

# The Effects of the Global Financial Crisis on Public-Private Partnerships for Transport Infrastructure Projects from a Project Investor's Perspective

Karl Potz

## 1. Introduction

In a survey published in 2008, the OECD (OECD, 2008) stated that the demand for infrastructure is set to continue to expand significantly in the decades ahead, driven by major factors of change, such as global economic growth, technological progress, climate change, urbanisation and growing congestion. However, challenges abound: in many parts of the infrastructure systems in OECD countries are ageing rapidly, public finances are becoming increasingly tight, and infrastructure financing is becoming much more complex. Studies, articles and experts views which basically say that infrastructure is, and will be, in big demand for decades to come and that PPPs will become increasingly attractive to public, procuring bodies. In the prevailing economic climate, with a general downturn in most markets, the construction of an infrastructure project is a traditional employment-generating measure, as the national economic stimulus packages introduced in the USA and in various countries of the European Union have shown.

There is great interest in public-private partnerships already, but the recent turmoil in the financial market has complicated and increased the cost of alternative financing solutions or eroded some of them almost completely (such as, bond financing, for example).

### *Aims and objective*

How will governments be able to fulfil infrastructure needs in the future - especially in the current global financial crisis? This article aims to show how the financial turmoil which fully hit the project finance market after the collapse of Lehmann Brothers in September 2008, impacted on delivering Public-Private-Partnerships (PPP) projects with a special focus on Europe and the UK Private Finance Initiative (PFI). As most countries in the world have

adopted PPP procurement structures similar to, or at least based on, the core principles of the UK PFI model it gives an ideal indication of where future trends might lead the global PPP market.

### *Research questions*

This article is trying to give answers to the following questions relating to the future of PPP models with the first and foremost being 1.) How the global financial crisis affected the delivery of PPP transport infrastructure projects with special emphasis on the UK's Private Finance Initiative, followed by 2.) key findings and conclusions of the consequences of the financial crisis on transport infrastructure PPPs and finally 3.) recommendations, for project investors, on how to structure successful bid submissions.

### *Scope and limitations*

This article does not aim to give a detailed and complete overview of the PPP process per se and its application for financing infrastructure projects nor does it aim to give a detailed analysis of the global financial crisis and its wider implications.

The focus of this paper is on the effects the financial turmoil has had on PPP models and especially on the UK Private Finance Initiative after the collapse of Lehmann Brothers in autumn 2008, which is widely recognised as the start of the global financial crisis.

### *Methodology and materials*

The author of this article has experienced the impact of the financial crisis on PPP projects at first hand throughout the past 3 years. He is involved in a number of current PPP deals and was involved in the project management, delivery and, ultimately, in the financial close and start of construction of the M80 Stepps to Hags DBFO<sup>1)</sup> project in Scotland. This

project started well ahead of the credit crunch in November 2006 and successfully achieved the financial close in the midst of the financial turmoil in January 2009. Throughout this period, the author gained detailed knowledge of how the global financial crisis affected the structuring and delivery of PPP, and especially PFI projects.

This paper is based on the experience of the author evidenced and supported by relevant data analysis, project examples, academic papers and publications of recognised institutions within the PPP sector including the likes of HM Treasury, the National Audit Office, Partnerships UK, 4Ps etc. as well as recognised private media sources from the project finance business like the Infrastructure Journal and InfraNews.

To start with and to make it easier for non-PPP-experts to follow the conclusions and findings of the author, it has been attempted to give a brief overview of how PPPs and the PFI work, in principle, and what their main features are, accompanied by relevant examples where applicable.

Secondly, an overview of common PPP models with the focus on transport infrastructure related structures are outlined to give an understanding of the different driving forces and risk allocations within a PPP.

Subsequently the author has tried to identify and describe the main implications the global financial crisis has had on the PPP project.

Finally, based on the recent experiences of the author and his findings throughout the work on this paper on the review of twelve relevant case studies, an attempt has been made to summarise the key findings and to draw conclusions. Ultimately the author has developed recommendations for project investors, on how to structure successful bid submissions for public-private partnerships in the current economic climate.

## **2. An overview of Public-Private-Partnerships and the Private Finance Initiative**

### **2.1. What is a Public-Private-Partnership?**

Steeds (Steeds, 2006) stated that “a PPP is any contract where public and private sectors work together to provide a service”. Public-private partnership

(PPP) is a government service or private business venture which is funded and operated through a partnership of government and one or more private partner companies. Typical projects might include the design, construction and facilities management of hospitals, fire stations, schools, bridges, roads, tunnels or train lines.

In other words, public-private partnerships mean that private market players provide services and/or facilities and buildings to public agencies. This often implies a number of advantages for customers, taxpayers, users and builders. The PPP model makes more room for investments in public facilities by spreading the cost of large public works investments over longer periods of time (while having the additional advantage of often not appearing on the procuring authority's balance sheet, which will be shown in more detail later on in this thesis). It lowers life-cycle costs (if a lifecycle is part of the provided services) and also increases the benefit to users because the service and/or facility become available earlier than it would be the case with traditional procurement and financing. In fact, a substantial number (indeed, most) PPP projects are “on time” and “within the budget”, an outcome not typically achieved on large infrastructure projects procured under traditional institutional arrangements. The latest construction surveys published annually by KPMG<sup>2)</sup> confirm this statement. The reason why PPPs have proven to be more value for money can be summarised with the effective risk allocation under a PPP structure (risk to be sitting with the party that is best suited to manage it) and the life-cycle approach usually adopted by bidders, who ultimately have to service (and suffer substantial deductions if not performed as agreed in the contract) their finished product for a long period of time.

### **2.2. The UK Private Finance Initiative (PFI)**

The UK is regarded as a pioneer in the development of public private partnerships (PPPs) and one of the most advanced users of PPPs in the world. PPPs are at the heart of the UK's successful public service reform agenda. It is on this basis that many countries are designing and developing PPP projects based on the UK Private Finance Initiative (PFI) model (CBI, 2007).

The Private Finance Initiative (PFI) is one of a range of government policies designed to increase private sector involvement in the provision of public servi-

ces. It was announced in the 1992 Autumn Statement with the aim of achieving closer partnerships between the public and private partners. It was one of a range of policies introduced by the Conservative Government to increase the involvement of the private partner in the provision of public services (Allen, 2001). PFI projects are different from other forms of public-private partnerships (PPPs) in that private parties are expected to contribute financially to the PFI project (National Audit Office, 2000). PFI entails transferring the risks associated with public service projects to the private partner in part or in full. When a private contractor is judged best able to deal with the possibility of risk, such as a construction risk, then these responsibilities are to be transferred to the private contractor. When the private partner is deemed less able to deal with the project's risks, such as whether demand will be high enough, then at least some of the responsibility must remain with the public partner.

### 2.3. Why Public-Private-Partnerships?

Partnerships UK<sup>3)</sup> give a very good description of why PPPs are a good way of funding infrastructures and the main reasons were already mentioned in 1.2. Partnerships UK (PUK) state that "many governments are turning to the private partner to design, build, finance, and operate infrastructure facilities hitherto provided by the public partner. PPPs offer policy-makers an opportunity to improve the delivery of services and the management of facilities. The other benefit is that of mobilizing private capital: the estimated demand for investment in public services shows that government and even donor resources fall far short of the amount required. For this reason, mobilising private capital can speed up the delivery of public infrastructure". This is especially important if a global financial crisis has eroded public funding, such as that just experienced (and still experience). Furthermore, PUK rightly claim that "governments are also turning to partnerships with the private partner as a means to improve the procurement of public services." This has been already mentioned as one of the key advantages of PPPs; it is proven that the private partner is much more efficient in developing, building and managing infrastructure projects. Also "the PPP process usually requires information about the true long-term cost of service delivery, which generates a more realistic debate on project selection. By improving the identification of a project's long-term risks and the allocation of those risks between the public and private partners, the PPP pro-

cess enables a more efficient use of resources. The contractual nature of PPPs acts as a powerful incentive to ensure that this long-term perspective is put into practice: the public partner can no longer procure infrastructure assets while failing to maintain them properly. At the same time, the private partner has incentives, as their capital is exposed to performance risk, to design and build these assets taking into account the costs of longer-term maintenance and renewal."

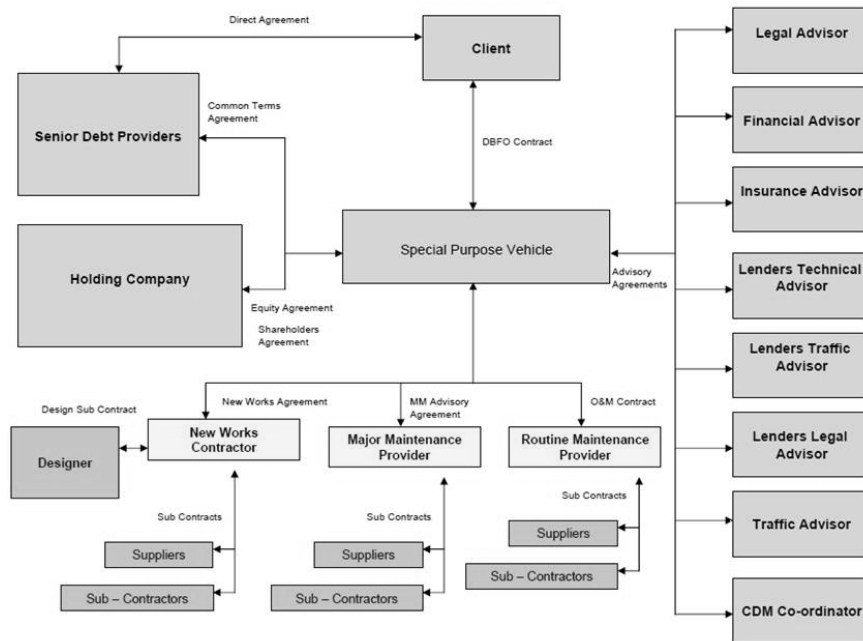
### 2.4. Parties involved in a PPP project

Figure 1 (compiled by the author) shows the typical structure of a Special-Purpose-Vehicle (SPV). It is the vehicle that is used by private consortia during the bidding stage of a PPP project without having any formal legal structure yet. These SPVs tend to be managed on the basis of bidding agreements and/or memorandum of understandings signed off by its member organisations. The chart identifies all the major parties involved and the key documents involved that define their contractual relationships to each other. For example, it shows that the client (authority, public body) usually contracts with the concessionaire via the concession contract (in this example it is a DBFO contract) and via direct agreements with the funders of the project.

If successful, the private consortia then sets up a formal legal entity, the Special-Purpose-Company (SPC), often in the forms as mentioned above. As figure 5 below shows, the final structure of the SPC is already in place during the bidding stage with the main contractors shown as direct sub-contractors to the concessionaire plus the numerous external advisors who are usually employed during the bidding stage, not only by the private bidder, but also matched by similar advisors on the public partner side.

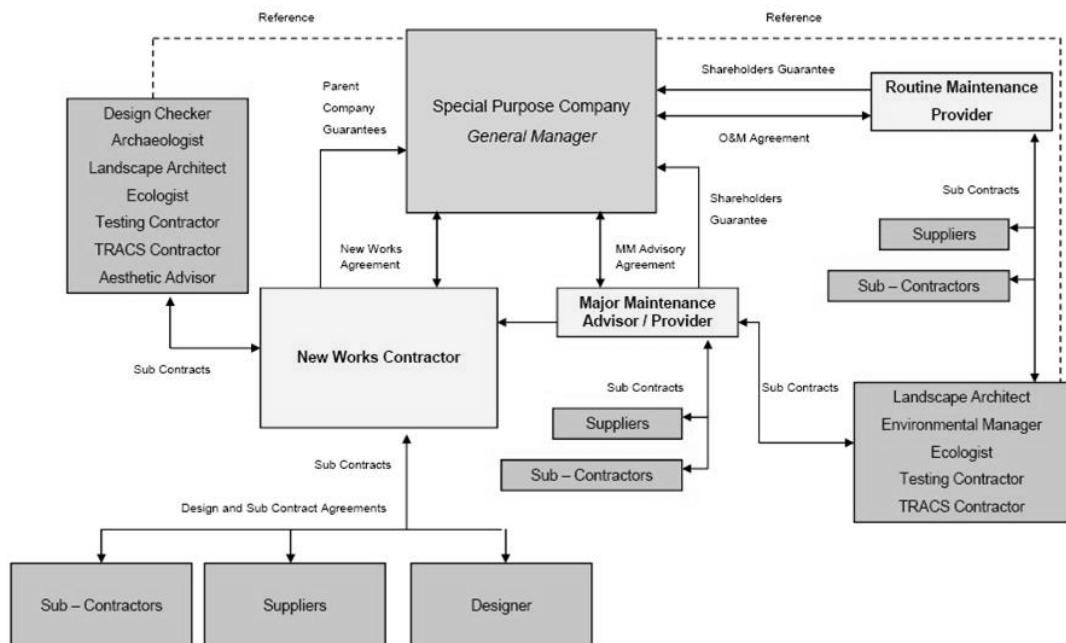
Figure 2 (compiled by the author) shows the structure of a typical SPC and the key documents that form the contractual relationships between all the parties involved. The figure highlights the central role of the SPC acting as the general manager and for this reason is the main point of contact for the client (the authority) in a PPP project. It also shows that all the various sub-contractors and suppliers are managed by the relevant main contractor, namely, the construction contractor, the routine maintenance services contractor and the major maintenance services contractor.

Figure 1: Typical parties involved in a Special-Purpose-Vehicle (SPV) during bidding stage



Source: Potz 2010

Figure 2: Typical structure of a Special-Purpose-Company (SPC) during concession period



Source: Potz 2010

### 3. An overview of PPP models and their characteristics

There are many different types of PPP models used for delivering infrastructure projects and they vary according to the various local legislations and government frameworks. Despite this big variety most PPP models used for financing large infrastructure projects are usually a variation of the following three models:

The design-build-finance-operate model (DBFO): The DBFO model is the most common form of PPP, involving the integration of these four functions, Design, Build, Finance and Operate within one PPP service provider. The PPP provider will obtain financing from private financiers, e.g. banks or equity investors, to develop the facilities needed to deliver services to the public partner. The provider will then build, maintain and operate the facilities to meet the public partner's requirements. The private provider will be paid according to the services delivered, at specified performance standards, throughout the entire duration of the contract. The private financing component gives the private partner the flexibility to plan its capital investment to maximise returns. This ensures optimal use of capital resources in government projects. Broadbent and Laughlin (2003) state that PFIs in their purest form are actually DBFO models.

The design-build-finance-transfer model (DBFT): The private partner finances and constructs the asset, which gives the private partner the incentive to complete on time and within budget. The asset is only paid for by the public partner when it has been completed (CBI, 2007).

The design-build-finance-maintain model (DBFM): Here the private partner is responsible for the design, build, finance and maintenance of the asset. It provides an incentive for the private partner to design the building taking into account the long-term maintenance (also called life-cycle or hard FM services) required by the authority.

Table 1 (by the author) on the next page gives an overview of how the traditional design and build contracts developed into PPPs by shifting key activities, such as the financing or operating of the assets to the private partner.

This paper focuses on the delivery of large infrastructure PPPs and the effects the current credit crunch has had on this over the last 24 months. Thus, the examples analysed during the process of writing

this thesis are based either on one or a mix of the DBFO, DBFT and/or DBFM model.

### 4. The effects of the global financial crisis on PPP/PFI models

The characteristics of the project finance market have changed dramatically in the last 24 months. The global financial crisis sparked off by the sub-prime mortgage crisis in the U.S., in autumn 2007, and the collapse of Lehmann Brothers in September 2008, have had a significant impact on the availability and pricing of finance for all forms of borrowing, including that for infrastructure/project finance projects.

The direct impact on the infrastructure/project finance markets started with the collapse of the monoline insurance industry in late 2007/early 2008. The exposure to the sub-prime market of the monoline institutions<sup>4)</sup> led to their credit ratings being revised downwards, thus undermining their basic business model (the credit enhancement of financial products/structures). This meant that credit enhancement (and therefore lower pricing) of capital-markets bond issues was no longer available, which eliminated a source of funding that had been used to finance a large number of infrastructure projects around the globe, in those cases where the funding requirement was in excess of €100m (compare case studies in this chapter).

With the monoline insurance market closed, wrapped debt, bond and conduit structures are now off-limits. It would not be impossible, nowadays, to structure a deal for a project as an unwrapped bond, but this would require rating agencies to move away from their convention of treating European availability projects as no more than one notch above investment grade (of which there is no indication that they will do so). In any event, the commensurate increase in required equity to de-gear the project, and the enhanced support required through construction, would most likely make a project unaffordable.

---

Activity	Responsibility				
	<i>Public partner: ● Private partner: ○</i>				
	Design – Build	DBFT	DBFM	DBFO	Full Privatisation
Provide output specifications	●	●	●	●	●
Design	●	○	○	○	○
Build	○	○	○	○	○
Finance	●	○	○	○	○
Operate (Routine maintenance)	●	●	●	○	○
Operate (Major maintenance)	●	●	○	○	○
Transfer of the asset	No transfer. Asset stays with public authority	At the end of construction from private to public partner	At the end of concession from private to public partner	At the end of concession from private to public partner	At contract sign off. Asset stays with private partner thereafter
	Owner of the asset after construction completion				
	Public partner	Public partner	Private partner	Private partner	Private partner
	Owner of the asset after concession period (if applicable)				
	Not applicable	Not applicable	Public partner	Public partner	Private partner

The key characteristics of today's market are as follows:

- Little or no willingness to take and hold senior debt amounts >€75m, with final holds ranging from €30m to €50m, on average.
- Little or no syndication (underwriting) market, so that banks are not willing to take any form of price risk on syndication.
- Virtually no capital (bond) market.
- Club deals are the preferred route for large projects, but this leads to the "lowest common denominator" syndrome.
- Margins and fees at 250 bps and higher; gearing moving down to the mid-80s and cover ratios moving up to the mid-1.20s.
- Emerging pressure on tenures with banks looking at hard (bullet repayments) and soft (cash sweeps and margin ratchets) mini-perm structures.
- Very short validity periods on offered terms, and a return of market flex provisions which actually mean that committed funding is not available at the bidding stage.
- Reduced willingness to provide equity bridge facilities requiring project investors to inject equity upfront.
- Increased scrutiny by lenders of project risk and of the corporate risk of the concessionaire and its subcontractors leading to greater bonding and security package requirements from contractors
- Harder line being taken on issues, such as sell down rights and market default events.
- Higher risk of lenders walking away from projects at very late stages.
- A breakdown of country-specific lending targets resulting in more projects competing against each other for limited funding.
- A greater reliance on multilateral lenders such as EIB, EBRD and TIFU.

## 5. The effects of the global financial crisis on the PPP/PFI debt market

It is a time of unprecedented change in the PPP senior debt market caused by the global financial crisis. With the capital markets effectively closed in

their familiar "wrapped bond" capacity, and the bank market facing severe liquidity and hence pricing constraints, few PPP deals have closed in recent months. Bids at an earlier stage of procurement are facing significantly higher debt pricing from a smaller pool of lenders. These lenders are also demanding increased security provisions and associated covenants from borrowers. From the author's current experience, lenders that remain active can typically offer only take and hold positions of circa €30-50 million although the trend is now going upwards throughout the first half of 2010. As a result, the once-standard "underwritten" approach has all but vanished, necessitating a club approach, bringing with it its inefficiencies and resource implications. In terms of pricing, the market currently sees vanilla<sup>5)</sup> PFI/PPP deals pricing at the 250-300 bps mark.

This global financial crisis presents new challenges for bidders to raise funds for projects. It is still uncertain for how long the current crisis will continue, but project investors should keep a very close look at market conditions when preparing their PPP tenders. The lack of liquidity and re-pricing of risk is leading to a number of difficulties:

- An increase in the cost of finance owing to a) increased cost of funding for banks, in particular long-term debt funding b) a relatively lower number of banks available and c) limited access to capital markets which leads to greater pressure on the debt market to absorb the overall funding requirements of the sector.
- Short availability periods for bank offers.
- Changes in debt syndicate structures owing to reduced willingness to take large ticket sizes and thus larger banking syndicates are being formed.
- Requirements for stronger credit structures e.g. higher cover ratios, increased maintenance/debt service reserving and larger revenue tails.
- Preference for short-term debt structures e.g. mini-perm structure.

Funding costs form a significant part of the costs of any PPP project. It is therefore vital that the most efficient and cost-effective financing structure is utilized but, as this paper demonstrates, current market conditions are making it very challenging for project investors (and their clients) to achieve this.

## 6. What next? An outlook into the future of PPPs

Project investors are advised to be prepared for all eventualities in the medium term, whilst developing a funding strategy that reflects the present state of the financial markets. In this regard, the key considerations for equity investors are that they will need to be:

Table 2: European PPP Debt Market Overview

PFI Debt Terms for availability based projects	January 2008	December 2008	End of 2009
Tenure (tail)	25-30 years 6 to 12 month tail	20 years 12 to 18 month tail	~ 10 years 12 to 18 month tail
Margin (Construction)	60-90 bps	150-200 bps	250-300 bps
Margin (Operation)	70-100 bps	180-250 bps	275-325 bps
Arrangement fee	60-90 bps	200-250 bps	250-300 bps
Commitment Fee	40%	50%	50%
Swap margin	8-12 bps	20-25 bps	25-35 bps
Gearing	Up to 93:7	Generally no more than 90:10	
Contractor support package	No surety bond	Some (usually 5-15%) adjudication bonding	
Cash sweep	No	Yes (to encourage refinancing)	Mixed
Underwrite/Syndicate	Yes	Limited	No. Club deals (or < £50m single bank take and hold)
Amount of funding available	€300m	€50m-€75m	€50m-€100m
No. of lending banks	~ 50	~ 40	~ 25
Maintenance Reserve Account	2 years	3 years	
Debt Service Reserve Account	3 months or Facility	6 months (no facility)	

Source: Potz 2010



- Able to state whether they are prepared to share refinancing risk and what terms they can live up to within their financial model as a base case for sharing potential future upsides on their returns.
- Able to provide a higher equity share of the total capital required than for similar PPPs prior to the crisis (because of lower gearings)
- Able to develop innovative solutions that fulfill the requirements of the public partner (which requires bidders to understand the internal pressures of their client)
- Able to present a competitive funding strategy which allows the flexibility to respond quickly to any change in the supply of capital, both equity and loan, or product offerings up to the financial close of the project.

## 6.1. Findings

Looking at the data from transactions in the global PPP market over the last 24 months, and the analysed case studies, the development of the European PPP debt market can be summarized as in table 2.

## 6.2. Conclusions

The financial crisis has changed the landscape for infrastructure projects, including PPPs. Some planned private infrastructure projects are being delayed, restructured and, to a lesser extent, cancelled, as these projects are now eager to get going, and complexity has increased.

New PPP projects are still being tendered and brought to financial closure, but at a much slower pace now than pre-crisis. Key issues which PPP projects are facing currently, among some others, are:

- PPP economics have changed greatly on account of the increased costs of funding for both debt and equity
- Affordability therefore becomes an issue for guarantors
- Limited funding (both equity and debt) with constrained bank liquidity for long-term debt continues to be key
- Pressure on risk / return requirements for equity investors is not expected to abate
- Closure of the monoline wrapped bond market represents a significant impediment. Project risk

to institutional investors, mostly as a result of the aversion shown towards construction risk

For current PPP projects this means that specific attention needs to be devoted by project investors to:

1. Specific Project risks, which, pre-crisis, were perceived less critically, are now becoming
  - either more thoroughly scrutinised by the credit committees of the banks (such as Termination Compensation payments)
  - and/or important, as these have direct impacts on equity returns (such as adequate refinancing gain/pain sharing principles). Refinancing risk itself, as the direct result of the new market paradigm requiring soft mini-perm structures in the absence of long-dated amortising profiles (mostly driven by the exploding cost of funding for banks), requires careful mitigation strategies for both debt and equity alike.
2. Country risk, as a result of some countries downgrades (i.e. Ireland, Hungary, Spain, Greece etc.) which, coupled with the general economic outlook and, particularly in the context of the planned future PPPs, could limit the fragile PPP debt willingness to lend.

Finally, identifying potential pitfalls for multilaterals (EIB, EBRD etc.) that could hinder their participation in a project (e.g. environmental issues or too low economic/social rate of return) are important factors to fine-tune the ultimate funding structure.

Whilst the bond market is still pretty much closed to PPP projects following the collapse of the monoline insurance market, the author has been discussing, both in principle and in relation to specific tenders, with bond arrangers and directly with underlying investors, forms in which the capital markets may be able to resurface in the PPP space. Whilst it is certainly clear that the underlying fundamentals of long-term, often index-linked, concession-based infrastructure projects remain aligned with the interests of institutional investors, such as pension funds and insurance providers, views are mixed as to how to re-link one to the other. That said, interest in unwrapped structures and private placements appears to be increasing, and given the pricing levels bank deals are reaching, coupled with the reducing capacity for banks to lend long-term and with little obvious willingness to take refinancing risk in either the public or private partners, unwrapped capital

market solutions appear to be an increasingly likely prospect.

This will be an area to watch closely over the next months to come, as new structures designed to meet institutional investors' appetites are developed and brought to market. Indeed, on a number of recent projects, bidders have been asked to price terms of unwrapped capital market solutions, and on others some were asked to put forward a capital markets solution. When the capital markets will return, with or without a monoline wrap, as a viable PPP financing structure, is obviously difficult to say, as well as whether their use will be possible.

## 7. Implications of the global financial crisis for project investors

Project investors, when bidding PPP projects in the current market conditions, need to carefully consider the implications set out below, which the global financial crisis has on the project finance industry.

### *Increased cost of funding*

The willingness of institutions to lend money to banks has been reduced significantly owing to the uncertainty over how safe those loans may be. Banks are therefore unable to borrow at EURIBOR at present, and EURIBOR has become dysfunctional as a measure with many banks, as the cost of funding may be as much as 100 bps over EURIBOR or even more. Given this, banks cannot extend loans for projects at the historically low margins that have been provided in recent years, as this would represent a very small increment over the banks' costs of funding or, in some cases, would represent lending at a loss. The margins in loan documents therefore represent two things

- a. true margin – the cost of taking the project credit risk; and
- b. cost of funding component – the increment over EURIBOR to cover the cost of funding.

Traditionally EURIBOR risk is borne by procuring authorities, whereas margin risk is borne by bidders. This therefore has implications for bid strategy and approach to procuring funders. In addition, standard market disruption clauses, that appear in all loan documents, are being carefully scrutinized by lenders at present. These clauses provide protection to

lenders where they cannot fund themselves at EURIBOR by passing on this risk to the borrower. It will be important to carefully review these clauses for future projects in the light of the higher margins currently being experienced, and reflecting lenders' costs as being higher than EURIBOR borrowing costs.

### *Increased volatility*

The cost of funding issue described above is highly variable both over time, as different financial news hits the markets, and between institutions. This uncertainty compounds the cost of funding issue described above. Whilst the cost of funding for projects is expected to remain higher than the historic levels that have been enjoyed, it is expected that a new equilibrium will emerge with, at least, an increased consistency of terms available.

### *Lack of liquidity*

There is generally a shortage of funding and an oversupply of opportunities for active lenders. This is a combination of the pool of lenders that have become reduced and those lenders that remain having more limited balance sheets with increasing demands upon them. A number of prominent PPP banks, that previously represented a significant portion of the bank funding market, are no longer in the market. This supply – demand shift means that lenders that remain active can afford to be more selective with regard to the lending opportunities they follow and can pursue those that offer premium income at least risk. This shift in power to lenders also means that lenders are generally getting away with more robust positions in lending documentation. A notable premium is also to be seen for larger projects that cannot be taken by one or two 'take and hold' banks. Larger projects will either require underwriters or a large club of lead arrangers. In order to attract a large club, it will be necessary for terms to be wide enough to accommodate all members of the club. For example, in the case of a bank club of 5, the terms will necessarily need to be the 5th best.

### *Shortening Tenures*

Increasingly banks are offering debt at shorter tenors and in particular very long-term debt > 30 years is no longer available. Capacity appears to be increased below the 20 year level, though a number of banks are also favouring a mini-perm structure (typically 7 years) or a hybrid "soft" mini-perm structure, as described earlier. Under a soft mini-perm, whilst long-

term debt is put in place, cash sweeps apply from (say) year 7 diverting cash (that would ordinarily flow to equity) to prepay debt. This cash sweep is clearly unpalatable to equity and hence encourages refinancing to shorten the expected debt tenure.

The above issues mean that funding will be a challenge for PPP projects in the current economic climate in that:

- The quantum of the likely funding requirement means that the debt will need to be priced to syndicate or a large club will be required
- The time to close means that it may be hard to attract lenders to invest time in the project when there is no shortage of lending opportunities available
- Market flex and MAC clauses are likely to be insisted upon by lenders which raise issues around how risk is shared with the authority and what should be priced into the bid

Given the above, it is essential to have a project team that is fully conversant with the issues in the funding markets and who have access to the timeliest information. This can only be provided by an active market participant. It will also be essential to work with the authority to steer the procurement process towards the most sensible approach.

It is becoming increasingly difficult to obtain legally binding commitment from funders until very close to financial close and any early commitment (if available) will be coupled to a pricing premium and flexible language. The moral commitment provided by early funder letters of support is now worth very little, as the practice of funders varying terms previously offered prior to Financial Close is now widespread.

It remains to be seen in future tender documentations to what extent authorities will specify a requirement for a preferred bidder funding competition. It is recommended to maintain an open dialogue with the procuring authority on the issues and to propose an approach in which the bidder maintains an element of funder involvement early on in the process (in order to ensure that the structure is bankable), whilst deferring the finalisation of the funding package until a preferred bidder has been appointed. Competitive tension can be maintained to ensure value for money and transparency. The approach will need to maintain flexibility for as long as possible and to keep funder options open until late in the process to

cope with the varying degrees of commitment of specific funders through time.

## 8. Recommendations for the effective structuring of infrastructure PPPs from a project investor's perspective

Based on the implications for project investors above, the areas below will need to be focused on in order to structure bids/projects effectively from an equity provider perspective.

### *Value for Money and Affordability*

The price will always be a key driver in PPP projects. In addition to ensuring that underlying construction, operating and maintenance costs are competitive, the funding structure and financial model will need to be optimised to target the appropriate financial evaluation criteria, be that affordability (i.e. the ability of the authority to meet the year on year expenditure) and/or value for money (i.e. the NPV of the annual service payments) compared to the authority's public sector comparator.

Techniques that can be used to optimise value for money and/or affordability include:

- Analysing the trade off between initial payments, ongoing payments and any lump sum contributions that may be payable by the authority upon completion, in order to minimise NPV;
- Sculpting of the service payments during construction depending on the relationship between the authority's evaluation discount rate and the cost of funding;
- Sculpting of the service payments during operations (e.g. to match the major maintenance profile);
- Full, partial or variable indexation of the service payments combined with the use of index-linked funding and/or derivatives;
- Optimisation of the construction programme, depending on the relationship between the Authority's discount rate, the cost of funding and construction cost inflation; and
- The use of sector specific cost indices.

### *Pro-Active engagement with the authority and development of variant bids*

It is important to research, engage and understand the authority's key drivers for the project early in the process (e.g. is service quality or the lowest service payment the key evaluation criterion?). Listening to the authority and being willing to alter standards, programmes etc. to meet their requirements are a key winning theme. Aside from input to help the authority develop the requirements for the reference bid, PPP projects can often be won through the use of innovative variant bids including:

- Programme variants that make more efficient use of resources;
- Technical variants that may require derogations from standards;
- Proposing alternative solutions that meet the authority's requirements at a lower cost;
- Longer or shorter concession lengths;
- Service payment sculpting; and
- Service payment indexation, including sector specific indexation, combined with index-linked funding.
- Understanding the willingness of the authority towards such variants will often be the key in focussing resource on variant bids that are likely to be attractive and properly evaluated by the authority.

### *Overall funding strategy*

A primary role of each project investor is (usually in conjunction with a financial advisor) to achieve the most competitive, robust and deliverable financial solution for the project. As a start, bidders should make an analysis of the funding options that would accompany the potential contractual structures for the project. This should examine the advantages and disadvantages of various funding solutions and examine a variety of funding sources and funding institutions including appropriate hedging strategies for interest rate, inflation and commodities hedging.

The cost of finance can be a major factor in determining the competitiveness of bids. The key will usually be to ensure that the most efficient funding terms available in the European PPP markets are available for the respective project. This will be the major role of the financial advisor to the consortium. Experienced bidders will usually utilise their relationship with funders, and those funders identified as

being market leaders for projects of this nature. As part of the funding competition, bidders should prepare a detailed information memorandum for distribution to short-listed funders and perform active negotiation with funders in order to improve terms and to optimise the funding structure as early as practicable. All funding options should be considered for the project, and usually include:

- Bank debt;
- Capital markets (fixed rate or index-linked);
- Private placements;
- EIB loans (floating rate, fixed rate or index-linked);
- Mezzanine debt; and
- Corporate, on-balance sheet structures (if applicable).

A detailed understanding of the funding and derivative markets will be a key factor in the bidder developing the optimal funding structure for the project. Usually the financial advisor (or some developers do have this experience in house - BBPI, for example) of the bidding team (consortium) should bring in this experience through:

- Active involvement in the bank and bond markets;
- Detailed understanding of rating agency requirements for projects of this nature;
- Ability to structure and accurately price inflation linked products in either the bond or derivative markets;
- Extensive experience of working with multilaterals (i.e. EIB)

### *Involvement of Multilaterals*

Two years ago, there was less benefit to be derived from multilateral involvement in PPP projects – commercial bank debt was so cheap and plentiful that the “hassle factor” of involvement with multilaterals was deemed not worth the limited benefits they brought in terms of pricing. In today's market, apart from EIB debt looking extremely cheap and there not being the same liquidity pressures experienced by the commercial funders, they have in some cases become more flexible than commercial lenders. For example, previously EIB lending policy

for its structured finance facility for road projects capped lending to the lower levels of:

- a) Project specific cap
- b) 50% of eligible project costs
- c) 50% of senior debt

But on the M80 project, closed on 16th January 2009, EIB waived the 50 percent of senior debt test, matched by the main sponsor's (Bilfinger Berger Project Investments) increase of their equity stake by app. £16mio.

### *Selecting the right funders*

The 'right funders' means:

- The banks who are offering the best terms in the market in terms of being "equity friendly";
- Banks who have a proven track record of reliable delivery; and
- The bidders (consortiums) relationship with those banks that remain active in international markets.

In the current market, where most banks are retrenching to their core services and jurisdictions, it is imperative to leverage the bidders' relationships with banks.

It is unlikely, but not impossible, that banks will agree to full exclusivity agreements, however it is essential to approach lenders at an early stage because:

- There are a limited number of banks willing to lend long-term,
- Banks are no longer underwriting, and final takes have also been reduced, hence all projects are being funded on a "club" basis. Slightly larger positions may be taken, but only at exceptionally expensive pricing, which provides comfort to the banks that they can sell down at a later stage.
- Consortia are likely to be bidding against at least two and possibly more others, who will be competing for the same leading lenders
- The authorities may expect the lenders to be represented at the table during the early dialogue process
- In the current market, over-coverage (where possible) is preferable since there is a higher risk of

banks either withdrawing from the process for reasons not related to the project or by failing to achieve credit approval

### *Adapting a funding approach to cater for future market developments*

At this time of market difficulty funding can no longer be considered to be a commodity and the scope for variation in pricing between different funders and for different commercial structures is large. The funding efficiency can therefore become a true source of competitive advantage and so it is essential that the funding work stream is expertly managed. In the authors' view there is certainly capacity in the funding market for projects of up to €300 million investment volume, although the procurement of funding for larger PPP projects is extremely challenging but achievable in the current market. In particular there may not be the capacity for multiple bidders to appoint separate funders covering the entire funding requirement (see the previous point with regard to funding competitions).

There may also be a need to move away from a typical long-term bank debt funding structure, as there is increasingly a downward pressure on tenures. A funding structure with short-term debt introduces refinancing risks which can be analysed and mitigated. These risks have been assessed on a number of projects recently, and the potential impact and mitigation measures available have also been considered. In addition, given the current state of the financial markets, with the supply of finance more limited and pricing volatile, it is essential to have a strategy for the sourcing of finance that is flexible and appropriate for the procurement timetable.

The author's experience is that the authorities will require funder involvement early on in order to ensure the reliable delivery of a robust funding structure. However, it will be important to demonstrate ongoing competitive tension (over capacity) through to financial close in order to ensure adequate coverage in terms of funders, and to ensure that terms at financial close are reflective of the market at that time rather than a historic (presumed) high point in the market. There are also procurement difficulties in securing funding, given the rate of change of funding terms and the financial circumstances of potential providers of finance when coupled to the timescales of a typical procurement process. A discussion with the authority is recommended on possible solutions as listed below:

- Government guaranteed debt;

- Government minimum compensation on termination to cover senior debt;
- Increased capital contributions for projects;
- Provision of funding in the form of debt, mezzanine or equity by government; and
- Sharing of refinancing risk on short-term financing structures.

reference please go to  
www.partnershipsuk.org.uk)

4) Like FSA, Ambac, FGIC etc.

5) “Vanilla” stands for straightforward/standard.

---

## References

Allen, G. (2001), The Private Finance Initiative (PFI), Research Paper 01/117, House of Commons Library, London

Broadbent, J., Laughlin, R. (2003), Public private partnerships – an introduction, London

CBI (2007), going global – The world of public private partnerships, London

National Audit Office (2000), Examining the value for money of deals under the private finance initiative, London.

OECD (2008), Infrastructure to 2030, Policy Brief January 2008

Potz, K. (2010), The effects of the global financial crisis on public-private partnerships for transport infrastructure projects from a project investor’s perspective. Masterarbeit, Universität für Bodenkultur, Wien

Steeds, D. (2006), Private Finance Initiative Guideline, Corporate Finance Faculty, London

- 
- 1) DBFO stands for design, build, finance and operate which represents a standard form of PPP-model to finance large infrastructure projects.
  - 2) See <http://astraeus.kpmg.com/Global/WhatWeDo/Industries/BuildingConstructionRealEstate/Pages/KPMGs-construction-surveys.aspx> for further information.
  - 3) Partnerships UK (PUK) is a public-private partnership (PPP) established by the British Government as a permanent centre of excellence in the development and implementation of PPPs (for