Public private partnerships, the levels of public investment and the New Member States

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Abstract: Some of the features of public private partnerships (PPP) are outlined. The arguments that PPPs provide additional investment are critical examined, and the way in which the accounting treatment may influence the use of PPPs examined. The costs of ppps are compared with 'conventional' public investment and it is argued that PPPs are a relatively expensive way of undertaking public investment. The idea that PPPs effectively transfer risk from government to private companies is assessed. Issues relating to the nature of contracts under PPPs, the transactions costs and the implementation of the contracts, are briefly considered. For the new member states, it is suggested that national accounting rules and perceived constraints on budget deficits may encourage the use of PPPs, even if that use is not warranted in terms of costs of public investment.

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1. Introduction

Public private partnerships (hereafter PPPs) have come to be seen by many as a route through which public investment in infrastructure can be more readily financed and increased. This paper seeks to provide a critical evaluation of public private partnerships and their ability to efficiently increase the level of public investment.

It is often recognized that the rate of public investment declined in many industrialised countries from the 1970s though with some recovery in the past decade or so. Kamps (2006), for example, presents graphically information on public investment relative to GDP for 22 OECD countries over the period 1960 to 2000 with the vast majority of countries displaying downward trends and he estimates that the government net capital stock declined on (unweighted) average in those countries from 57.8 per cent of GDP in 1980 to 55.3 per cent in 1990 and 51.4 per cent by 2000. This general decline has often been attributed to the relative ease of cutting public investment expenditure (as compared with current expenditure) when government budgets are under pressure. 'Government budgets have come under pressure, and with that development have come two responses. One has been a desire to reduce the impact of infrastructure spending on government budgets, both as a means of minimizing government borrowing and as a way of protecting economically necessary but politically dispensable infrastructure expenditure from general budgetary pressures. The other response has seen governments turn to private capital markets for infrastructure funding' (Grimsey and Lewis, 2004, p.30).

The European Bank for Reconstruction and Development (2001) remarked, with specific reference to South Eastern Europe, that infrastructure 'is characterised as being outdated, inadequate to support economic growth, expensive to maintain and having regional imbalances. In light of restricted and shortfalls in public sector budgets, governments in the region have recently started to consider whether public private partnerships (PPPs) can be effective complement to financing infrastructure projects. This interest is primarily motivated by a desire to finance infrastructure projects off budget.' (European Bank for Reconstruction and Development, 2001, p.1).

The perceived role of PPPs in some forms of public investment is indicated by the EIB (2008) when they write that 'Public Private Partnerships (PPPs) are gaining importance as vehicles to finance much-needed public infrastructure across Europe, accounting for well

over EUR 200 bn of investment to date. Over the coming five years, in excess of EUR 100 bn will be invested in transport, health, education, environmental and other public investment projects through PPP transactions.' The majority of the EIB-financed projects come from the transport sector to the extent of 80 per cent. 'The UK accounts around one third of the EIB's PPP project portfolio, with Spain, Portugal and Greece each approximately 15%. France, Germany, Italy, Poland and Turkey have ambitious programmes to increase the proportion of public investment financed by PPP and the EIB's lending to PPPs in these countries is expected to increase in the future.' (EIB, 2008). It is debatable whether an investment project with subsequent operation by a private sector company but which is (at least part) funded by a public sector organisation such as the EIB should be regarded as a full public private partnership since funds are raised by a public body rather than by the private contractor. It does though retain the feature of provision of services by private sector company involved in the construction of the project, and the raising for funds by the EIB does not appear on the balance sheets of national governments. This is reflected in the following: 'Liberal Democrat Treasury spokesman Vince Cable, who argues that the increased use of public funds undermines the purpose of the scheme, which was to access private sector loans and the disciplines in procurement and funding that go with them. … The increasing participation of the Treasury and taxpayer-backed institutions such as the European Investment Bank (EIB), Royal Bank of Scotland (RBS) and Lloyds Banking Group in PFI schemes highlights the circularity of the process.' (Milma et alia, 2009)

This paper provides an evaluation of a number of key arguments which have been advanced to the effect that public private partnerships (PPP) would be an effective means of providing additional public investment. It also considers whether PPP is a more costly alternative than 'conventional' public investment, which is related to the question as to the overall impact of the use of PPP on the time profile of public expenditure and budget deficits. It then begins to consider whether PPP would be an effective way on supporting public investment in the new member countries (NMS) that is the countries joining the European Union in and after 2004.

2. The features of Public Private Partnerships

Public Private Partnerships (PPP) go under a variety of names but with the essential feature that private firms contract to finance and acquire capital assets and lease those assets along with provision of some related services to the public sector. 'In general, PPPs can be defined as arrangements between governments and private sector entities to provide public infrastructure and services. These partnerships, which are characterised by a sharing of investment, risk, responsibility and returns between the partners, are based on the underlying

logic that the public and private sector have complementary strengths in the delivery of public services. A more precise definition is difficult as PPPs have an extremely wide spectrum, ranging from operations and maintenance contracts to the wholesale construction and operation of new assets.' (EBRD, 2001, p1). In discussion here we use the terminology of public private partnerships, though when there is specific reference to the UK, the term Private Finance Initiative (PFI) is used.

Broadbent and Laughlin highlight three elements to the difference between 'conventional' public investment[1] and PPPs[2]. 'First, …, the building is technically not owned by the public sector – although who has the "asset" of the building is a major disagreement in PFI. … Second, the design of this building, along with accompanying services, is the responsibility of the private sector. The public sector should not be actively involved in the specification – all it specifies is the outputs it requires it terms of services. Third, the public sector is locked into a long-term relationship, specified as best as possible through a legal contract, with a private sector supplier who might have different values and interests. A genuine concern to many is that this private sector supplier, with its profit emphasis and necessity to give priority to its shareholders, may or may not share the same public service values that might be the case if provision were exclusively made by those in the employment of the public sector.' (Broadbent and Laughlin, 2003, p.336).

A range of justifications have been given for the adoption of public-private partnerships in partial replacement for or in addition to 'conventional' public investment (that is public investment funded from taxation or government borrowing, with the project usually constructed by a private company but operated by a public sector organisation). These include:

(i) The initial financing of the project by a private company is a way through which additional funds and resources for public investment can become available, and a way through which constraints on budget deficits circumvented.

(ii) Private sector expertise is brought into public investment. The expertise can be seen to include the design of the project and the deliver of services from the project. A significant idea is that the government specifies desired outcomes (in terms of services to be provided etc) and the private company is involved in the design process as well as the delivery of services.

(iii) The idea that investment projects are more likely to be delivered on budget and on time when undertaken through a PPP. A 'possible source of higher cost efficiency in a PPP is bundling and life-cycle planning. If the private owner-operator knows in advance that he will

not only construct but also maintain the asset for its entire economic life, he may be able to make investments in the construction phase that will allow him to reduce maintenance costs in the operation phase and thereby lower life-cycle costs. In contrast, if two separate firms undertake the construction and operation phases, there will be no incentives to make such investments in the construction phase, and consequently life-cycle costs will be higher.' (Maystadt, 2005).

(iv) There are risks associated with the construction and then operation of an investment project, and it is argued that the private sector is better able than the public sector manage risk. 'Crucially, the driver for efficiency gains is argued by the Treasury to be the transfer of risk to the private sector.' (Heald, 1997, p.574). This requires that within a PPP risk is effectively transferred from the public sector to the private sector

These proposed advantages are further discussed below. But as Heald argued 'a key obstacle to the use of private finanance in public projects is that private finance is always more expensive. Therefore, private sector financing must bring with it operational efficiency gains whose prsent value exceeds the prsent value of additional financing costs.' (Heald, 1997, p.574). There are a range of 'tranasctions costs' associated with any public investment project, but notably in the case of a PPP. This has lead to the argument that PPP may not be suitable for small projects. 'Similarly, in addition to their own internal costs, bidders must typically meet the costs of technical, financial, design and legal advisors. These costs do not necessarily fall in proportion to the size of the project, and so drive up the relative cost of small PFI schemes. For example, one private sector contractor has suggested that their bid costs, as a proportion of a project's capital value, are 33 per cent lower for a £50 million project compared to a project costing £20 million.' (HM Treasury 2003a, p.53). It argues that PFI is unlikely to be the best procurement option for projects with small capital value (for example, HM Treasury, 2003a, p. 87).

3. Public investment and public private partnerships: additionality and accounting

The argument that PPPs provide additional finance for the public sector and enables projects to proceed which would not otherwise have been possible is essentially spurious. In whatever way, investment in or for the public sector is undertaken there are resource costs involved in the construction and maintenance of the investment project, and the investment has to be funded whether directly or indirectly. If there is more public investment under PPP schemes than there was hitherto (or there would have been) that is simply the result of a political decision to increase investment and for it to take the form of PPPs.

Consider what the limitations on the level of public investment actually are. In a fully employed economy with the economy being resource constrained, then clearly resources used for one project are not available for use elsewhere. The limit on public investment is then the availability of resources: the opportunity cost of the investment is that resources have to be drawn away from use elsewhere. In an economy with spare resources of labour and capital, that would not be basically the case (though there may be shortages of specialised labour and/or capital equipment which would be required for the specific public investment project). Resources are available which can be put to use (whether to construct public investment projects or for use elsewhere is a political decision to be made). But the limits are in effect the same whether the investment programme is undertaken through PFI or through some other form.

In a less than fully employed economy, resources for the investment are generally available, but there are still issues of the funding of the investment. An investment project may be financed from general taxation, which would mean that tax revenue is higher (than it would be otherwise) and finance available for private expenditure thereby reduced. When a government decides that capital expenditure is not to be financed through general taxation but through borrowing it faces, in effect, a choice. The public sector can borrow from the private sector and uses the funds obtained to pay for the investment project, or the private sector finances the project directly as through the PFI schemes. Whether directly or indirectly, the public sector is in effect borrowing from the private sector, and the investment funds are obtained through different routes. The public sector repays the full cost of the private sector companies which have constructed the investment projects in annual payments over periods of 20 to 30 years. But it does not provide access to any higher level of funding than would otherwise be the case with public funding. In either case, the public sector faces future obligations – either in the form of future interest payments on the borrowing or in the form of leasing and other charges to the private sector.

The ways in which public investment, whether ‘conventional’ or through PPP, is treated in government accounts and the ways in which key aspects of the budget deficit and public debt are targeted can be problematic and has tended to create incentives for the use of PPPs rather than ‘conventional’ public investment. The first aspect of this is that in the usual presentation of public accounts includes the outstanding financial liabilities of government but rarely includes the assets of the government. Further, targets may be set of for the size of the public debt (e.g. 60 per cent under Stability and Growth Pact, 40 per cent adopted by UK

government) but not for size of public assets (see Sawyer, 2009, for further discussion on this point).

The use of PPPs creates a future stream of expenditure commitments for government, some of which are finance leasing charges and service charges. 'Finance lease debt is thus defined as the liability of the lessee to make finance lease payments to the lessor for use of an operational asset. Note that finance lease debt does not include any future payments for services provided by the private sector as these are contingent on the services being delivered satisfactorily. National Accounts do not include contingent liabilities' (Chesson and Maitland, 2006). The European Commission (2002) in their ESA95 Manual observe that 'Some governments are making increasing use of the corporation sector to finance, construct and operate public infrastructure. There can be two objectives: to use the skills and profit motivation of the corporation sector; and to spread the cost of new assets over the time they are used, so avoiding the high initial costs of government's own capital formation.' (p.182). Government investment which is funded through borrowing would also, of course, spread the costs over time, and this remark suggests that accounting rules used may encourage the use of PPP. The proposed treatment of PPPs in national accounts depends on the exposure to risks and rewards. In one case, 'when the corporation is exposed to most of the risks and rewards of ownership during the period of exploitation, the infrastructure is recorded in the corporation's balance sheet. The contract between government and the corporation has the characteristics of an operating lease. Only the regular payments by government have an impact on government net lending/borrowing' (European Commission 2002, p. 183). In the other case. 'when government is exposed to most of the risks and rewards of ownership during the period of exploitation, the infrastructure is recorded in the government's balance sheet. The contract between government and the corporation has the characteristics of a financial lease. The infrastructure built by the corporation is allocated to government's balance sheets through gross fixed capital formation (GFCF), balanced by an imputed loan of equal value. GFCF is recorded in government's accounts according to ESA95 rules …: there is an impact on government net lending/net borrowing for the value of GFCF. Government debt is increased by the amount of the imputed loan' (European Commission 2002, p.183).

The distinction can be drawn between what may be termed 'revenue risk' and cost risk', though the corporation undertaking a PPP scheme would be particularly interested in 'profit risk'. In general for a PPP the revenue for the corporation is essentially guaranteed subject perhaps to meeting performance requirements, and the corporation faces little revenue risk. The demand for the services from the PPP is contractually guaranteed by government, often

for 25 to 30 years ahead. The costs of providing the services associated with the PPP would be subject to a range of risks, from the wages of employees through to maintenance costs on the project. From the perspective of government, there is a commitment to making payments under the terms of the PPP contract.

The European Commission (2002) argues that 'Demand for services provided by the asset might be greater or less than expected. Assume the corporation's income is affected by the demand for the asset, such that government or other customers only pay for the amount of service consumed. This suggests an operating lease.' (p. 193). However, for many PPPs income is essentially guaranteed.

The government may have shed the risks associated with the operation of the project though has taken on a commitment to future service payments even in the event of the services no longer being required. How far the government does shed the operational risks has been a matter of some debate.

Based on the distinction between 'finance lease' and 'operating lease', Chesson and Maitland, 2006 estimate that finance lease liability under PFI in the UK amounted to £4.92 billion, equivalent to 0.4 per cent of GDP. This could be compared with over 700 signed [PFI] projects in the UK, with a total capital value of over £46 billion'. Sawyer (2008) indicates that in early 2007 the future commitments under PFI in the UK was £169.6 billion (in 2007 prices). With a (real) discount rate of 3.5 per cent the present value of those commitments would be £120 billion and a 6 per cent rate £98 billion. Thus a rather small proportion of PFI could be allocated to the 'finance lease' category, and hence have an immediate impact on the scale of public debt, and only effect the budget deficit position when the charges under the PFI become due.

An 'operating lease' still means that there is a commitment by government to make future payments for the services under the lease. If there is concern over the size of public debt, then it is reasonable to make allowance for those financial commitments which do amount to future obligations to make payments.

In a similar vein when the cost of 'conventional' public investment would appear in the calculation of budget deficit, then the costs associated with PPP related to the capital costs should be similarly included. Decisions on whether to undertake a public investment project should not depend on the manner in which it is to be financed (though it could depend on the cost of such finance).

The time profile of expenditure under PPP is rather different to that under the financing of 'conventional' public investment. With 'conventional' public investment, the costs (to the

government) are incurred at the outset with the costs of construction whereas under PPP the immediate costs are just those of contracting and the leasing costs on PPP are spread over the 30 years or so of the contract. Hence the costs of 'conventional' public investment are much more 'front loaded' than with PPP. The choice of discount rate then becomes of some significance, and the higher the discount rate chosen the more likely it is to favour PPP over 'conventional' public investment.

The discounted present value of the two streams of expenditure are generally of similar orders of magnitude, but the total (undiscounted) expenditure under PPP will be greater than under 'conventional' financing. Consider a project which may be financed either through PPP or 'conventional public investment', and where the net present values of the two alternatives are similar. The costs (to the government) of the form will appear later in time than is the case for the latter. The cumulative (real) costs would be lower for the 'conventional public investment' than for the PPP. Even allowing for growth, of GDP, the costs of PPP relative to GDP will be higher than the costs of the 'conventional public investment'. Although PPP reduces pressures on public expenditure in its early years, it places much more pressure in its later years.

The conclusion can then be drawn that 'once PFI [UK PPP] is on the books, the distinction between PFI and conventional capital will disappear. The only reason then for going down the PFI route will be because it transfers risk to the private sector, making the higher cost of borrowing worthwhile' (Timmins, 2007). This leads us to a discussion of the relative costs of finance under PFI as compared with conventional public investment, and whether the higher cost of finance under PFI are warranted by the transfer of risk from the public sector to the private sector.

Broadbent and Laughlin (2005) contains an interesting discussion of the tensions between the UK government and the Accounting Standards Board over the accounting treatment of assets and service commitments arising from PFI and PPP projects. But as Heald remarked over a decade ago disquiet and criticisms over the accounting treatment of PPP 'is likely to come from those converned about "honest government accounting", a group that is neither numerous nor political weighty' (Heald, 1997, p. 594).

4. Cost and availability of finance and the rate of discount

Cost of finance

It is widely recognised that the cost of finance involved in a PPP will not be less than the cost of finance involved for the government in undertaking 'conventional' public investment. It follows from the observation that for a variety of reasons government bonds are close to

being free of default and hence the rate of interest on government bonds will be lower than (or perhaps equal to) the rate of interest on other bonds, loans etc.. Borrowing by private sector involves some risk as far as lenders are concerned, even if the risk is regarded as rather small. 'A key obstacle to the use of private finanance in public projects is that private finance is always more expensive. Therefore, private sector financing must bring with it operational efficiency gains whose present value exceeds the prsent value of additional financing costs. Those advocating the use of private finance contend that these efficiency gains do outweigh the highe financing costs. This argument is rarely empirically documented, and is normally asserted to be a consequence of the better incentive structures which prevail in the private sector.' (Heald, 1997, p.574)

Transfer and pricing of risk

The defence which has been advanced by the UK Treasury (2003a) is along the lines that the difference between the risk-free rate of interest on government bonds and the risk premium paid by private borrowers (and in effect passed on to government through the PPP leasing arrangements) seems to be that the difference is illusory. It argues that there is a risk premium with both PPPs and with 'conventional' public investment. 'Where gilts are used, tax-payers effectively underwrite the associated risk and the price reflects this fact. The taxpayer takes on the contingent liability, and where the risk materialises, they carry the cost as a result. If the taxpayer were to be compensated it would be equivalent to paying the risk premium at the point of raising the capital, making the public and private sector's cost of capital equivalent.' Treasury (2003a) also dispute the argument that 'the government are better at diversifying the risk than the private sector'.

The general idea is that any investment (whether in the public sector or in the private sector) carries risks and the notion that appropriate allowance for risk and risk bearing should be made have become central to the debates over PPP. The cost of finance under different regimes (e.g. PPP, 'conventional' public sector investment) may reflect differences in the bearing of risk. In effect it is argued that under 'conventional' public sector investment, the government can borrow at a relatively low rate of interest, which is perceived to be risk free (as far as the lenders are concerned), but the government bears the risks associated with the operation of the public sector investment. Under the PPP, the company concerned borrows at a higher rate of interest, which is reflected in the price it charges the government, but the company bears the risks associated with the operation and maintenance of the investment project. An early expression of the argument is : 'An important assumption underlying the PFI is that private sector management will reduce variability risk (e.g. reduce capital

overspends or operational underperformance) reflecting the proposition that risks ought to be borne by those best able to control them. It is believed that the private sector will exercise more resilience to cost overruns because these contractors know that the private sector firm is itself vulnerable to bankruptcy and lacks government's access to tax revenues.' (Heald, 1997, p.575)

Although government borrowing is from the lenders' perspective one involving virtually no default risk, and the rate of interest at which the government can borrows reflects that, it would still be the case that the project for which the government is seeking funds bears some risk. A school may be built but there are risks associated with the running and maintenance of the school – the roof may leak, a wall may collapse etc.. Under PPP these risks are transferred to the private contractor (though if there is some catastrophic event which threatens the whole project, the contractor is likely to be bailed out by the government). But by parcelling out the risk, the amount of risk to be borne is in effect increased. The government operating many schools is in effect pooling the risk.

The government is perceived to be able to borrow at the lowest rate of interest which is regarded as risk-free. Private sector firms generally borrow at a rate of interest which bears some risk premium.

The operation of a public investment project involves risks in terms of, for example, the costs involved. When risk can be envisaged as arising from random events (that is not related to the actions and behaviour of those involved), then the government, operating a large number of public investment projects, could be seen as involved in the pooling of risk. The variance of outcomes across a large number of projects will be smaller than the variance on an individual project. A private firm operating one (or small number) of public investment projects would face greater risk (variance of outcomes) than the government operating a large number of projects would. The Arrow-Lind theorem (Arrow and Lind, 1970, see also Foulde and Rees, 1977) to the effect that there should be no risk adjustment to the discount rate for public investment projects is seen to rest on two assumptions. First, that the returns from public projects distributed independently of national income and second, that returns spread over large number of individuals. The argument here is not that these assumptions hold but rather that in the comparison between 'conventional' public investment and public private partnerships it should be recognised that the risks (variance) associated with the former when government operates a large number of such projects are likely to be less than those associated with the latter.

The UK government has argued that '[t]he appropriate sharing of risks is the key to ensuring value for money benefits in PFI projects are realised', and that risks involved in design and construction should be 'borne by the party who is best placed to manage them'. The intention is that '[w]here risks are transferred, it is to create the correct disciplines and incentives on the private sector to achieve a better outcome ….Successful PFI projects should therefore achieve an optimal apportionment of risk between the public and private sectors. This will not mean that all types of risks should be transferred to the private sector. Indeed, there are certain risks that are best managed by the Government; to seek to transfer these risks would not offer value for money for the public sector.' (H M Treasury, 2003a, p. 35)

There are though a range of issues which arise. Even if it accepted that risk can be shifted and more effectively borne by the private sector, there are questions as to the pricing of risk and how much the public sector has to pay the private sector to bear the risk, and whether the risk is effectively transferred.

The pricing of risk can be a crucial element in the case for a PPP rather than 'conventional' public investment. 'In all schemes [considered] risk transfer is the critical element in proving the value for money case. There is considerable variation between schemes in the absolute and relative value of risk transferred. What is striking, however, is that in all cases risk transfer almost equals the amount required to bridge the gap between the public sector comparator and the PFI. This suggests that the function of risk transfer is to disguise the true costs of PFI and to close the difference between private finance and the much lower costs of conventional public procurement and private finance.' (Pollock, Shaoul and Vickers, 2002, p. 1208)

Risk is generally viewed as related to the variance of possible outcomes. In the example given above, risk was clearly being measured in terms of the expected costs from delays etc., and is not related to variability and the costs of variability. Risk is essentially an *ex ante* concept and there are clear difficulties in assessing what the risk may be, and in assessing whether the prior estimates of risk arose in practice (and with PPP only with a 30 year delay). Thus, it can be argued that 'risk transfer requires the ability to quantify the probability of things going wrong. There is no standard method for identifying and measuring the values of risk, and the government has not published the methods it uses. The business cases we examined do not reveal how the risks were identified and costed. Our findings are supported by a Treasury commissioned report which found that in over two thirds of the business cases for hospital PPP schemes the risk could not be identified. In the other cases risk transfer was

largely attributed to construction cost risks, which would be dealt with by penalty clauses under traditional procurement contracts' (Pollock, Shaoul and Vickers, 2002, p. 1208).

There is also a loss of flexibility under PPP arrangements. Any contract drawn up to cover a significant period of time suffers from issues of dealing with flexibility and unforeseeable circumstances since a contract cannot possibly specify reactions to all possible changes in circumstance, and indeed many events which occur during the term of the contract could not even be imagined when the contract is being drawn up. Seeking to do so would entail extremely long contracts, and may not be possible in a world with some degree of uncertainty. The PPP contracts are typically for 25 to 30 years, and specify the services to be rendered over that period. The 'conventional' public sector alternative also includes degrees of inflexibility : once a school is built, its use cannot be readily changed etc.. But it is clear that there is some flexibility : demographic changes may render the school surplus to requirements, its use may be changed and the associated maintenance arrangements etc. changed. Under a PFI, compensation to the contractor would be required etc.. A recent expression of this comes from the NHS Confederation when they write that 'Problems arise for a PFI project when there are unanticipated developments after the contract has been agreed which require changes in the size or design of the new hospital facilities. Most large PFI hospital projects completed so far have had to adapt their planned use or increase in size during procurement or after completion.' (NHS Confederation, 2004, p.7)

'Taking on a 30 year contract for services is an additional risk for [NHS] trusts. If the demand for hospital services is reduced for any reason, the NHS trust is still tied into an agreement for maintenance, facilities, and management services over and above the cost of building the hospital. This would not be the case if the hospital was built with public funding.' (MacDonald 2000). Similarly, 'another issue is the underestimation of demand risk, which arises if serviced schools or prison places under a 30-year PFI project turn out to be in excess of requirements' (Heald 2002). Further, Shaoul argues that 'PFI, by locking management into a particular form of service delivery and one contractor for 30 years, serves to reduce rather than enhance management's flexibility to respond to changed circumstances, as other analysis has shown' (Shaoul, 2005, p.10). Thus it can be readily argued that the PFI arrangements reduce flexibility, and inhibit responses to changing circumstance.

In this discussion, the distinction between risk and uncertainty should also be borne in mind. Risk is taken as the situation where the probability distribution of future 'events' is known (or believed to be known) from which expected outcomes and the variance etc. can be calculated. Uncertainty refers to a situation where the future is unknowable, and where past frequency

distributions are not adequate guides to future probability distributions. Further, it may be argued that risk can be applied to 'natural' disasters, e.g. the risk of flooding, but even there, as the example of flooding in the face of climatic change vividly illustrates, past frequencies may not be a guide to future probabilities. The situation becomes more complex when human behaviour is involved : the probability of a contractor fulfilling the contract is not just a function of 'natural events' but of human behaviour and intentions.

Shaoul goes further and argues that 'But risk transfer is conceptually flawed. The concept of risk assumes that all possible outcomes of each trial or event can be predicted and weighted so that a complete array of results covering all eventualities can be compiled. In the context of business decisions, since the number of possible outcomes is infinite, the issue is uncertainty not risk. The significance of this distinction is that it renders the measurement and methodology of risk transfer problematic.' (Shaoul, 2005, p. 13)

Is 'risk' effectively transferred ?

One way in which risk is transferred from the public sector to the private sector under PFI is that the payments under the contract are assured and the contractor accepts the risks associated with the provision of the services under the contract which include variations in costs and impact on profits. Under a 'conventional' public sector investment, the provision of services would be undertaken directly by the public sector who thereby incur the risks associated with fluctuating costs. The effective transfer of risk would, of course, mean that in the event of a major difficulty which threatened the profitability of the PFI project, there would be no assistance forthcoming from the government but the PFI contractor would have to bear the costs. There is, not surprisingly, problems arising here from the 'too big to fail' syndrome. An example of this is given in the following. 'The Passport Agency PFI provides an example of the political realities of risk transfer in the context of a high profile, essential service. The fact that compensation was waived and the allocation of the costs of failure negotiable suggests that risk transfer was not after all secured by the contract, or not to the value contractually specified and in respect of which the risk premium was payment.' (UNISON, 2004, p.33). A further example is given by the case of the National Air Traffic System. 'This privately-owned service now depends on a government life-support machine, because it cannot be allowed to fail … [T]he case, precisely because it was a failure, is useful because it raises issues about the rationale, appraisal and risks of the Government's partnerships policy in the context of services that cannot be allowed to fail.' Further, 'The Public Accounts Committee has twice drawn attention to the paucity of data on the relationship between risk and the cost of private finance. …The expectation that changes in

risk transfer are accompanied by changes in the premiums paid to private financiers and adjustments to annual payments has not been tested.' (UNISON, 2004, p.37)

The House of Commons Committee of Public Accounts has noted that 'Departments are too willing to bail out PFI contractors who get into trouble. Contractors should expect to lose out when things go wrong just as they expect to be rewarded when projects are successful. Departments must ensure that PFI contracts safeguard the taxpayer's position in circumstances where the contractor is no longer able to deliver what is required under the contract. Departments should consider in advance how they will eventually exit from deals should this prove necessary and draw up contingency plans accordingly. When projects run into difficulties prompt action is necessary to prevent costs rising further. They taxpayer must not be expected to pick up the tab whenever a deal goes wrong.' (House of Commons Committee of Public Accounts, 2003a, p.4)

Edwards and Shaoul conclude that 'our analysis has shown that the concept of risk transfer that lies at the heart of the rationale for partnerships is problematic, regardless of whether the project is "successful" or not. If the project is successful, then the public agency may pay more than under conventional procurement: if it is unsuccessful then the risks and costs are dispersed in unexpected ways. Hence public accountability is obscured. … our analysis shows that, although a project fails to transfer risk and deliver value for money in the way that the public agency anticipated, the possibility of enforcing the arrangements and/or dissolving the partnership is in practice severely circumscribed for both legal and operational reasons.' (Edwards and Shaoul, 2002, p.418).

Availability of finance

Until recently most attention with regard to finance for PPPs had focused on the cost of finance. It has been generally assumed that there would not be issues of credit rationing for firms bidding for PPP contracts. A firm (consortium, special investment vehicle) which was successful in securing a PPP contract was virtually guaranteed a steady stream of revenue, and any risks with regard to profitability would come from the cost and performance side rather than the revenue side. Indeed PPPs were viewed as a route through which additional funding for public investment could be secured which the government could not itself tap, though that may have been for self-imposed reasons rather than limitations applied by the finance markets. But credit rationing is a pervasive feature of the operation of banks and other financial institution, and the question can be raised as to whether such rationing does inhibit PPPs. This has come to the fore in the present financial crisis, where there have been reports that funding for PPPs was placing a limit on their use. For example, it was reported in

the UK that 'Hospital building and improvement programmes financed through the government's controversial private finance initiative (PFI) are being placed at risk by the credit crunch, according to a leaked health service memo. Health managers have been told to "expect a capital desert" next year and "a real problem" in completing projects because no banks are financing PFI schemes, the memo claimed. The stark warning came from Graham Eccles, chief executive of the South East Coast Strategic Health Authority, who was summarising a meeting with Alan Johnson, the health secretary.' (Guardian, 26th January 2009).

In earlier times, at least in the UK, there have been concerns over the additional costs of finance associated with PFI comes from the re-financing of PFI projects. The risks associated with a proposed PFI project change between the pre-contract period (when there is still uncertainty over the award of the contract as well as its precise terms) and the post-contract period. This can then be reflected in a lower cost of finance (for the PFI contractor) in the post-contract period than in the pre-contract period. The ability to re-finance the PFI contract can then be an additional source of profit for the contractor. A report from the National Audit Office summarises the argument. 'This figure shows that, once the required service has been brought into operation, the project risks are lower, as the risks associated with commencing service delivery are no longer relevant. This creates opportunities to reduce the annual financing costs, as funders are prepared to offer better terms for projects with lower risks. … Lower annual financing costs improve the returns that can be paid to the private sector shareholders.' (National Audit Office, 2002, p.1).

5. PPPs, incentives and costs

The argument is advanced that PPPs provide incentives for contractors to undertake the provision of assets on a cost-efficient and on time basis. It could first be said that the use of PPP (rather than 'conventional' public investment) does not change the basic problem of how a contract can be written between government and private contractors which both leads to cost efficiency and deals with the inherent risks. A contractor may be awarded a fixed price contract whether that price is paid 'up front' (as a capital sum) or in paid over many years (as a fee for leasing and services). Conversely, a contractor may be award a form of cost-plus contractor in either case. The incentives for a contrast to be completed on time and on budget can be secured by the writing and monitoring of appropriate contracts for the construction project with penalties imposed for late delay etc..

However, a PPP differs from 'conventional' public investment in two signficiant respects. First, the design of the project is often more in the hands of the PPP contractor than would be

the case under 'conventional' public investment. Second, the PPP contractor will be operating the project on the completion of the construction, and has incentives to ensure high quality construction on the basis that the operation of the project will be less costly with high quality construction rather than low quality.

The idea that construction costs will be lower and completion is more likely to be on time and budget has become a central feature of the UK's PFI programme. In making decisions on a PFI project, it has to be compared with a public sector comparator (PSC). In doing so a range of assumptions need to be made of which those on risk transfer and its costs (as discussed above), the rate of discount to be applied and any differences in construction costs appear the more important.

The judgement between PFI and PSC is influenced by the rate of discount chosen. The PFIs clearly involve financial commitments over periods of upto 30 years as would the PSC. But the time profiles of the costs involved are rather different – the PSC is 'front loaded' with the capital costs incurred in the initial stages, whereas for the PFI as far as the government is concerned the costs are more evenly spread out as the leasing charges repay the capital costs of the constructor. In view of these marked different time profiles, the comparison between PSC and PFI may be rather sensitive to the choice of discount rate. As some of the example cited in this paper suggest, the difference in NPV terms between a PFI and the corresponding PSC may be rather small, and hence a relatively small change in the discount rate could well lead to a change in the relative ranking. Further, it may here be noted that the UK government (H M Treasury 2003b) has recently lowered the test discount rate from 6 per cent to 3.5 per cent, and many PFIs had used the higher 6 per cent rate in the calculations.

The British government has often claimed an average lower costs of 17 per cent on PFI projects as compared with 'conventional' public investment, and assumptions along those lines often built into the PFI-PSC comparisons.

There are then clear incentives to overstate the costs of the PSC alternatives in order for the PFI to be favoured. Further, the PFI is carried through whereas the PSC is not, making a genuine comparison fraught with difficulties. It is recognised that '[t]here is a demonstrated, systematic, tendency for project appraisers to be overly optimistic. This is a worldwide phenomenon that affects both the private and public sectors (Flyvbjerg, *Underestimating Costs in Public Works Projects—Error or Lie,* APA Journal, 2002). Many project parameters are affected by optimism—appraisers tend to overstate benefits, and understate timings and costs, both capital and operational.

To redress this tendency, appraisers should make explicit adjustments for this bias. These will take the form of increasing estimates of the costs and decreasing, and delaying the receipt of, estimated benefits. Sensitivity analysis should be used to test assumptions about operating costs and expected benefits.' (H M Treasury, 2003b, paras. 5.61,5.62)

Advocates of PFI argue that the project costs will be lower under PFI than under 'conventional' public investment. They would point to a history of cost over-runs on public funded projects, and the incentives which the PFI providers have to ensure that projects are delivered on time and on budget. The strongest arguments for the cost effectiveness of PFI has come from studies such as Arthur Andersen and Enterprise LSE. They report, for example, that 'The total estimated saving from our sample of projects is over £1 billion in NPC terms against an estimated cost of conventional procurement of £6.1 billion. The table shows a consistent pattern of PFI projects delivering sizeable estimated cost savings. The average percentage saving for this sample of 29 projects (ie the percentages above added and divided by the number of projects, a calculation that avoids the large projects distorting the average) is 17%. This compares to the average saving in PFI projects with a PSC examined to date by the NAO [National Audit Office] of 20%. On the basis of the public sector's own figures, the data therefore suggests that the PFI offers excellent value for money.' (Arthur Andersen and Enterprise LSE, 2000 Section 5.5)

Those who have scrutinised these claims for lowering construction costs under PFI have been much more sceptical of the claims. Pollock, for example, notes the claims which are made 'that PFI projects come in on time and on budget. The Treasury claims that this is true of nearly all PFI projects, whereas most public projects are late and cost more than expected. But researchers at the University of Edinburgh's Centre for International Public Health found that the evidence the Treasury produces for these assertions is either non-existent or false.

The claim that public-sector schemes have average cost overruns of 73%, and time overruns of 70%, is constantly repeated to support the claim that PFI is value for money. But on closer examination it transpires that the only figures the government is willing to release derive from false data commissioned by the government from the PFI industry.

But of the five studies cited by the Treasury as proof of PFI efficiency, only one contains any data. Two reports by the National Audit Office were based on interviews with managers of PFI projects, and the authors themselves conclude that it is not possible to judge from such evidence how the method of procurement affected the results. A third study by a private company contains no comparative data to support the claim. A fourth, by the Treasury, remains under wraps, and repeated freedom of information requests have been refused on the

grounds that "disclosure would be detrimental to the commercial interests of the specific PFI contractors". (Pollock, 2007).

6. Public private partnerships and the new member states

The arguments surrounding the use of PPPs reviewed above are of general applicability. The thrust of the discussion above is that (i) the use of PPPs involves relatively expensive finance, (ii) doubt has been cast on the risk transfer argument, and specifically whether the transfer of risk from public to private offsets the higher cost of finance, (iii) the use of PPPs does not itself provide additional resources or funds for public investment, and it is only if there is a political decision to not use 'conventional' public investment can it be said that PPP generates additional investment. In this section it is necessary to consider whether there are features of the post-2004 new member states (NMS) which would indicate that PPP would be a valuable addition.

For many of the NMS there is a general perception that they have a substantially greater need for public investment than the 'old' member states. In 2007, before the onset of the financial crisis, many NMS were running small budget deficits, but in 2008 the predominant picture was that of budget deficits. The NMS had, in general rather low debt ratios, and with the exception of Hungary ratios below the EU-15 average (see Table 1). Further, for those seeking to join the Economic and Monetary Union (and for those who have joined) there are pressures to adhere to the requirements of the 'convergence criteria' and to those of the Stability and Growth Pact. It could here be noted that the SGP requirements are more stringent than those of the 'convergence criteria' in that the latter require a 3 per cent budget deficit at a point in time, whereas the former seeks to impose a ceiling of 3 per cent. It is, of course, the case that the SGP and 'convergence criteria' involves no distinction between current expenditure and capital expenditure and no allowance for borrowing for public investment (hence no notion of a 'golden rule').

The figures in Table 1 indicate that in 2007 all but one of the NMS (Hungary being the exception) came under the 3 per cent of GDP deficit limit, but in 2008 six exceeded the limit, and it is likely a greater number in 2009. Also in many cases the deficit was sufficiently close to 3 per cent to think that seeking to attain a budget in balance over the cycle forms a constraint on the fiscal activities. It can also be seen that most but not of the NMS countries have a debt to GDP ratio well below the 60 per cent mark. It is debatable whether the debt to GDP ratio has in practice ever been a constraint which had any impact.

What are the circumstances under which the use of PPPs could raise the level of public investment in NMS (above the level which could be achieved through the use of

'conventional' public investment) ?. We suggest two cases. The first relates to the effects of accounting conventions interacting with the rules of the SGP, and the second to access to foreign sources of funding.

It is evident that 'conventional' public investment would be included in public expenditure for the purposes of calculating the budget position, and hence increases in public investment would raise the budget deficit. It is also evident that in general PPP does not count as part of public expenditure at the time it is undertaken, though clearly it raises future public expenditure. The future payments under a PPP could be seen as a combination of financing charges, repayment of principle and contractual service charges. It is the financing and repayment of principle that is particularly relevant here in that costs related to the provision of service from the investment project would be incurred under 'conventional' public investment as well as PPP. If the present value of the costs of a PPP project and a comparable 'conventional' public investment (and associated services) were the same, then it could be said that the impact on the budget deficit position over time would be the same. However, the time profiles of the costs (to the government) of the 'conventional' public investment and of the PPP are such that the costs of the former tend to come before the costs of the latter. Assuming that the rate of discount used is greater than the rate of growth of the economy, then the expenditures incurred under the PPP will be greater relative to GDP than the expenditures under the 'conventional' public investment. The differences may not be great and occur particularly in the latter years of the project which could last for several decades.

The Stability and Growth Pact and the convergence criteria seek to place constraints on the budget deficit over the course of the business cycle without reference to any distinction between current and capital expenditure, and to limitations on the size of the public debt (relative to GDP). The focus on public debt and liabilities without any reference to public assets can generate pressures against public investment which would not occur with PPP in that the latter is generally not reflected in the calculated liabilities of the public sector. In a similar vein as 'conventional' public investment is financed out of tax revenue or borrowing, pressures on the scale of public borrowing inevitably places pressures on public investment. PPP appears to avoid those pressures in that borrowing by private companies associated with PPPs do not appear in the public budget. It has been though argued above that the use of PPP increases future budget deficits (as compared with 'conventional' public investment).

It is generally the case that a government can borrow in its own currency more readily and at lower costs than private companies can, and it is that observation underlies the idea that the cost of finance will be higher under a PPP than under 'conventional' public investment. It

was argued above that public investment whether of the 'conventional' form or under a PPP faces the constraints of funding and of resources. It can though be argued that access to borrowing from overseas releases the funding constraint. Borrowing from overseas in a foreign currency creates exchange rate risk, and the possible risks have been vividly illustrated by recent events. It is though possible to argue that a multinational company (or associated special investment vehicle created to undertake the PPP) can borrow more readily and at comparable costs in the international markets as compared with a (small) government. Further, the special investment vehicle may incur the exchange rate risk in so far as it borrows in one currency and the PPP is remunerated in another currency, whereas under a 'conventional' public investment in so far as the national government was borrowing in a foreign currency it would be incurring the exchange rate risk.

7. Concluding comments

The paper has argued that PPPs are a relatively expensive way of undertaking public investment, which only generates additional public investment when there are political decisions to use PPP rather than 'conventional' public investment. There are issues related to the nature of contracts under PPPs, the transactions costs and the implementation of the contracts, which need further exploration. A brief consideration for the NMS suggests that the accounting rules and perceived constraints on budget deficits may encourage the use of PPPs.

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[1] 'Conventional' public investment is taken to be capital investment produced by the private sector for use in the public sector, where the investment is funded by government (whether out of taxation or borrowing) and the resulting capital equipment operated by the public sector.

[2] They were writing with reference to the UK's Private Finance Initiative (PFI) which is a major example of PPPs.

Table 1: Budget deficits and debt ratios

	Budget balance as percent of GDP (- = deficit; + = surplus)		Debt/GDP ratio
	2007	2008	2008
Bulgaria	0.1	1.8	14.1
Cyprus	3.4	0.9	48.4
Czech Republic	-0.7	-2.1	30.0
Estonia	2.6	-2.7	4.8
Hungary	-5.0	-3.8	72.9
Latvia	-0.3	-4.1	19.5
Lithuania	-1.0	-3.2	15.6
Malta	-2.2	-4.7	63.8
Poland	-1.9	-3.6	47.2
Romania	-2.5	-5.5	13.6
Slovakia	-1.9	-2.3	27.7
Slovenia	0.0	-1.8	22.5
EU 15	-0.6	-2.0	69.6

Source: Eurostat website