions or refurbishments) may draw on corporate finance depending on their size and scope. Different financing techniques have relative merits and limitations as summarized in Table 7 below:


### Table 7: Project Finance vs. Corporate Finance Structures

<table>
<thead>
<tr>
<th>Financing Structure</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Finance:</strong></td>
<td><img src="#" alt="List of advantages for project finance" /></td>
<td><img src="#" alt="List of disadvantages for project finance" /></td>
</tr>
<tr>
<td></td>
<td>• Off balance sheet.</td>
<td>• Greater transaction costs compared to corporate finance</td>
</tr>
</tbody>
</table>
|                     | • Separates project credit profile from developers’ credit profiles – the project company is insulated from developer default. Similarly, developers are insulated from project liabilities.  
 |                     | 68 | • In developing markets only available for larger projects |
|                     | • Can achieve high leverage ratios. This can provide greater rates of equity returns from smaller cash flows. | • Requires additional due diligence and associated time when structuring |
|                     | • Can create greater tax shields because of greater leverage – which can reduce the overall cost of capital. | • Bid prices can change when final price is dependent on prevailing credit market conditions (i.e. interest rates) as final financing terms may not be set until after preferred bidder selection. |
|                     | • Reduces managerial discretion over free cash flows because of lender imposed constraints. | • Given the complexities of project finance structures and documentation the time between bid award and financial close/project commencement may be lengthy (typically in the order of 12 months, but may be much longer if the project structure is not bankable). This can conflict with grantor/political project timetable expectations. |
|                     | • Mitigates the “underinvestment bias.”  
 |                     | 69 | • Provides additional mechanisms for risk spreading through syndication and securitization. |
|                     | • Additional lender due diligence can improve project quality. | • Additional lender due diligence can improve project quality. |
|                     | • Lender reporting and control requirements can help achieve much greater transparency for the grantor with regards to project company operations and financial performance. This can be very important implications when assessing performance related payments and when setting or adjusting fare levels. | • Places sponsors’ assets/balance sheet at risk |
|                     | • Given the complexities of project finance structures and documentation the time between bid award and financial close/project commencement may be lengthy (typically in the order of 12 months, but may be much longer if the project structure is not bankable). This can conflict with grantor/political project timetable expectations. | • Lower debt to equity ratios |
| **Corporate Finance:** | • Lower transaction costs because credit risk assessment is based on sponsor credit rather than complex | |

67 Adapted from various sources but principally Yescombe, (2002).

68 The degree of protection afforded by project finance structures varies between legal jurisdictions

69 Underinvestment Bias: High proportions of debt increases a company’s management reluctance to finance low risk positive NPV projects as smaller returns belong almost entirely to lenders. Similarly, other high risk positive NPV projects may be foregone because of the risks they pose to managers. Project finance can achieve higher leverage to enhance returns of smaller NPV projects and can also protect management’s interests by partially insulating them from potential downsides of riskier projects (Yescombe 2002).
### Financing Structure

<table>
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<th>Financing Structure</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>project credit risk</td>
<td>• Typically available only for smaller investments (sponsor not willing to accept larger risk)</td>
</tr>
<tr>
<td></td>
<td>• Simpler, easier to obtain and faster to structure than project finance</td>
<td>• Project is not isolated from sponsor credit profiles and vice versa</td>
</tr>
<tr>
<td></td>
<td>• Requires smaller amounts of due diligence and associated time because of</td>
<td>• May limit public control over refinancing activities and prevent public sharing in refinancing gains.</td>
</tr>
<tr>
<td></td>
<td>additional security provided by sponsors' balance sheets</td>
<td>• Public authorities may realize fewer benefits related to project transparency compared to project finance</td>
</tr>
<tr>
<td></td>
<td>• Depending on sponsor's credit rating, may offer lower margins on debt</td>
<td>• Public authorities may realize fewer benefits related to project transparency compared to project finance</td>
</tr>
<tr>
<td></td>
<td>• Offers greater flexibility to accommodate changes (such as renegotiations)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Typically available only for smaller investments (sponsor not willing to accept larger risk)</td>
</tr>
</tbody>
</table>

### 7.4 Typical financing structure of a long term PPP agreement

As discussed above, financing for water PPP projects usually take the form of project finance structures. Project finance structures involve a Special Purpose Vehicle (SPV, an independent legal entity established for the purpose of undertaking the project) into which lenders and project sponsors contribute debt and equity to fund project costs. The figure below shows a typical representation of a financing structure for a long term water and wastewater PPP scheme. Characteristically, the Special Purpose Vehicles are legally separated from project sponsors. The Developer of a concession type or any other form of long term PPP scheme will be legally a separate company from the international parent company. If things go wrong, the extent of the parent company’s losses is the equity it invested in the Developer.

Initial lender due diligence and subsequent monitoring can enhance project transparency and quality. Since banks or other lenders may require significant changes to a project’s structure or agreed risk allocation before committing financing, it is recommended that they are consulted as early as possible in the procurement process. Although these changes can help rationalize risk allocations, they can take considerable time to negotiate and agree, as well as damage project and grantor credibility, which is why it is so important to focus, from project inception, on developing a project structure that is bankable. In this respect, it will be invaluable for public authorities to hire experienced transaction/financial advisors who are familiar with taking PPP projects to market and financing them (typically investment/project finance banks or in some cases IFIs).

Project financiers will look to the balance between sponsor equity and debt financing (gearing) in a particular project. The project’s gearing will reflect:

- How much debt can project cash flows support?
- How risky or uncertain are the project’s cash flows (market risk)?

Although many project financings aim to maximize gearing (debt is typically cheaper than equity), equity requirements are never the less usually substantial to ensure that the sponsor’s commitment makes it too costly to withdraw its support when the going gets tough. Debt to equity ratios of 75:25 or 70:30 have been common, although some, more conservative, export credit agencies have sought lower gearing (60:40). Lenders and Grantor want to know that the
parent or sponsor company is truly committed to the operation, and will provide sufficient funds to fix things which go wrong. To ensure this, governments may require that at least a specified amount of equity is injected into the SPV, or that the parent company guarantees the obligations of the concession Developer up to a specified level. It is good practice to ensure that the concession company has enough equity or parent company guarantees to remain viable\(^{70}\) even if things do not go as expected (see Ehrhardt and Irwin 2004). More risky project structures (e.g., typical full concession type PPP agreements) are also likely to induce lenders to insist on lower gearing, as well as to increase the cost of debt – a ‘double-whammy’ effect on increasing project costs.

Risk allocation and the certainty of project cash flows will determine the nature and amount of debt that projects can support. Spreads on project debt will also reflect perceptions of riskiness in addition to general market conditions at the time of issuance. Higher leverage for water PPP projects with riskier cash flow characteristics is a recipe for disaster, assuming that sources of debt and equity are even available on this basis.

International commercial lenders are also increasingly conscious of the social and environmental impact of projects they lend to. Over 60 of the world’s leading financial

\(^{70}\) It is important to note that in interviews undertaken with Severn Trent Water International (UK), Veolia (France), Ondeo (France), Biwater (UK), Cascal (UK-Netherlands), Odebrecht (Brazil), and Gelsenwasser (Germany) within a period from 2006 to 2009, these international player are not willing to effectively ‘bet the (parent) company’ on a single contract. It is therefore important to take into account the willingness of Developers to bear risk, and accept that Developers will need to limit their risk to a specified level. It is not good practice to seek unlimited parent company guarantees, since few Developers would be willing to bid in such circumstances.
Institutions have now adopted the Equator Principles, a voluntary set of guidelines in financial industry to determine, assess and manage environmental and social risks in project financing. These Equator Principles Financial Institutions (EPFIs) have consequently adopted these Principles in order to ensure that the projects they finance are developed in a manner that is socially responsible and reflect sound environmental management practices. Water PPP projects will, therefore, need to have been the subject of environmental and social impact studies and public consultation prior to launch in order to attract financing from these institutions.

7.5 Public Funding, Support and International Funding Institutions

As discussed, depending on the type of PPP structure chosen there will be a lesser or greater level of support required. As the provision of water services are public in nature, are of high political sensitivity and are vital for human subsistence, most water PPP services require some direct or indirect form of public support. This section provides a non-exhaustive list of some possible forms of public support.

Capital grants and Public ‘soft’ loans. The upfront capital costs required to construct new water systems are typically in the hundreds of millions of dollars. However, the tariff revenues generated from customers are often too small to service the costs of project debt required to construct a system’s infrastructure. Accordingly, the Grantor may opt to incorporate an element of capital grant designed to offset the private sector’s initial construction costs and associated ongoing debt repayment obligations. Reducing debt service during operations enhances the stability of concession Developer companies and helps to prevent default, which is often costly to public partners as well. Determining the appropriate level of capital grant and defining appropriate construction milestones is a challenge for project planners. Too much capital grant can reduce risk transfer to the detriment of value for money incentives when private partners do not have sufficient ‘skin in the game.’ Conversely, insufficient capital grants can result in potentially unstable concession companies and correspondingly large risk premiums ie poor project bankability.

Lending public money to private partners at concessionary interest rates can help overcome disadvantages resulting from the private sector’s higher cost of capital. Preserving appropriate risk transfer to the concession company requires careful consideration when projects incorporate public financing. To protect public interests and ensure rational risk allocations, there is an argument that public loans should be senior in the project’s capital structure and should benefit from appropriately large junior debt / equity cushions. Private lenders may, however, have an issue with such an approach to funding structuring – in this respect it is important to clarify and agree whether the intention is that the public loan will be treated as a ‘quasi-grant’ (which should be subordinated to senior debt) or not. Ideally substantial amounts of private financing should still accompany public loans to take advantage of private lenders’ due diligence and subsequent oversight.

Exemptions from taxes and import tariffs. Exempting developers from selected import and customs tariffs and local and national taxes (e.g., tax holidays) can reduce costs to public institutions and passengers. In most cases such waivers will require legislative acts or close coordination between public agencies. Early planning for exemptions and their associated legal requirements is essential for ensuring timely project completion. In addition, public institutions should carefully consider the ‘value for money’ associated with long-term tax exemptions (especially on corporate income). Existing tax codes and accounting practices may already provide large tax shields in early years through depreciation and interest expense.

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deductions. Providing tax breaks in later years as well may reduce incentives for further capital investments as well as reducing potential public revenues.

**Loan guarantees.** Public guarantees (sovereign, municipal etc) aim to improve project bankability and to reduce the cost of debt for private concessionaires. In some cases lenders may not finance a project without the provision of such guarantees, especially where the creditworthiness of the Grantor is deemed deficient. However, ‘wrapping’ project debt with the full faith and credit of public institutions comes with a measure of caution regarding risk transfer and private incentives. Planners should ensure that public guarantees on senior debt benefit from adequate cushions of equity capital at risk. Contingent liabilities associated with guarantees should also be priced into any ‘value for money’ analysis and should be transparently disclosed.

**Equity contributions.** Contributing public equity capital to water concessions aims to align public and private interest in a system’s financial success. Sharing common equity can also provide a mechanism for public influence on operating and investment activities. Public equity is often contributed “in kind” through public asset transfers for brownfield concessions, or through capitalization of capital grants. However, the drawbacks of public equity ownership often outweigh its benefits. Reduced risk transfer and increased likelihood of political influence can harm water operations and compromise private incentives to perform; the shareholders’ agreement must specifically and explicitly addresses these issues where such a structure is being contemplated. Differences between public and private shareholders can result in conflicting strategies or incoherent company objectives.

**Export Credit Financing.** Export credit agencies (ECAs) exist to promote and facilitate the foreign investment and export of goods and services of their particular nation’s companies. In water projects ECAs have commonly supported the financing of imported rolling stock and associated signalling/communication systems. A number of ECA’s can provide project financing through banks or directly to the buyer via guarantees to the buyer’s bankers. ECA financing can take the form of loan guarantees, political risk insurance, concessionary lending or working capital guarantees. In some instances, ECAs require matching contributions from private lenders. Most ECAs from OECD countries abide by the “Arrangement on Officially Supported Export Credits” which sets upper limits on the amount of assistance that foreign governments can offer in support of their exports. ECA financing may be particularly useful when local credit markets are underdeveloped or when sovereign risks reduce the attractiveness of private finance.

Where local public resources are lacking, support may be available through multilateral or bilateral development institutions. Historically the World Bank, IFC, ADB, EIB, MIGA and EBRD have been active MLA project financiers. Most of these organizations operate exclusively within developing countries. Multilateral and bilateral financial institutions may offer support through:

- Loans (potentially to both projects and governments)
- Grants
- Equity investments
- Guarantees on debt and equity
- Advisory services

Multilateral and bilateral support can help to make water PPP investments more financially viable and provide developers and lenders with additional comfort on political/regulatory project risks. However, working with these institutions may also lengthen the project development process or constrain policy discretion. They may be very demanding in terms of environmental and social safeguards requirements, or impose stringent procurement
procedure requirements. Multilateral and bilateral financial institutions with strong development mandates may also be able to help planners determine whether a water PPP would be a sound policy consideration, as discussed in Chapter 1.

7.6 Considering and Valuing Contingent Liabilities

Risks associated with private sector participation in water PPP projects invariably create contingent liabilities that can influence the amount of public support services may require. Contingent liabilities typically relate to the provision of public guarantees, but also reflect other potential public sector obligations that do not appear or are not accounted for in public budgets and accounts. Intuitively, public institutions should plan to cover the expected value of such liabilities as part of their efforts to budget for system affordability. This can be accomplished either by verifying sufficient budgetary ‘cushion’ in later years or by setting aside appropriate amounts of reserves when future budgets are uncertain. Proper budgeting is challenging to achieve in practice as contingent liabilities correspond to uncertain cash flow events and public funds have some opportunity cost associated with them. Allocating excessive reserves to cover such expenses may divert public funds from other important uses. Conversely, allocating insufficient reserves may strain future budgets in periods where expenses occur. This can prevent public authorities from meeting contractual obligations or from making necessary investments to ensure quality serves. Correctly valuing contingent liabilities is therefore a critically important funding consideration for public institutions. Methods for valuing contingent liabilities include:

- Actuarial or Statistical Techniques: these techniques use historical data and current trends to estimate future losses related to uncertain events. The application of actuarial techniques is limited by the availability of historical data and their failure to explain the patterns behind losses which they predict.
- Econometric Models: unlike actuarial techniques, this method identifies factors which drive future losses. By forecasting future changes in those underlying factors, econometric models endeavour to predict future loss distributions. For example, econometric models can be used to calculate government exposure on a direct loan to a private Developer by forecasting those elements which potentially drive default and the corresponding risk of loss, or early repayment and associated reinvestment risk.
- Contingent Claims Analysis: this method can be particularly useful when historical data is lacking or when planners seek to evaluate a single specific element within a larger collection of risks. Contingent claims analysis employs many of the same techniques used to value financial options by identifying elements of within larger risks that have option like cash flow features. For example, the value of a direct loan with risk would be deemed equivalent to the value of a risk free loan less the value of a ‘put’ option on the borrower’s default (Lewis and Mody, 1997).

7.7 Hedging

Hedging instruments provide mechanisms that help public authorities and private developers manage financial risks associated with specific liabilities (both contingent and otherwise). However, such instruments provide counterparties with certain rights and / or obligations at some future date. Hedging is a common feature of water PPP projects and is often used to offset exposures to:
• Foreign currency movements (eg swap and forward contracts/options)
• Large purchases of raw materials and other project inputs (eg forward contracts for steel and concrete)
• Interest rate movements (eg swaps)
• Counterparty risks (eg credit default)

Deciding when and how to hedge certain project risks requires careful consideration of associated costs and benefits. Whenever projects procure hedging instruments from international markets, planners should ensure that:

• Prices are fair and competitively obtained (see case example below)
• Purchased hedges offset a risky exposure.
• Hedging instrument covers are purchased in appropriate amounts.

It should be noted, however, that hedging comes at a significant cost, with commercial lenders often earning as much from hedging instruments as they do from the project loans. Planners should, therefore, endeavour to construct natural hedges that eliminate risky exposures altogether when circumstances allow. For example, when lenders can provide loans in local currency, projects can match revenues with debt service payments avoiding the need for expensive currency swaps or the need the public sector to bear foreign exchange currency risk. Chapter 4 discusses many of the risks that planners may want to consider hedging.

7.8 Refinancing

The capital and debt structure of a project can significantly affect both investor returns and a concession’s financial risk profile. Striking the balance between stability and appropriate rates of return usually occurs towards financial close when lenders conduct extensive due diligence and also specify restrictive covenants on project debt to minimize default risk. However, market conditions and a project’s credit profile are rarely constant throughout time. Favourable changes in either of these factors may provide for additional value capture by opportunistically altering elements in a project’s capital or debt structure. For example, a concession company may be able to extend the maturity of project debt (within the constraints of the term of the PPP contract) and/or reduce interest rate margins and/or replace the hedging instruments. This could reduce the debt repayment profile, leaving additional cash free for paying dividends or making investments in service improvements.

The length of most water concessions allows ample time for potentially valuable refinancing during a project’s life as risk profiles or credit market conditions change. Post-construction refinancing is relatively common and typically planned, and recently is often built into the original financing as a margin ratchet. However, other opportunities for refinancing could be less predictable. This may be especially true in rapidly developing countries where sovereign risk spreads hopefully contract over time to reflect improving governance, increasingly stable macroeconomic conditions, or developing local capital markets. Financing terms may similarly become more favourable when systems demonstrate several years of sound operations and timely debt service or when contracting authorities show competence at managing privately financed infrastructure projects. In practice, the opportunity for later stage refinancing often arises from a combination of public and private efforts. When not originally planned, some structure for sharing these unexpected ‘refinancing gains’ between public and private partners is therefore reasonable to include in a well crafted concession contract.

Profit maximizing developers and investors would naturally pursue refinancing whenever gains sufficiently exceed associated costs (eg transaction fees, additional financial risk, hedge
breakage costs etc.). However, the benefits of refinancing decisions for public institutions may be less clear given different policy objectives and reduced appetites for risk. In addition, refinancing may limit a project’s flexibility or may create additional termination liabilities for contracting authorities. Value for Money analysis should precede any agreement to changes in a project’s capital structure. Well designed contractual arrangements should therefore also include mechanisms for dealing with refinancing opportunities that may be in both the public and private interest.

### Box 6: Refinancing Gain - HM Treasury

The United Kingdom's HM Treasury Department provides detailed guidance on refinancing and arrangements for sharing in version 4 of its *Standardization of PFI Contracts* guide. Specifically, the Treasury in the October 2008 Amended Refinancing Provisions, states that the grantor (“Authority”) is entitled to between 50% and 70% of such refinancing gains depending on the amount and kind of gains generated, and subject to the Authority’s approval and value for money analysis. Transactions where sharing may be warranted include:

1. Reduction in interest margins;
2. Reduction or release of reserve accounts;
3. Release of contingent junior capital;
4. Extension of the maturity of debt;
5. Increase in the amount of debt; and
6. Refinancing undertaken without the direct involvement of the Contractor.

HM Treasury also mentions that certain transactions should not require an authority’s consent and likewise would not require any form of sharing. These include:

1. Disposal of junior capital, which in terms of rights is equity in all but name.
2. Refinancing agreed in the project’s base case financial plan;
3. Transactions originally taken on a corporate finance basis;
4. Gains on interest rate hedging;
5. Changes in taxation or accounting policies; and
6. Qualified banking transactions such as syndication or securitization of loans.

Considerable analysis should precede an agreement to refinance any portion of a project’s capital structure. HM Treasury recommends that contracting authorities should diligently analyze how refinancing can potentially increase termination liabilities or otherwise impact the operational / policy flexibility of contracts. More information from HM Treasury can be found at: [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)

### 7.9 Summary and Conclusions

In this chapter I have examined the different contractual arrangements for private sector participation that can effectively prescribe the funding and financing mechanisms for water PPP projects. The majority of project financiers will look at the proposed transaction structure and try to find a funding structure that best fits. This in turn can have significant impacts on other important considerations such as affordability, value for money, risk transfer and overall project feasibility. As financial close usually occurs later in a project’s development cycle, planners will inevitably be challenged to anticipate the implications of their decisions prior to receiving final investor feedback. Indeed, it should be borne in mind that sometimes the project may need to be restructured to suit funding requirements. Understanding the basic financial considerations of water PPP projects is therefore essential when seeking to align financing implications with public interests during early planning stages.

It is also important for public authorities to appreciate that private capital comes with an expectation of reasonable return. Rational, profit maximizing developers and investors are prepared to take risks only if they expect to earn commensurate rewards. Planners must
consider how private investors will recover normal returns throughout project development and implementation. Public-private partnerships are never free, and failing to understand the need for reasonable rates of return can render projects financially non-viable or result in underinvestment during subsequent stages of operation and maintenance.

I recommend that policymakers understand the implications that project structure has on funding and finance and underline that this is a critical component of effective planning. I discuss the concept of ‘bankability’ in reference to investor/lender sentiments and their willingness to commit debt or equity capital toward a project. I emphasise the importance of realizing that considering bankability goes beyond financial analysis alone and should include much larger project considerations. I explore how to structure finance for water PPP projects and discussed the merits and limitations of the different financing techniques available. In addition, I examined the role of public support and bilateral and multilateral financial organisations and the possible forms this may take, depending on the type of PPP structure chosen. Finally, I end with a discussion on the consideration and valuation of contingent liabilities along with other risk management techniques and refinancing.