



Document de travail

Partnership contracts, project finance and information
asymmetries: from competition for the contract to
competition within the contract?

N° 2008-06
Février 2008

Frédéric Marty
Arnaud Voisin

Partnership contracts, project finance and information asymmetries: from competition for the contract to competition within the contract?

Frédéric MARTY*

Arnaud VOISIN**

Abstract

Private finance has brought to public-private partnerships a third-party overlook on the contracts. Bringing into the appraisal of PPP deals banks and rating agencies results in outsourcing the due diligence of the project to the party best suited to perform it. This reduction in asymmetries of information can occur both in the competition for the market stage or in the competition within the market stage (yardstick competition).

At the negotiation stage, funding competition helps to increase the public sector's information on the deal. Of course, the cost of collecting this information should not outweigh the savings it induces. In order to maintain competitive pressure through the lifecycle of the project, value testing schemes, as benchmarking or market testing are used. However, they induce concerns about transaction costs and could reduce the certainty about the charge for the public partner.

Résumé

Les techniques de financement de projet introduites par les partenariats public-privé britanniques ont permis à la personne publique de bénéficier d'évaluations réalisées par les banques et les agences de notation financières, lesquelles l'aident à réduire l'asymétrie informationnelle qu'elle subit traditionnellement face à ses contractants. Un tel processus peut à la fois jouer *ex ante*, dans le cadre de la concurrence pour le marché, et *ex post*, dans la logique du maintien d'une concurrence dans le marché, par exemple dans une logique de concurrence par comparaison.

Dans le cadre de la concurrence pour le marché, lancer un appel d'offre autonome portant sur le volet financier du contrat permet d'accroître l'information du contractant public sur l'équilibre économique de l'opération. Encore s'agit-il de veiller à ce que les coûts additionnels induits par la procédure n'en annulent pas les gains potentiels. D'autres instruments sont utilisés pour maintenir une pression concurrentielle sur le contractant. Il s'agit des techniques de *value testing*, lesquelles recouvrent des techniques de parangonnage (*benchmarking*) et de remise en concurrence partielle (*market testing*). Il ressort alors de l'expérience britannique que ces dispositifs ne sont pas exempts de risques pour la personne publique, qu'il s'agisse de coûts de transaction ou de possibilité de révision à la hausse des paiements de la personne publique.

* Chargé de Recherche CNRS – UMR CNRS 6227 GREDEG – Université de Nice Sophia-Antipolis Chercheur affilié OFCE – Département Innovation et Concurrence – 250, rue Albert Einstein - 06560 Valbonne
frederic.marty@ofce.sciences-po.fr

** Observatoire Economique de la Défense – ministère de la Défense GREMAN – Université de Nice Sophia-Antipolis – IAE de Nice – avenue Emile Henriot – 06000 Nice – arnaud.voisin@defense.gouv.fr

Public-Private Partnership (PPP) is a general expression describing a vast array of contracts, ranging from finance leases to concessions. This paper deals with a peculiar type of Public-Private Partnerships, introduced by the British Private Finance Initiative (PFI) and implemented in France under the Partnership Contracts framework. These contracts rely on project finance for their funding and provide services mainly sold to the public sector. Indeed, the development of PFI in United Kingdom has induced a significant transformation of the financing structure of government contracts. As Richard Abadie, Head of PFI Policy at HM Treasury wrote in the Standard & Poor's PPP Credit Survey 2006: "Ten years ago, there was no public project finance business. Today, about 90% of the £46 billion already invested in PFI is project finance debt and I see no problem with funding capacity for our future PFI program" (Holder, 2006). Such contracts bring a third party in the traditional principal-agent scheme, the financier, who finances the most part of the project's investment costs. Instead of a traditional Principal-Agent relationship, these contracts involve investors whose interests are most of the time aligned with those of the purchaser (Vinter, 1997)

In a Partnership Contract, competitive pressure could be maintained through the underlying specificities of the contract. Lenders play a role in disciplining the special purpose entity (SPE) in charge of the contract and avoiding excessively aggressive financial schemes, which could induce a significant financial vulnerability. In other words, financial investors in SPE bonds have proper incentives to favour the optimal levels of gearing and leverage. Weak debt coverage ratios would compromise their expected returns. As Abadie also wrote: "However, the government expects the markets to regulate themselves on appropriate gearing levels and interest rates for PFI" (Holder, 2006). Our purpose is to analyse the changes in governance and incentives brought by this framework in issues related to competition in PPP projects.

The main component of the contractor costs is the repayment of the asset providing the service. This financing is essentially provided through bank loans or in some cases through bond issues. A third party therefore assesses the commitment and the credibility of both the bidder and its project and its ability to be funded at the best cost is observable by the public partner (Lyonnet du Moutier, 2006). The asymmetry of information on the financing cost can be furthermore limited if a funding competition is held (NAO, 2001). The presence of a third party, the investor, allows other ways to reduce asymmetries of information. In order to guarantee the repayment of the debt by the contractor, investors will require tight governance rules for the project. As the operator will have to comply with debt coverage ratios, any lack of performance will not only result in penalties, but also in pressures from the investor.

Being a global contract, the Partnership Contract leads to the creation of a consortium, as a single operator cannot provide the whole package of services needed. Project governance requires re-

allocating the risks transferred to the private sector between the stakeholders (investors, builders, facility managers etc). This process gives way to a series of back-to-back contracts, designed to prevent any free riding between the parties. When the contracts between the members of the consortium do not match sufficiently the contract with the public authorities, this may lead to a project termination (NAO, 2006). PPP are global contracts, bundling design, building and operation of an asset (infrastructure or equipment). Their duration is related to the economic life cycle of this underlying asset. Both characteristics tend to restrain competition, as they favour large firms during both the tendering process and in further renegotiations (Hart and Moore, 1988).

In such franchise contract model, the contractor is free from competitive pressure. The solution for creating proper incentives to efficiency lies in setting up a competition for the market (Demsetz, 1968). Competition for the market could be, to a certain extent, analysed as a decisive step for the quality of incentives in a PPP contract, according to the Chaldwick's principle (1859) rediscovered by Demsetz (Mougeot and Naegelen, 2007). However, competition for the market within a framework of incomplete contracts creates specific issues (Williamson, 1976; Huet, 2006). Being a long term and global contract, the partnership contract enhances the traditional issues of moral hazard and adverse selection related to the choice of a bidder. It implies high transaction costs for both the public and private partners, due to duration of the negotiation and the skills and resources involved (Allen, 2003). The requirements of the contract are generally complex and expressed in terms of outputs rather than inputs. Each bidder must present an innovative offer, with the underlying risk of losing the tender without being repaid for its innovation. Both of these characteristics tend to limit the number of bidders and in the long term reduce the competition, as most firms would get out of the PPP market after a costly series of lost bids

The ability of a Public Private Partnership to maintain the competitive pressure *ex post* must also be questioned (Chong, Huet, Saussier and Steiner, 2007). If they were no asymmetries of information, a simple cost plus contract would be optimal. A fixed price contract would owe a rent to the private partner. In both cases, it remains difficult or very costly to identify the type of bidder and to measure its performance (Laffont and Tirole, 1986). Furthermore, the contractor benefits from the contractual irreversibility and the informational rent built up during the contract duration. An intermediate solution would be to implement an incentive framework, with a less than negligible risk of leaving the contractor a substantial rent (Laffont and Tirole, 1993).

Asymmetries of information on the operating costs can also be reduced through benchmarking and market testing processes (yardstick competition). Elementary parts of the service provided by the contractor can be periodically compared with market prices (Bureau and Mougeot, 2007). Prices exceeding the benchmark should be reduced to market prices. The operator will eventually choose new sub-contractors in order to reduce its costs. Such mechanisms appear particularly suited for soft

services within PFI contracts (Farquharson, 2007). Evidences of operational PFI contracts reveal that public contractors regard soft services as less performing on average than the other components of PFI (Partnerships UK, 2006). As facility management can be unbundled from the main service, specific re-tendering can be set up (market testing), or relative performance with other PFI deals can be compared (benchmarking) at appropriate periods of the PFI contract. Periodical service-by-service competitions could mitigate the advantages, induced by *the fundamental transformation* (Williamson, 1985), hold by the winner of the first competition for the market on its future challengers.

Our purpose is to highlight the role of external finance in PPPs' deals. Indeed, as Dewatripont and Legros (2005) underlines, "although PPPs are called in UK Private Finance Initiative, the financial dimension of contracting has – somewhat surprising – been missing". The fact that PFI contracts rely on private sector finance could be first analysed in terms of fiscal strategy (Marty, 2007). As Dewatripont and Legros wrote "PPP's could be seen as attractive for governments, which try to make their accounts good by (ab)using accounting rules that not correctly capture their assets and liabilities". However, accounting international standards, European rules on national accounts and budgeting procedures tend to restrict the scope of such strategies of creative accounting. Thus, in the end, private finance could be analysed as a means to assess and monitor the financial equilibrium of the contract. As such, external finance may help the public sector in containing adverse selection and moral hazard issues in PPPs contracts.

In this communication, our purpose is to assess to what extent separated competitions for the funding and value testing for facility management components are likely to incentivise private contractors in a framework of contractual incompleteness. To this end, we will consider in a first part the ability of an unbundled debt funding competition to improve competition for the market and to help public authorities in controlling the opportunistic behaviour of contractor. In this framework, we will successively analyse the role of financiers in PFI tendering process and the principles of the funding competitions implemented for some contracts. In our second part, we will show how the financier's commitment could help to maintain competition within the contract and, consequently, reduce moral hazard issues. We will show, in the first place, that financiers and the public partner have converging interests in the SPE financial governance. In the second place, we will study the contractual mechanisms that can maintain an appropriate competition level within the contract.

1 - FUNDING COMPETITION AS A MEANS TO IMPROVE COMPETITION FOR THE MARKET AND TO REDUCE ADVERSE SELECTION

As principal-agent models or incomplete contract theory shows, public contractor faces incentives issues in PPP contracts. The contract monitoring is more difficult because the output cannot be easily

defined and controlled (Hart and al., 1997). The contract between the public principal and its private agent is incomplete because of uncertainty about the future, bounded rationality of both contractors and the inability to observe perfectly the agent's behaviour. If as Jean Tirole (2007) quotes, contracts are never too long or too detailed in mainstream theory. Establishing the most complete contracts possible induces excessive transaction costs, wasteful investments and additional risk factors. Actually as Hirshleifer (1971) shown, "individual interests lead parties to fine-tune the contract whenever contract incompleteness could put them in a situation of being held up ex post. Completing contract thus involves rent-seeking" (Tirole, 2007). Trying to complete the contract in order to specify the obligations of both parties appears as a deadlock.

These issues are prominent in long-term contracts with a significant service component. If the allocation of residual rights of control usually appears as a key dimension to produce efficiency incentives, the fear of hold-up strategies or opportunistic behaviours could arouse difficulties between the contractors. For example, the allocation of the different risks of a project between partners is particularly complicated to perform (Välilä, 2005). For example, risk transfer to private partner can be excessive, if he is not able to manage it at the lower cost. This may lead either to a non-sustainable project or to a bail out of the private partner. Introducing financier as a third party allows for assessing the optimality of the risk allocation.

Financiers help reducing the government's informational deficit and favour a contractual equilibrium between the partners, because they have proper incentives to acquire information about the contract. The financial and technical viability of the SPE and its ability to repay debt are crucial for investors. They have thus strong incentives to control the ability of the SPE to deliver the service required by the contract. They will have also interest in rejecting financial arrangements exposing the SPE to excessive hazards or deductions. As external lenders have incentives to invest for acquiring information about the SPE, they help the government in the private partner monitoring, as we will establish in this section.

A - The role of financiers in PPP tendering process

- Private finance as a main feature of PPP contracts

The Private Finance Initiative introduced within the public contract financing the model of the project finance. In this framework, the actors involved are quite different from those of the French model of concession. It is not a bilateral relationship between a principal (the franchiser) and an agent (the franchisee), but a contract between a public authority and a Special Purpose Entity, in which the sponsors hold a very tight part. For example, the PFI contract on the Treasury building (see below) presents a financing structure in which the sponsors bring just 5% of the funds. The SPE is also the

borrower (or the bond issuer). Its cash flows must cover its debt service and ensure a reasonable rate of return to equity investors. In the conventional project finance model, the sponsors appoint a credit arranger in order to raise funds (Mireur, 2007). Its selection takes place very early in the project life. The sponsors contract with an arranger before bidding. Its selection is based on previous references, reputation or financial capacity. This last point is one of the most important as long as the credit arranger brings often 30% of the financing. The SPE and the arranger sign a term sheet that specifies the credit conditions and the procedure adopted for the pooling. The level of commitment of a credit arranger is very variable according its risk assessment. A clause of best efforts represents the lowest level. An unconditional offer is the highest level of commitment. If the arranger would fail in raising funds, he commits himself to buy the bond issued by the SPE. He plays in this situation a role of bond underwriter.

For constituting the pooling he has to send to potential funders an information memorandum about the project. This one gives the financial model of the deal, which embeds its main features, as expected cash flows, cover ratios, sensitivity analysis or expected loss in case of default. It also summarises the borrower commitments and the guarantees from the sponsors. Potential funders assess the former experiences of the sponsors in similar deals (tracking record) and the durability of their technical and financial commitment in the SPE. Funders, who often search stable returns overall life of the project, verify if the sponsors' implication will cover all the contractual period. They have to consider the potential consequences of a sale of their shares on the PFI secondary market during the contractual period. Without guarantee or liability disposals, the new shareholders may not have the financial or the technical capacities to face with the rising of the cost and difficulties of maintenance at the end of the contract¹. Funders also examine the risk allocation between the SPE and its subcontractors. It allows to prevent favouritism in the sub-contractors selection and to assess their ability to face with potential deductions. With such informations, financial institutions engage a due diligence process in order to decide to participate to the pool and to set the spread (or the risk premium over the gilt)².

- The alignment of interests between the financier and the public partner; how can they reduce asymmetries of information?

In PPPs contracts principal and agent have conflicting interests about the quality of service that should be achieved and about the costs that should be incurred. In addition, given the complexity of such contracts, audits are costly and very difficult to perform. Thus, participants have private information

1. Such issue correspond to the debate on the incentives to invest at the end of a franchise contract in framework (Chong and Huet, 2007).

2. We have to notice that it exists different types of funding, which are conventionally identified by their ranking in terms of repayment rights. Senior debt (on which funding competition could be processed) is ranked the highest. Mezzanine or subordinated debt would be only repaid when the senior debt is reimbursed. The riskiest form of funding, which then received the highest returns, is equity. It will be repaid only if the SPE has succeeding.

about contractual variables. This context makes more difficult to rely on a sole *ex ante* competition for ensuring that the *ex ante* contracting on and the *ex post* delivery of service will be optimal. The competition for large or complex projects, such as PFI, is often insufficient (Zupan, 1989). Consequently, *ex ante* competition fails to guarantee the optimal value for money, especially when the contract is characterised by a significant complexity and a strong uncertainty (Saussier and Yvrande-Billon, 2007). The oligopolistic structure of the market makes irrelevant the disciplining character of a competition for the market relying on an auction mechanism (Kirat and Marty, 2005). In such context, the public contractor cannot solely consider the proposed price, in other words the PFI unitary charge. As Richard Abadie wrote “Government has focus on the underlying cost make up of the unitary charge. The need of transparency is unsurprising given the length of contracts and the public’s right to assure that the government is securing optimum value for money through PFI. Relying solely on competition to determine price is an outdated principle” (Holder, 2006).

A separate funding competition both favours the entrance of new actors, which are susceptible to reinforce the competitive character of the PFI market and the partial solving of the issues induced by the asymmetrical information context. The commitment of financial institutions into the contract allows, on one hand, for assessing the completion of value for money and reinforces, on the other hand the monitoring upon the SPE. Financial unbundling is an efficient lever arm for ensuring project transparency by inducing a disclosure of the contract financial key points.

In some cases, an insufficient risk transfer to the contractor could be revealed by the reasonability of the bond spread. For example, if the public partner assumes nearly all the demand risk, it could be, in financial terms, something like providing to the contractor a forward contract for free (Välilä, 2005). The private partner has the guarantee to receive a certain level of revenue regardless of the actual level of demand. The logic is the same in the case of a guarantee of minimum revenue level. The private partner also benefits from a put option for free. If he will not deliver the service, its cash flows will be set at the option strike price. In both case, a funding competition will reveal such contractual disequilibrium. The effect will be comparable in symmetrical situation. If an unbearable level of risks is transferred to the private contractor, a separate funding competition will result in an excessive risk premium or a fruitless tendering.

Taking benefit from the financial market evaluation could also allow to spot excessively risky strategies and to avoid the public contractor to manage the financial distress of its contractor. Such phenomenon is an endemic issue in auction process. Stimulating competition may be counterproductive if it encourages bidders to propose excessively low bids in order to maximise their winning chances. The private partner will be after in a tight corner because of the low level of the rent produced by its contract. However, if the contract is poorly specified, necessary renegotiations may

lead to a substantial revision to the detriment of the public partner (Prager, 1990), as witnessed in some PPP in Latin America (Marty, Trosa and Voisin, 2006).

Thus, stimulating *ex ante* competition may be a risky strategy if the public contractor has difficulties to specify the desired output or to commit himself not to renegotiate few months after the financial close of the deal. If need be he will be exposed to pay excessive rents to an opportunistic contractor. In addition, if he is exposed to pay large rents *ex post*, he can also expect to pay rents *ex ante* if the competition for the market is not sufficient. Thus, it would be very fruitful for the public contractor to introduce in the deal another actor, which has interests convergent with him. An external financier has strong incentives to assess the financial equilibrium of the contract and to monitor the SPE during its performance. Such contractual unbundling seems to move away from the intrinsic logic of PPP, which lies in a global contract (Hart, 2003). Nevertheless, it appears that if the synergies between conception, construction and operating stages are significant, the interest of a simultaneous arranging of the financing is less obvious (at the very least for “conventional” PFI projects).

Dewatripont and Legros (2005) distinguish two types of external financiers, respectively outside shareholders and debt creditors. Their insight is to consider that the financial structure of the contract is not without consequence on the private partner incentives. A conventional result of corporate finance literature is to stress that outside debt or equity may lower incentives to exert effort for the contractor (Jensen and Meckling, 1976). Indeed, if the bundling of construction and operating stages in a PPP contract creates proper incentives for the private partner (Hart, 2003), it appears that external finance induces the loss of a part of its rent. External finance introduces a new agency relationship into the contract. On one hand, it is positive of the public contractor because the interests of external financiers are convergent with its objective. By the way, he can externalise a part of the monitoring costs. But on the other hand, this new agency relationship could be seen as harmful for productive efficiency because the private partner must share its rent. We observe the conventional trade-off established by Laffont and Tirole (1993) between incentives for productive efficiency and informational rents. In a PPP, the benefits in terms of incentives to productive efficiency, induced by the bundling, could be undone because external shareholders end up getting too much of the effort returns. The higher is the share of external equity, the lesser are the incentives to improve the productive efficiency.

Nevertheless, debt appears as a more efficient source of external finance (Dewatripont and Legros, 2005). Contrary to outside equity, the SPE has to serve a predefined payment to the holders, whatever is its rent. So the recourse to debt finance allows conciliating the interests of the public principal and of the lenders with the incentives of the consortium to exert adequate efforts. External finance introduces new control rights, which allows the lenders to exert a significant monitoring upon the SPE through corporate governance mechanisms (Aghion and Tirole, 1997). Such effect will be all the more

plausible that external finance comes from well-informed and incentivised financial actors, as banks or large pension funds. They take benefit, for monitoring tasks, from their internal expertise and have resources to invest for discovering useful information about the SPE. As Dewatripont and Legros (2005) quote, theoretical literature consider since Diamond (1984) that financial intermediation constitutes a process allowing to delegate monitoring.

B - Principles and challenges of the funding competition

In order to benefit from this monitoring and to ensure the value for money of PFI deals, especially when the competition for the market involves few actors, the British Treasury promotes the organisation of debt funding competitions. As Farquharson (2007) notes: “to improve further transparency of private finance within PFI projects, the Treasury will require debt funding competitions (post selection of preferred bidder) across all PFI procurements, except where the procuring authority believes that such approach will unduly increase procurement costs and lengthen procurement times”. We will assess, in our second point to what extent such additional competition is a costly option for the public authority. Before this, we consider, in a first point, the procedures used in UK for organising such competitions.

- The British practice of funding competition (The PFI on Treasury headquarters and the guidance from the HM Treasury)

The first British debt funding competition was organised in 2000 for a PFI contract relative to the Treasury building refurbishment (NAO, 2001). In May 2000, the Treasury completed a deal with Exchequer Partnership (EP) to refurbish and maintain its main building for a period of 35 years. EP was in fact selected since September 1996 and the key terms of the deal was already set before the 1997 elections. The new government, who has re-launched the PFI policy (Marty, Trosa and Voisin, 2006) wished to re-assess the deal. Rather than setting up a new competition, the Treasury preferred reopening negotiations with EP, on the condition that the consortium will set up a specific competition on funding. The purpose of this arrangement was twofold. First, the Treasury wanted to obtain the best available price. Second, a separated competition may increase the transparency of the cost structure of the deal. Because of the long period elapsed between the appointment of EP as preferred bidder and the resumption of negotiations, the Treasury tended to consider the deal was no more best value for money. This intuition fuelled on the observed progressive decrease of the risk premium in PFI contracts as the portfolio as PFI signed-deals increases.

Organising such a competition involves a strong co-ordination between the partners. As the NAO report picks out, “before embarking on the competition, the Treasury and Exchequer Partnership

signed an agreement that detailed how the competition was to be run and set out the role that all parties were to play during the competition process”. There were several reasons for giving to the private partner the responsibility of running the competition. First, it was up to him to convince financial markets about the robustness of its economic model and its credit worthiness. Second, the financiers must assess the risk allocation within the private sector, especially in terms of risk transfer agreements between the SPE and its sub-contractor. Third, the spirit of the contract binds the private partner to provide finance. The competition was relative to the senior debt, which is repaid first. Before launching the competition process, EP and its financial advisor (the Société Générale) requested Standard and Poor’s to provide the potential bidder with an indicative project rating³. In the end, 19 financial institutions submitted offers; six final bidders provided detailed credit terms for the contract. The selected financier for senior debt was a monoline insurer, a financial firm whose activity is to wrap bonds. Such firms give the insurance to investors that the principal and the interests of issued bonds will be repaid in timely manner. In this case, the Treasury considered that the debt funding competition makes the public authority save £13 millions, without altering the initial risk allocation. The saving related is assessed to 7%.

In its 2001 evaluation the NAO considered the process would become frequent in PFI deals. However, until now, just one PFI contract was concerned by such competition. In this case, it is the FSTA (Future Strategic Air Tanker) PFI project. The preferred bidder (selected since 2004), which is a SPE led by EADS, launched in June 2007 a funding competition to raise £2 billions of financing. Introducing a separated competition for the debt funding represents a real innovation in the traditional project finance model. We have seen that in a conventional PFI deal the bidders are required to demonstrate at a relatively early stage that they can find sufficient financing. The purpose is to promote a competition at this stage. If the selection were competitive, the price would be lower. As NAO (2001) wrote, “funders are more likely to offer better terms if they are invited to bid against one another for the financing after a preferred bidder has been chosen and the project risk profile is defined”. Thus, the funding competition represents another procurement process, which takes place at the end of the main contractual negotiations. When the bidder makes its offer, it has to form expectations about its future financing. It belongs to the public authority to assess the realism of such hypothesis. It induces that the risk is larger when the project is novel and complex. Both contractors have less experience for such deals and, in addition, it is likely that financial structuring will have more influence on the contract conception (HMT, 2006).

3. It was rated “low investment grade”. The rate was satisfactory because it means that the probability of honouring the debt service is high. In other words, the project is not seen as speculative.

Running such competition implies to comply with the rules of competitive dialogue in order to avoid replications of transaction costs and to create judicial risks⁴. As the competitive dialogue procedure requires that all the significant commercial issues are finalised at the final tender stage, it is necessary that the potential funders are well informed about the deal in order to propose well fitted bids. As such competition would increase transaction costs, the Treasury also proposes to limit the competition to a short-list of 4 or 6 potential funders. They are invited to bid for the total finance requirement. They must receive an information memorandum, which summaries all the relevant project features as contractual key terms, description of subcontractors, risk and financial analysis etc... Each offer is assessed on the basis of the risk premium required, on the acceptance of standard contract terms and risks allocation and on the ground of the financial structure of the proposal. This one covers capital structure (gearing level, financial ratios), risk margin and other fees, reserve requirements, repayment structures and hedging requirements (HMT, 2006).

Running a debt funding competition is a more and more attractive option because of the development of the PFI financing market, which allows a greater fluidity within the potential funders and induces a decrease in risk premium. In UK, the growing popularity of PPP has paved the way for a more PFI mature funding market and a more efficient secondary market (Singh et al., 2006). The financing of PFI contract becomes attractive for financial institutions. First, as the contract portfolio growth, markets become increasingly educated and comfortable with such contracts. Second, a significant number of PFI has now reached the operational cash generating stage. As a consequence, PFI are seen as a stable asset class, with relatively high yields. Third, PFI contracts take benefit from significant secondary market liquidity. It allows the initial shareholders to realize gains through discrete proposals. Such investments are very attractive for pension funds. For them PFI appears as a low volatile investment. In addition, they can match their long-term obligations to serve pensions to the stable income flows of the PFI deals.

- The limits of funding competition (costs, constraints upon the Special purpose vehicle...)

However, organising a specific funding competition is not a free option for the public authority. It induces additional risks and can result in an increase of transaction costs, which can outweigh the potential benefits of the procedure. It is a particularly important dimension to take into account if the principal objective of the debt funding competition is to obtain better financial terms, in other words, to reduce the spread (or the risk premium). As we have seen, the competition is about senior debt finance. Not only such a competition induces significant transaction costs, but also the profit element in senior debt finance is a small component of the overall cost of service in PFI contracts. So before

4. Under competitive dialogue procedures, the authority may “request the participant identified as having submitted the most economically advantageous tender (e.g. the preferred bidder) to clarify aspects of the tender provided that this does not have the effect of modifying substantial aspects of the tender or of the call of tender and does not risk distorting competition or causing discrimination” (UK Public Contract Regulation, 2006, 18-26).

organising such competition, public contractor must assess if the game is worth the candle. This is why the new Treasury guidelines of 2006, which replace the 2002 ones, insist on the fact that such competitions should be considered above a threshold of £50 millions and must constitute a systematic approach, since the contract capital value exceed £500 millions (HM Treasury, 2006).

A separate funding competition could have several adverse effects. First, the increase of the number of lenders could be sub-optimal. The theory of incentives puts into relief some adverse effects of external finance. We have seen that having to share its rent with outside financiers, the SPE could select a socially sub-optimal level of effort. We have also to note that despite the interest in terms of monitoring of external finance, some free-riding issues could arise if the outside financiers are excessively dispersed (Dewatripont and Legros, 2005). In terms of incentives to invest for acquiring information about the SPE, it will be better to concentrate the financing to large bond investors or banks. The superiority of concentrated debt finance on a dispersed outside equity is one of the most ancient principles of the agency theory. Since the seminal work of Berle and Means (1932) the fact that a shareholder who can claim 1 % of a project's return has less incentives to invest in monitoring than a creditor who has rights on 20 %, is well established. External finance could also paradoxically promote too aggressive financial structures just because of the auction process. If a lender wants to maximise its chances to win the bid, he risks accepting weak financial ratios. The spontaneous evolution of PFI financial structures already leads to a gradual lowering of the financial coverage ratios and to increasing leverages. A competition could lead to a stronger financial vulnerability, especially if it induces a more bond-based financing, which is flexible with strong difficulties (Marty and Voisin, 2006). Conversely, running for the private partner a separate competition for funding can compromise the maximisation of the contract value for money by deterring most innovative financial set-up. We also have to consider that in conventional PFI schemes, the upstream assessment of the bids by financial actors constitutes a kind of guarantee of their realism and viability. We may consider, in such a way, that even in the case of a bundled contract, SPE sponsors are directly incentivised to obtain the most competitive finance.

We have also to compare the potential benefits of such competition in comparison with the transactions costs it induces. Private funding represents a net cost over conventionally funded procurement financed through gilts, in other words by the issuance of sovereign debt. If promoting competition may reduce such differential, the fact remains that the additional cost of private finance can be limited to 80 bp by financial tools and it usually represents less than 5 % of the overall cost of the project (HM Treasury, 2006).

Transaction costs are, in fact, one of the main issues of the PFI experience. In the case of conventional PFI, transaction costs remain too high, despite the standardisation of the contracts, and can be, in some cases, prohibitive for bidders (Holder, 2006). In addition, the negotiations take a very long time to reach

the financial close step. A striking example of the duration of the contractual negotiations induced by PFI contracts and of the associated risks can be found with the Skynet V project⁵ (NAO, 2006b).

Long term and complex contracts, as PFI, imply high transaction costs. Two kinds of *ex ante* transaction costs are distinguished in the literature. The first type tallies with search costs, in other words, the costs of thinking through the contract's implications (Klein, 2002). The second are the "ink costs", the costs of actually writing the contract (Dye, 1985). PFI also induce *ex post* transaction costs relative to the partner monitoring. Such costs could undermine the gross efficiency gains of partnerships and limit *ex ante* competition by rising entry costs for potential bidders. In a PPP, the tendering, contracting and monitoring processes are more resource consuming than traditional procurement. The transaction costs are all the more significant than unavoidable renegotiations will be costly for the two partners. Therefore, HM Treasury considers that £20 millions is the minimum capital value for running a PFI without the risk to see contracting costs cancel the potential benefits of the partnership. Allen (2001) also considers that bidding costs represent for all the potential contractors in a tendering process about 3 % of the project total expected cost⁶. Such percentage is three times higher than its value in conventional procurement⁷. Consequently such transaction costs must be integrated by the public contractor⁸ in its budget and are susceptible, in the same time, to deter bidders. The National Audit Office wrote in a report on value for money "at the outset of a deal departments need to set realistic budgets of their own administrative costs, to monitor these costs and seek to keep them under control. They must be also mindful of the costs to bidders. Imposing excessive costs on bidders is likely to result in higher charges in the long run and might deter firms from bidding" (NAO, 2003).

5. Skynet contract is relating to satellite communications services for military uses. The Ministry of Defence (MoD) decided to renew its conventionally procured system Skynet IV in 1993. The MoD choosed the PFI solution in 1999 and began the competitive process in July 2000 with an invitation to negotiate sent to two potential bidders. Paradigm (an EADS subsidiary) was selected as preferred bidder in February 2002 and the deal was stricken in October 2003. But during the time taken by the process, market conditions evolved. From 2002, it appeared that insurance markets were no more able to cover contract's risks. A revision of the deal at such late stage would have created a risk of termination of the contract. The MoD rather preferred to sign the contract in October 2003, knowing that a deal restructuring will be unavoidable in the very short term. This renegotiation began from 2004 and the deal was deeply restructured in December 2005. The MoD accepted to commit himself in a contract, which must be renegotiated immediately (with the associated risks of contractual opportunism) because he had considered the major risks of the fresh start alternative. First, delaying contract signature would have probably delayed the provision of the service, creating a capacity gap for the military telecommunications. Second, the MoD took into account a legal risk. The other bidder could bring the procurement process before the courts if such contractual adjustments may change the nature of the deal during the procurement process. The Skynet example testimonies from the long duration of PFI process and puts into relief the risk induced by such duration. We have to consider that a separated competition for the funding would induce additional time and exacerbate legal risks upon the procurement⁵. A specific competition for the funding could induce additional time between the definition of the contractual terms and the financial close of the deal (above all if it is not integrated to the whole competitive process since its beginning). Such delays could exacerbate the potential (and the need) for change in the service and increase the possibility of disagreements between the parties (HM Treasury, 2006). Moreover, a specific competition on the debt could push upwards PFI transaction costs.

6. In the PRIME PFI deal (NAO, 1999a), the cost of the whole procedure amounted to £10.9 millions for the public partner (£1.7 million expected) and to £27 millions for the bidders.

7. Advisory costs are very significant in PFI deals (Välilä, 2005). Their averaged amount is about 3.7% of the project capital values. For smaller project, they can reach 10%.

8. For the Newcastle Estate PFI contract (NAO, 1999b) the cost of procurement initially assessed at 400 000£ by the public contractor finally reached £4.4 millions. It represented 2% of the discounted contract value.

Because of such deterring costs, the public authority is often bound to compensate for bidder costs as it in the case for the London Underground PPP contracts. Taken into account public transaction cost and such reimbursement can undermine the potential gains of PPP. For the London Underground, the public authority initially budgeted £150 millions (the outturn was £180 millions) and must finally pay to the bidders £275 millions (NAO, 2004). But transaction costs do not just occur at the procurement stage. The private provision of services entails higher monitoring costs than conventional procurement schemes. Costs are all the more higher than the contract poorly specify the expected service. For example, in the United States, the costs induced by the monitoring of the performance of private contractors are assessed between 3 and 25 % of the contract values (Torres and Pina, 2001). Comparable amounts could be observed in UK for the franchised railways (Jupe, 2007). The privatisation of the publicly owned and vertically integrated firm, British Rail, induced the creation of 25 (19 since 2006) franchises operated by train operating companies (TOCs). The UK Department for Transport (2004) considers that the value for money of the deals is underpinned by franchisees poor performance, especially in terms of quality of service, and by the government “failure to control costs”. Indeed UK railways regulation induces significant costs of transaction both for running the tendering process and for administrating and monitoring contracts. For the Strategic Railways Authority, the annual average cost of the tendering process was £3 millions in 2004. In the same time, franchise management represented a third of its operating budget (£30 millions).

It finally appears that a debt funding competition is useful in the case of an absence of sufficient competitive pressure among PFI bidders. Such competition has to be organised when public authority faces a monopolistic market or when collusion among bidders is feared. The case of the Treasury building also shows that a debt funding competition is welcome when the time taken between the selection of the preferred bidder and the financial close of the deal is too long.

However, organising such competition supposes that the negotiated contract terms are commercially viable. It would be also easier for conventional projects, as school or hospital buildings. For such contracts funders are well experimented and can assess quickly the risk profile of a project as well as the credit worthiness of its sponsors. In addition, experience on conventional contracts showed that the terms of senior debt are reasonably predictable for both partner (HM Treasury, 2006). It could be quite different for more complex projects for which funders have little (or no) previous experience. In these cases funders need to undertake considerable and by the way costly due diligence. Thus, competition cannot be just focused on risk assessment and pricing. Investors would require, for debt funding competitions relative to highly complex project, a long period of evaluation or the right to discuss the initial risk allocation between partners. Indeed, funders, at the opposite of conventional PFI contracts, have not been involved at the first stages of

Partnership contracts, project finance and information asymmetries : from competition for the contract to competition within the contract?

negotiations where the economic model of the contract was set and the risks shared. The funders could consider the previous decisions of the contractors as sub-optimal or, at worse, as risk inducer.

Thus, lenders could refuse some contractual disposals. For example, protections set in case of SPE failures can be considered insufficient. The risk allocation within the private sector can also be seen as a factor of vulnerability for the lenders. The decision of running a separate debt funding competition for the FSTA project, if it could be explained by the funds needed, is quite paradoxical. Because of the complexity of the deal the expectation of a funding competition had already induced delays. Indeed, the *Financial Times* revealed the June 7th 2007, “negotiations had dragged on because of the need to ensure the terms of the deal would not be rewritten during the financing round. Securing finance on some other PFI deals has taken more than a year”.

As a conclusion of this first part, we may consider, after Jean Tirole (2007), that relying on the signals given by external financial actors help to increase, for the public contractor, information about the economic and financial equilibriums of the contract. However, organising a debt funding competition would increase PFI transaction costs. The expectation of British authorities is that the additional transaction costs could be limited if the financial assessment is made when the risk allocation is already set and the economic model of the project precisely defined (NAO, 2001). In this case, financial institutions could be more efficient as they assess a commercially viable project. For the NAO, it would be more costly to price risk upstream, before the negotiation stage, than at such final step. In this way, the NAO thinks that the transaction costs would be not so higher in the case of a debt funding competition. In addition, these additional costs must be thrown into the economic equation of the contract. *Ex ante*, they allow limiting wasteful cognitive expenses for the public contractor. *Ex post*, they allow outsourcing a part of the monitoring costs. So a separated competition on the financing partially solves the conventional limit of the other types of competition for the market. As Tirole (2007) wrote: “Competition in general does not reduce the buyer’s transaction costs. Intuitively, the buyer is worried about the occurrence of *ex post* hold-up, and this concern is the same regardless of the extent of *ex ante* competition”. The alignment of the interests of lenders and public contractor helps to impede such temptation.

2 – THE FINANCIERS’ COMMITMENT AS A MEANS TO MAINTAIN COMPETITION WITHIN THE CONTRACT AND TO REDUCE MORAL HAZARD

As discussed above, the new PPP framework derived from the British Private Finance Initiative (PFI) is based on project finance. This characteristic has a strong influence on the governance of the projects, as the lenders have to select carefully the deals they fund and to ensure during the whole life cycle of the project the repayment of the operator's debt. We will in the first place study the alignment of interest

between the financiers and the public partner, resulting in a series of contracts re-allocating the risk transferred through the PPP deal between the private stakeholders. In the second place, we will analyse the mechanisms allowing for competition within the contract, mainly consisting in performance monitoring of the service suppliers and value testing of the soft facility management services.

A – The financiers and the public partner share common interests in the SPE governance

In most PFI contracts, the debt of the Special purpose vehicle (SPE) represents up to 90% of the project's capital expenditure. The funding is provided by bank finance, involving a pool of financiers. When the cost and risk profile of the project allow for it, financing can rely on bonds and securitisation. In both sources of funding, the financiers bear a significant part of the project risks, as the repayment of debt can be compromised by the failure of the contract. This feature incentivises the banks and bond holders to ensure the success of the project, thus being on the public partner's side rather than on the sponsors' side.

1 – The financiers' interest is to ensure the contract meets the public sector's objectives

Given their financial commitment in the project, the role of the financiers doesn't end at the signature of the contract. They are committed to ensure that the project meets its objectives and provides the expected return on investment. As Vinter (2004) points out, project finance arrangements imply a prominent role of the lenders. Their interest in the project being to make profit through credit margins and arrangement fees, their main objective is to secure the debt repayment. To this end, they require control over key project decisions and ring-fence the project's profile through restrictive financial covenants and back-to-back contracts between the private stakeholders of the project. These claims lead to intense negotiations with the sponsors of the project, as the latter may lose their grip on the project. This fear is fuelled by the fact that the lenders often require a "step-in" clause, allowing them to take control of the project in times of hardship

The loan agreement is a key device in the governance of the SPE and beyond, of the PPP contract. In order to monitor the project's ability to repay its debt, the banks have a close scrutiny on key debt ratios; the most widely used being the *Annual Debt Service Coverage Ratio* (ADSCR). This ratio ensures that the revenues of the SPE, net from operating costs, cover the repayment of the debt with a security margin. In most PFI contracts involving services sold to the public sector, this ratio represents on average 1.2 times the annual debt service. Projects involving higher risks, such as demand risks, will require higher ratios (du Moutier, 2006). There has been a rising concern amongst the rating agency about the decrease of ADSCR in recent

Partnership contracts, project finance and information asymmetries : from competition for the contract to competition within the contract?

British PFI projects. Funding competition has driven the lenders to accept ratios below 1.2, at a time when the World Bank recommends an ADCSR over 1.3 (Marty & Voisin, 2006).

One of the consequences of the monitoring of ADCSR ratio bears on the efficiency of performance payment mechanisms. NAO (2003) shows that the deductions applied to PFI prisons, though representing a small amount of the normal unitary charge (1.5 to 3%), resulted in most cases in performance improvements (see figure above).

	Opening year	1st year	2nd year	3rd year	4th year
Parc	1997	750 000 £	109 000 £	3 500 £	0 £
Altcourse	1997	195 000 £	108 000 £	34 000 £	0 £
Lowdham Grange	1998	83 000 £	11 865 £	0 £	0 £
Ashfield	1999	50 000 £	66 000 £	200 000 £	0 £
Forest Bank	2000	0 £	0 £	0 £	0 £
Rye Hill	2001	0 £	65 589 £	0 £	0 £
Dovergate	2001	423 000 £	0 £	0 £	0 £

Source: National Audit Office (2003) "The Operational Performance of Prisons"

More recently, on a wider number of PFI contracts, Partnerships UK (2006) found out that performance deductions resulted in 70% of instances in performance improvements. As in the prisons case, the deductions applied were most of the time limited and sometimes waived off by the public partner. Another finding was that there was equally no evidence of deductions resulting in performance reduction.

To our opinion, these findings illustrate the leverage effect of Annual Debt Service Coverage Ratio on deductions. The example below illustrates the strong incentive created by the combination of public partner and financier's requirements. One must keep in mind that in some contracts, such as MoD Main Building Redevelopment (NAO, 2002), the total amount of deduction can reach up to 20% of the unitary charge.

Combined effect of performance deduction and ADCSR in a PFI project

We consider a PFI contract where the SPE's annual costs in real terms are:

- Debt repayment, 5 €M
- Operating expenditure, 4 €M
- Margin on operating expenditure, 5%

The loan agreements sets the ADCSR at 1.2 times the debt repayment

The expected unitary charge amounts then to:

$$(5 \times 1.2) + (4 \times 1.05) = 6 + 4.2 = 10.2 \text{ €M}$$

A deduction of only 2% reduces the unitary charge to $(10.2 - 0.2) = 10 \text{ €M}$

In order to conform to the ADSCR requirement, the operator must renounce its margin, thus making no profit

2 - Back to back contracts are designed to limit free riding behaviour

One of the issues faced by PPP using project finance is the free-riding behaviour of the stakeholders. For instance, equity investors may attempt to bail out of the project when their return on investment reaches the expected level. The constructors may as well exit the SPE once the building phase has ended. The financiers' interest is to prevent these strategies, in line with the public partner's interest. One of its main purposes is to insulate the SPE from most of the project's risks, using the "pass through" technique: the SPE is purely a financing vehicle, the risks being borne by the other stakeholders. Some risks should though be retained, in order to incentivise the SPE to be efficient.

Project finance has since long developed mechanisms to limit free riding between the project's stakeholders. Under the principal contract with the public partner, there exist numerous agreements bonding the private sector partners together. The purpose of these "contracts within the contract" is to allocate to the party the most able to manage them the risks transferred through the PPP contract from the public to the private sector. These back-to-back contracts are an essential part of a PPP global design, as they replicate the obligations of the main contract. The numerous underlying contracts in a PFI deal with shareholders, constructors and operation and maintenance firms.

Shareholders agreements guarantee the ownership of the SPE. As in the case of a joint venture, it provides pre-emption rights for the existing shareholders when one of them wants to sell its interests, non-competition clauses and aims at preventing conflicts of interests.

Construction contracts can be signed with one or several construction firms, generally on a fixed price basis. When the construction period is long and involve several sites, the contract may include several packages. For instance, the Ministry of Defence Allenby-Connaught accommodation project has a 10-year construction period involving four garrisons, for a capital value of 1.2 £Bn. Therefore, the

Partnership contracts, project finance and information asymmetries : from competition for the contract to competition within the contract?

construction is separated into tasks with prices categories ranging from “firm”, “fixed”, and “competed” (Manley & Alii 2006).

Replication of the PPP contract obligations within the underlying private sector contract is a key feature of the incentive power of these arrangements. We can see evidence of the adverse effect of improper design of these contracts in NAO (2006). In that case, a PFI was signed in 1998 to build and operate the National Physical Laboratory, a complex set of highly specialised laboratories. The building contract between the SPE and the constructor was not aligned with the performance clauses of the PFI contract. The building phase resulted in delays and extra costs due to the inability of the contractor to meet the technical requirements. However, the latter had received 90 % of the expected payments, though less than 60 % of the asset had been built. The contract was terminated by the end of 2004, after several salvage attempts.

Conversely, "turnkey" construction contracts matching the PFI contract obligations meet the expected targets in costs and delays: MoD Private Finance Unit (2005) shows that in the sensitive domain of Defence, all 29 projects evaluated remained within their budget limits and with only two exceptions – due to the public partner - met their expected timetables.

Operation and maintenance contracts are also required when the project company cannot carry them out. As the main objective of the SPE is keeping down costs, the operation and maintenance contractors are not necessarily selected amongst parent companies of the shareholders. As the maintenance and operation risks are passed through the SPE to the relevant subcontractors, the shareholders are indifferent to the companies selected. We will see later that this principle provides a strong basis for competition within the contract.

The specific structure of PFI-type deals provides new sources of incentives in PPP. As the main feature of these contracts is the construction of an asset financed by a high gearing of debt, the repayment constraint incentivises the private partner to meet the performance level required. The project finance underlying the deal demands also a tight network of mutual obligations between the various private stakeholders of the project. These back-to-back contracts are designed to bind all the parties to the project's fate.

B – The mechanisms allowing for competition within the contract

In United Kingdom, such mechanisms were already part of early PFI contract design, but they have been formalised and systematised through the standardisation of PFI contracts initiated by the HM Treasury in 1999. There exist two main categories of competition drivers: the performance monitoring mechanism, which can result in re-tendering against poorly-performing service providers and the value testing processes, which incentivise the contractor to keep costs in line with the market.

1 - Performance monitoring and replacement of poor-performing service providers

In most contracts, performance is measured by both public and private partners. For instance, in the MoD Main Building Redevelopment contract, the public partner undertakes service audits with the company of the private partner's staff, but the Ministry of Defence does not inform him until the actual day of which the part of the building that will be subject to the audit (NAO 2002b).

Performance monitoring raises the issue of its burden-sharing between the public and the private partners. Along with the costs of the tendering process, they represent a significant part of total transaction costs for both parties (Allen, 2001).

As a general principle, monitoring costs should be proportional to the consequences of poor performance. Only the critical areas of service should be subjected to a rigorous monitoring system (HM Treasury, 2004). A balance must be found between the comprehensiveness of performance monitoring and the prioritisation of the indicators. In its report on the operational performance of prisons (NAO, 2003), the National Audit Office found out that the United Kingdom's Prisons Service was using a set of 90 key performance indicators (KPI) in its evaluations. After prioritising these indicators and reducing then number to sixteen, it appeared that the ranking of prisons by performance was not altered when relying on fewer indicators.

Performance mechanisms offer flexible responses according to the severity of the situation. Poor performance, as was previously demonstrated, results in payment deductions. When the underlying contracts of the PFI projects are adequately designed, the deduction is borne by the provider of the defaulting service. If the whole package of services shows poor performance or if a critical service is permanently under the standards, this may lead to the termination of the PFI contract.

Keeping in mind the eventuality of a contract termination, we will however focus on the most likely event, the persisting poor performance of a sub-contractor. If the payment deduction he incurs fails to remedy its poor performance, there are provisions in the PFI contract for its replacement. The SPE has to set up a competition and to select another sub-contractor. In this case, its interests are aligned with those of the public partner, as a repeated poor performance may lead to the termination of the PFI contract.

The threshold triggering the replacement of the non-performing service provider is subject to fine-balancing issues of duration and deduction. The chart below shows the terms and conditions under which a subcontractor is replaced or the contract terminated. Each category of services has a number of performance points available and the percentage is calculated against this reference. The 1.84 £M of

Partnership contracts, project finance and information asymmetries : from competition for the contract to competition within the contract?

performance deduction corresponds to up to 20% of the unitary charge of the contract, amounting to 90 £M a year (NAO, 2002b).

Period	Replacement of service provider if performance points awarded exceed a given percentage of the maximum points available:	Termination of the contract if performance deductions exceed:
In any six-month period	35%	£1,107,000
In any one-year period	25%	£1,845,000
In any three-year period	20%	£4,428,000

Source, NAO (2002) "MoD Main Building Redevelopment"

Performance measurement must be "reasonable and objectively measurable" (HM Treasury, 2004). As they seek repayment of the project's debt, the financiers want to ensure that only significant drops of performance will be subject to deductions. The public partner may require a 100% availability in critical areas of service (e.g. operating theatres in hospitals) and allow for a threshold (for instance, of 90%) allowing for slight underperformance in other areas. In some contracts, this relaxed deduction regime is linked to a formal warning notice to the contractor, constituting a non-monetary incentive (NAO, 2002a).

If we refer to the existing contracts, keeping in mind that the available data reflects the early years of in-life PFI, there is few evidence of subcontractors' replacement. According to Partnerships UK (2006), in more than half of the reviewed projects, there was no change in subcontractors resulting from performance deduction. This result must be analysed in relation to the low level of deduction we referred above.

2 - Benchmarking and market testing

Testing the value of services provided within a PPP is a means to reintroduce competitive tension within the contract. It concerns mainly services which scope is precisely identified, such as catering or cleaning: specific or complex services will not thus fall within this category. Value testing excludes also services related to the life-cycle cost of the contract, as re-tendering them would imply the renegotiation of a new PFI deal.

According to NAO (2007), 250 PFI projects are known to have provision for testing the value of certain services (catering, cleaning...), with intervals of 5 to 7 years. These services represent a significant part of the total cost of a PFI contract: for instance, in the PFI contract for Darent Valley

Hospital, 28% of the unitary charge is submitted to value tests. Value testing is performed through comparisons between the current service provider and market prices (benchmarking) or through invitation of other suppliers to compete with the current provider (market testing).

Benchmarking is potentially the less costly option, as no re-tendering is involved. Several sources might be used. A first information can be gathered from other existing similar PFI deals (e.g., hospitals or prisons, the deals being numerous and similar in their scope). This practice implies drawing up a database at government level, in order to streamline the comparison process. The second source of information relies on market prices, but requires the presence of perfectly comparable services in the market.

Market testing results in a re-tendering of the service against the incumbent supplier. It is likely to be more challenging for the provider, as the firms bidding against him will tend to be aggressive on prices in order to be selected. However, the transaction costs of market testing are higher than benchmarking, for both the public and the private sectors. Past experience on market testing within British government has resulted in inconclusive results.

The Thatcher's government in the 80's first implemented this practice. Any public service could be provided either by the public sector, either by a private company, the only criterion being cost-benefit analysis. Most of the tendering processes were won by the public sector, which was in a dominant position due to its asymmetry of information on the service expected and to the preliminary rationalisation of its organisation. The private sector accused the government of viewing them as a spur in order to foster reforms and not as a true alternative for public service provision (Marty & Alii, 2004).

Benchmarking may results as well in a cost reduction as in a readjustment of the PFI price. It is therefore similar in its principle to a renegotiation. Most PFI contracts have provisions to share the gains and losses of this process. As an example, in the MoD Main Building Redevelopment deal, the ministry of Defence requires the contractor to benchmark and market test the costs of the various facility management services, 10 years after the signature of the contract, and thereafter at 5-year intervals. Cost savings or increases are shared in the ratio of 80 % for the Ministry and 20 % for the contractor, within a limit of a maximum of £M 10 of extra costs for the latter (NAO 2002b).

NAO report on value testing (NAO, 2007) examined 34 contracts, as well as 11 early PFI projects that had carried out value testing in summer 2006. Before contract standardisation in 1999, PFI included provisions for value testing, but on the 34 contracts of the sample, value testing terms were often expected to have limited effectiveness. Since October 2006, the Treasury has issued new guidance (HM Treasury, 2006), in order to improve value for money through competition, transparency and reassessment of service provision. In this perspective, market testing is the mechanism most suitable to achieve this goal.

Only three market tests had been completed at the time of the study. External suppliers were not successful, as one tender was won by an in-house bid and the two others by the incumbent suppliers. Treasury insists in maintaining interest of suppliers in bidding against the incumbent suppliers.

It appears that value testing can be a lengthy process, the few existing processes ranging from 9 to 25 months. These delays are similar to the time taken to re-let services contract in conventional procurement. Some projects have difficulties in finding suitable benchmarks for comparisons.

In terms of costs and saving resulting from value testing, the results vary according to the sector of the deal. For instance, in the cases of two telecommunication projects, prices reductions of 19 % and 37 % after using benchmarking. Telecommunication is a very competitive sector, with prices decreasing at a fast rate, especially when the service requirement evolves at a slower pace in the public sector than in the private sector. Conversely, value testing in building projects has resulted in adjustments between – 2 to 6%, with an exceptional 14% in one school project. Building industry is subject to the increasing cost of raw materials and energy and shows less opportunity for cost reduction.

We can analyse value testing as a means for the public sector to benefit from prices decrease opportunities, but reintroducing the risk of increases in the unitary charge of the contract. Literature shows that renegotiation can result from the strategic behaviour of the contractor, threatening the public partner of a contract termination (Guasch & Alii, 2003). In terms of contract governance, forecasted renegotiations should prevent the issue of renegotiating only when the contract is at risk. Value testing should then be seen as a means to restore the initial economic terms of the PPP contract.

On a pure conceptual basis benchmarking and market testing may be seen as amendments to the general PFI philosophy, as the latter is based on a trade-off between cost and certainty (Marty & Alii, 2004). Entering a PPP deal is in some way similar to buying a financial option at an agreed rate. The decision of the public sector is based on the comparison of the relative volatility of prices in conventional and in PPP procurement routes. The public sector might wish, for political reasons, benefit from potential upsides, and then take back the risk of downsides.

To date, the experience gained on value testing raises the issue of the scope of PFI contracts. One may wonder if the services subject to testing should continue to be included in PPP arrangement and could not rather be contracted apart from the main deals, in a conventional procurement route. On the other hand, as the life cycle cost of the underlying asset constitutes the core of a PFI, soft facility management services are most of the time viewed as an additional sources of savings on the total cost of a deal (Allen, 2001). In terms of transaction costs, the interest of the public partner is to transfer all or at least part of

the benchmarking and re-tendering costs to the private sector. As he is not submitted to public contracts regulations, the latter should be able to manage these procedures at a better cost than the public sector.

As a conclusion to this section, we have shown that project finance provides the PPP deals with a financial and contractual framework in which the financiers act most of the time as representatives of the public partner's interests. This framework allows for reintroducing competition in the contract, through performance monitoring and value testing. Theoretically, this set of mechanisms provides competitive pressure through strong incentives to maintain performance and keep prices down. However, evidences of the efficiency of this framework can only be found on the first operational years of the contracts analysed, as most PFI are in the early years of their life cycle.

Conclusion

Private finance has brought to public-private partnerships a third-party overlook on the contracts. Financier provides a remedy to the asymmetries of information that the public sector experiences with its contractors. Bringing into the appraisal of PPP deals banks and rating agencies results in outsourcing the due diligence of the project to the parties best suited to perform it. This reduction in asymmetries of information can occur both in the competition for the market stage or in the competition within the market stage.

At the negotiation stage, funding competition helps to increase the public sector's information on the deal. Of course, the cost of collecting this information should not outweigh the savings it induces. In this case, the size of the deal, as well as the number of bidders, plays a prominent role in the trade-off. They may also be adverse effects because the financiers face projects which general terms have already been agreed once for all and offer no room for adjustments. A complex deal will thus provide less value for money if submitted to a funding competition, as the bidders will perform individually due diligence processes and increase the overall transaction costs.

If competition for the contract in PPP can be improved through funding competition, there remain issues about maintaining competitive pressure through the lifecycle of the project. PPP contracts relying on private finance imply an underlying framework of back-to-back contracts, bounding together the project's stakeholders and designed to prevent free riding behaviour. As they allow for re-allocating the risk transferred by the public partner to the party best able to manage it, these contracts create an incentive framework under the supervision of the financiers.

PFI-type deals involve asset life cycle costs and operating expenditure. Soft management facilities services can be individually monitored, as they are not as closely related to lifecycle as capital and

Partnership contracts, project finance and information asymmetries : from competition for the contract to competition within the contract?

maintenance expenditure. Simple services like catering or cleaning can be submitted to value testing. The less costly process is benchmarking, when market prices of a given service can be directly compared with the cost of the service under the PFI contract. Market testing results in a re-tendering of the service provided through PFI contract. This procedure induces higher costs for both the bidders and the public sector and in most cases take as much time as a conventional procurement process. Competition within the contract may result in an increase in prices, for example when the benchmark bears on an activity submitted to above general inflation cost escalations. In most contracts, the savings and increases in costs are capped through an incentive scheme, letting part of the gains or losses to the private sector.

Bibliography

- AGHION P. and TIROLE J., (1997), "Formal and Real Authority in Organizations", *Journal of Political Economy*, 105, pp.1-29.
- ALLEN G., (2001), "The Private Finance Initiative", House of Commons, Economic Policy and Statistics Section, Research Paper 01/ 117, December.
- ALLEN G., (2003), "The Private Finance Initiative", *House of Commons Research Paper 03/79*, Economic Policy and Statistics Section, octobre.
- BERLE A. and MEANS G., (1932), *The Modern Corporation and Private Property*, Transaction Publishers, revised edition 1964.
- BUREAU D. et MOUGEOT M., (2007), *Performances, incitations et gestion publique*, Rapport du Conseil d'Analyse Economique, Paris, 135p
- CHALDWICK S.E., (1859), "Results of Different Principles of Legislation and Administration in Europe: of Competition for the Field as Compared with Competition within the Field of Service", *Journal of the Royal Statistical Society*, pp.381-420.
- CHONG E., HUET F., SAUSSIER S. and STEINER F., (2007), "Public-Private Partnerships and Prices: Evidence from Water Distribution in France", *Review of Industrial Organisation*, forthcoming.
- CHONG E. et HUET F., (2007), « Partenariats public-privé et investissements de fin de contrat : le cas de l'industrie de l'eau en France », *Document de travail GREDEG*, novembre, 41p.
- DEMSETZ H., (1968), "Why Regulate Utilities", *Journal of Law and Economics*, volume 11, pp.55-66.
- DEPARTMENT FOR TRANSPORT, (2004), *The Future of Rail*, London, July.
- DEWATRIPONT M. and LEGROS P., (2005), "Public-Private Partnerships: Contract Design and Risk Transfer", *European Investment Bank Papers*, volume 10, n° 1, pp. 121-145.
- DIAMOND D. W., (1984), "Financial Intermediation and Delegated Monitoring", *Review of Economics Studies*, volume 51, pp. 393-411.
- DYE R., (1985), "Costly Contract Contingencies", *International Economic Review*, pp. 233-250.
- FARQUHARSON E., (2007), "UK PFI Recent Measures Further to Improve Delivery and Management of PFI Projects", *International Monetary Fund*, Seminar on Strengthening Public Investment and Managing Fiscal Risks from Public-Private Partnerships, Budapest, March.
- GUASCH J.L., LAFFONT J.-J. and STRAUB S., (2003), "Renegotiation of Concession Contracts in Latin America", Working Paper, University of Edinburgh.
- HART O. (2003), « Incomplete contracts and public ownership: remarks, and an application to public-private partnerships », *The Economic Journal*, vol. 113, mars, p. C69-C76.
- HART O. and MOORE J. (1988), "Incomplete Contracts and Renegotiation", *Econometrica*, volume 56, pp.509-540.
- HART O., SCHLEIFER A. and VISHNY R.W., (1997), "The Proper Scope of Government: Theory and Application to Prisons", *Quarterly Journal of Economics*, volume 112, n°4, pp.1126-1161.
- HER MAJESTY TREASURY, (2003), "PFI – Meeting the Investment Challenge", London.
- HER MAJESTY TREASURY, (2004), "Standardisation of PFI Contracts – Version 3", April.
- HER MAJESTY TREASURY, (2006), "Preferred Bidder Debt Funding Competitions: Draft Outline Guidance for Feedback", August, 12p.
- HIRSCHLEIFER J., (1971), "The Private and the Social Value of Information and the Reward of Inventive Activities", *American Economic Review*, volume 61, pp.561-574.

Partnership contracts, project finance and information asymmetries : from competition for the contract to competition within the contract?

HOLDER R., (2006), "A Decade of PFI Imparts Discipline and Process to UK Public Sector Infrastructure Procurement", *Standard & Poor's PPP Credit Survey*, May, pp.4-6.

HUET F., (2006), « Partenariats Public-Privé et concurrence pour le marché: quelles avancées depuis Demsetz (1968) ? », 53^e Congrès de l'AFSE, Paris, septembre, 57p.

KIRAT T. et MARTY F., (2005), « L'économie de la répartition des risques dans les contrats administratifs: Les problématiques économiques », in Kirat T. (s.d.), *Economie et droit du contrat administratif: L'allocation des risques dans les marchés publics et les délégations de service public*, La Documentation Française, Paris, août, pp. 25-56.

KLEIN E., (2002), "The Role of Incomplete Contract in Self Enforcing Relationships", in Brousseau E. and Glachant J.M., (ed.), *The Economics of Contract*, Cambridge University Press, pp. 549-571.

JENSEN M. and MECKLING W., (1976), "The Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structures", *Journal of Financial Economics*, volume 3, pp. 305-360.

JUPE R., (2007), "Rail Franchising Matters – the Award of Open Access Rights on the ECML", *Public Money and Management*, February, pp. 83-86.

LAFFONT J.-J. and TIROLE J., (1986), "Using Cost Observations to Regulate Firms", *Journal of Political Economy*, n° 94, pp. 614-641

LAFFONT J.-J. and TIROLE J., (1993), *A Theory of Incentives in Procurement and Regulation*, MIT Press, Boston Ma.

LYONNET DU MOUTIER M., (2006), *Financement sur projet et partenariats public-privé*, éditions EMS, Paris.

MANLEY J. AND ALII, (2006), "Presale: Aspire Defence Finance PLC" Standard and Poor's Infrastructure Finance, March

MARTY F., TROSA S. et VOISIN A., (2004), "La construction des méthodes de comparaison de coûts public-privé: les enseignements des expériences étrangères", revue *Politiques et management public*, volume 22, n°3, septembre, pp. 43-61.

MARTY F., TROSA S. and VOISIN A., (2005), "The Financial Determinants of Government commitment in Public-Private Partnerships", *International Journal of Public Policy* Vol. 1, n° 1-2, pp. 141-157.

MARTY F., TROSA S. et VOISIN A., (2006), *Les partenariats public-privé*, La Découverte, collection Repères n° 441, Paris, mai, 122p.

MARTY F. et VOISIN A., (2006), « L'évolution des montages financiers des PFI britanniques : la montée des risques », *Revue française de finances publiques*, n°94, mai, pp.107-120.

MARTY F., (2007), Partenariats public-privé, règles de discipline budgétaire, comptabilité patrimoniale et stratégies de hors bilan », *Document de travail OFCE*, n° 2007-29, octobre, 48p.

MIREUR F., (2007), *Approche financière du project finance infrastructure. La rénovation du métro londonien*, Mémoire de Master 2 financement de projet / financements structurés, Paris 10 Nanterre, juin.

MOUGEOT M. and NAEGELEN F., (2007), "Was Chaldwick Right?", *Review of Industrial Organisation*, volume 30, number 2, march, pp.121-137.

NATIONAL AUDIT OFFICE, (1999a), "The PRIME Project: The Transfer to the Department of Social Security Estate to Private Sector", HC 548, session 1999-2000, December.

NATIONAL AUDIT OFFICE, (1999b), "The Newcastle Estate Development Project", HC 16, November, 85p.

NATIONAL AUDIT OFFICE, (2001), "Innovation in PFI Financing: the Treasury Building Project", HC 328, Session 2001-2002, November, 35p.

NATIONAL AUDIT OFFICE, (2002), "Ministry of Defence: The Joint Services Command and Staff College", HC 537 Session 2001-2002, February

- NATIONAL AUDIT OFFICE, (2002), “MoD: Main Building Redevelopment”, HC 748 Session 2001-2002, April.
- NATIONAL AUDIT OFFICE, (2003), “Delivering Better Value for Money from the Private Finance Initiative”, June.
- NATIONAL AUDIT OFFICE, (2004), “London Underground PPP: Where they Good Deals?”, June.
- NATIONAL AUDIT OFFICE, (2006a), "The Termination of the PFI Contract for the National Physical Laboratory", HC 1044 Session 2005-2006, May.
- NATIONAL AUDIT OFFICE, (2006b), *Ministry of Defence – Major Projects Report 2006*, HC 23, session 2006-2007, November.
- NATIONAL AUDIT OFFICE, (2007), "Benchmarking & market testing the ongoing services of PFI projects", HC 453 Session 2006-2007, June.
- PARTNERSHIPS UK, (2006), *Report on Operational PPP/PFI Projects*, March.
- PRAGER R.A., (1990), “Firm Behaviour in Franchise Monopoly Markets”, *Rand Journal of Economics*, volume 21, pp. 211-215.
- SAUSSIER S. and YVRANDE-BILLON A., (2007), *Economie des coûts de transaction*, La Découverte – collection Repères n°408, Paris, 122p.
- SINGH R., ARCHER A. and MANLEY J., (2006), “European PFI/PPP Secondary Market Starts to Witness Steady Growth”, *Standard and Poor’s PPP Credit Survey 2006*, May, pp. 37-38.
- TIROLE J., (2007), “Bounded Rationality and Incomplete Contracts”, *Working Paper IDEI*, Université de Toulouse 1, May, 37p.
- TORRES L. and PINA V., (2004), “Public-Private Partnerships and Private Finance in the US and Spanish Local Governments”, *The European Accounting Review*, 10-3, pp. 601-619.
- VÄLILÄ, T., (2005), “How Expensive are Cost Savings. On the Economic of Public-Private Partnerships”, *European Investment Bank Papers*, volume 10, n° 1, pp. 94-119.
- VINTER, G.D., (1997), *Project Finance, a Legal Guide*, Sweet and Maxwell, London, 352 p
- WILLIAMSON O.E., (1976), “Franchise Bidding for Natural Monopolies – In General and with Respect to CATV”, *Bell Journal of Economics*, volume 7, number 1, Spring, pp. 73-104.
- WILLIAMSON O.E., (1985), *The Economic Institutions of Capitalism*, Free Press, New York.
- WORLD BANK, (2001), *Port Reform Toolkit*, August.
- ZUPAN M.A., (1989), “Cable Franchise Renewals: Do Incumbent Firms Behave Opportunistically?”, *Rand Journal of Economics*, volume 20, pp. 473-482