The Private Finance Initiative: the UK experience
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1. Introduction

The essential features of the Private Finance Initiative (PFI) in the UK are that capital investment projects (for the public sector) are financed as well as constructed by a private company, and then leased back to the public sector over a predetermined period (generally 25 to 30 years), and that generally the private company provides a range of services associated with the capital project (e.g. maintenance). The recent origins of the PFI can be seen to be a change in the rules governing private involvement in the late 1980s with the replacement of the previous so-called Ryrie rules: ‘Under the Ryrie rules, the use of private finance would only be allowed if the efficiency gains thereby generated were sufficiently large to compensate for the higher cost of private finance, a condition which in practice was never met’ (Bladen-Hovell, 1996). But the PFI involves not only drawing upon alternative sources of finance for public investment but also that services related to the capital thereby constructed are also provided under the PFI contract. The idea of comparing a PFI project with a ‘conventional alternative’ (labelled Public Sector Comparator PSC) financed through bonds with services provided by the public sector is central to the operation of PFI, and as will be seen below a controversial aspect of PFI is the manner in which that comparison is undertaken and how the costing of the PSC is arrived at.

The incoming Labour government in 1997 provided a further impetus to the PFI and it became a major element of their economic programme, closely linked with a rhetoric of more investment in public services, notably health and education. ‘The introduction of partnership working, known as the Private Finance Initiative (PFI), was heralded with much enthusiasm by the then Conservative Government in the early 1990s and was later adopted with similar enthusiasm as a cornerstone of the incoming Labour Government’s policy for improving infrastructure and public services. The Labour Government re-branded the policy as public private partnerships (PPP), widened it to include several different forms of which the PFI is but one, and has, confusingly, used the terms PPP and PFI interchangeably. Under the PFI, the public sector procures a capital asset and non-core services from the private sector on a long-term contract, typically at least 30 years, in return for an annual payment.’ (Edwards, Shaoul, Stafford and Arblaster, 2004).
Much of the impetus for the PFI arose from a combination of a perception of low and declining levels of public investment\(^1\), concerns over the size of the budget deficit and to some degree of the public debt and allied to this perceptions that government would be unable to borrow further. The PFI appeared to be a way of drawing on alternative sources of finance in a way which would not increase the (reported) budget deficit.

The PFI is viewed as part of the development of public-private partnerships (hereafter PPP). PPPs are a broader concept which include PFI as a particular case. However, ‘Public-private partnerships (PPPs) are key elements in the Government’s strategy for delivering modern, high quality public services and promoting the UK’s competitiveness. They cover the range of business structures and partnership arrangements, from the Private Finance Initiative (PFI) to joint ventures and concessions, to outsourcing, and to the sale of equity stakes in state-owned businesses’ (Public Private Partnerships – the government’s approach 2000).

The arguments for the PFI have evolved over time, and have tended to move away from a stress on the provision of additional finance and to use arguments based on who is best able to bear risk, the relative efficiency of PFI provision with ‘conventional’ public investment and the incentives involved. This is represented by the following recent statement. ‘The involvement of private finance in taking on performance risk is crucial to the benefits offered by PFI, incentivising projects to be completed on time and on budget, and to take into account the whole of life costs of an asset in design and construction. Private finance in PFI, particularly third-party finance, takes the risks in a project and allocates them to the party best able to manage them. The lenders to a PFI project, as they have significant capital at risk, have a powerful incentive to identify, allocate and ensure the effective management of all the risks the private sector assumes in a project.’ (HM Treasury, 2003a p.10)

In this paper we seek to provide an overview of PFI and the arguments relating to it.

2. Scale of PFI

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\(^1\) ‘The UK’s public services have suffered from a legacy of under-investment. A repairs and maintenance backlog built up on existing assets, and plans for new investment projects were subject to flaws in the budgeting system which encouraged short termism and a bias against capital spending. Public Sector Net Investment fell by an average of more than 15 per cent each year between 1991–92 and 1996–97, and represented 0.6 per cent of GDP in that year – the lowest level for over a decade.’ (HM Treasury, 2003, p.14). Public sector net investment had been around 5 per cent of GDP in the first half of the 1970s. In the decade of the 1980s it averaged just over 1.1 per cent of GDP, and just over 1.2 per cent in the 1990s. Gross investment fell from around 10 per cent of GDP to an average of 4.8 per cent in the 1980s and 3 per cent in the 1990s.
We begin by considering the scale of PFI expenditure and the implications for the future course of public expenditure. There are a number of relevant dimensions of the scale of the PFI. The first refers to the scale of investment which is financed in this way. Table 1 provides figures for PFIs broken down by government department responsible for the commissioning of the PFI projects. It can be readily seen that the PFI is concentrated in the area of transport, defence, health (often hospital construction), and education (school construction and refurbishment).

The totals given at the bottom of Table 1 indicate the overall investment arising from the PFI programme between 2004/05 and 2006/07. In relation to overall public expenditure the figures (at around £4 billion in 2004/05) appear relatively small: overall public expenditure is estimated at just around £470 billion for 2004/05, and hence PFIs were equivalent to under 1 per cent of public expenditure. A more appropriate comparator would be other forms of public investment: gross investment in 2004/05 was estimated at just under £43 billion, and after depreciation and asset sales, net investment undertaken directly by the public sector at £22 billion. Thus it could be said that around one sixth of the overall net capital investment contracted by the public sector (that is the £4 billion under PFI and the £22 billion directly undertaken) was being undertaken through the PFI.

Table 1 near here

Under the PFI, the government is contractually committed to lease the project from the private sector company for a specified period (often 25 to 30 years) ahead (and on the other side the private company is contractually obliged to lease the project to the public sector). For the private company this provides a guaranteed future income stream (usually in real terms with price to be paid for lease and services linked to the retail price index). For the government, there is the contractual obligation to make those future payments.

Table 2 provides an indication of the extent of future commitments which flow from the PFI. The figures in that Table indicate the future obligations from the contracts in force in April 2004 (at the time of budget report). The expectation would be that as more PFIs come on stream in the future, these expenditure commitments from the PFI programme will rise significantly. It can be seen from Table 2 that at present the future obligations amount on an annual basis to around £6 billions (calculated in 2004 prices) for the next decade or more.

Table 2 near here

The cumulative figures in Table 2 give a future commitment of £123.9 billion. A (real) discount rate of 3.5 per cent would put present value of those commitments at £89 billion and a 6 per cent rate £73 billion. The 3.5 per cent rate was chosen as the newly recommended rate
for project appraisal (H M Treasury, 2003b Annex 6) and 6 per cent as a figure often used in PFI evaluations. By way of comparison, the public sector net debt stood at £380 billion in April 2004 (and £443 billion calculated on the Maastricht treaty definition). The public debt to GDP ratio has tended to decline in the UK over the past decade, but a significant part of that decline can be attributed to the use of PFI in that an equivalent amount of investment undertaken in a ‘conventional’ manner would have added to the public debt to an extent which would have meant constant or rising public debt to GDP.

3. Accounting issues and the size of public debt

There are two particular accounting related issues which arise which serve to obscure the role of the PFI. The first issues arise from the concern over the structure of the balance sheet of government which focuses on liabilities and not on assets. This is clearly reflected in the Stability and Growth Pact (and previously the convergence criteria under the Maastricht Threat) with the constraint (not, of course, observed in practice) that public debt should not exceed 60 per cent of GDP. Leaving aside the question of why 60 per cent is seen as such a crucial figure, the point here is that a constraint has been put in place, and that the constraint refers to a particular measure of government liabilities. The concern expressed relates to the liability side of the balance sheet with no reference to the asset side. In the context of the public sector, assets do not usually directly generate income for the government, which may explain a focus on liabilities rather than assets. But it does ignore that public sector assets are productive in a more general sense and add to the productive potential of an economy and thereby to tax revenue. Assets should be included in any evaluation of the government’s balance sheet position, rather than merely to focus on the liability side.

The second is that the liabilities of government only include the liabilities incurred in the form of financial assets and do not include commitments to future payments. Hence it neither includes commitments to future transfer payments such as pensions, nor (and more significantly here) does it include commitments to future payments under leasing agreements. Private sector accounting practice would include leases over three years as a future liability in the capital accounts (balanced by a corresponding asset), public sector accounting does not.

The PFI appears to place an investment project ‘off balance sheet’. As PFI involves the creation of both assets and liabilities, the net position is unaffected, but having projects which can be placed off balance sheet may influence behaviour. Two sets of accusation have been made in this regard. First, that there has been a drive to get projects ‘off balance sheet’ in order to limit the apparent size of the government’s budget deficit. Second, that some projects
may ‘disappear’, appearing in neither the government’s nor the private company’s balance sheet.

The UK has recently denied that these balance sheet considerations have played any role in the development of the PFI. ‘The decision to use PFI is taken on value for money grounds alone, and whether it is on or off balance sheet is not relevant. Almost 60 per cent of PFI projects by value are reported on Departmental balance sheets and fully reflected in the Government’s national accounts. The Government publishes a complete statement of the costs of PFI facilities, which are fully covered by annual unitary payments, in the Budget document.’ (H M Treasury 2003, p.13). Similarly, ‘the Government only uses PFI where it offers value for money, considered over the long term. … The financial reporting and balance sheet treatment of projects are subsequent and irrelevant to the decision whether to use PFI, but the monitoring and reporting of financial commitments made under PFI is an important part of managing the public finances.’ (HM Treasury, 2003, p.22).

But governments do set targets etc. in terms of debt to GDP and/or budget deficits to GDP ratios, and the manner in which those ratios are calculated could be presumed to have some effects on what governments decide to do. In the first years of PFI, the borrowing associated with the PFI does not appear on the government’s balance sheet, and the size of the budget deficit is lower than it would otherwise have been if expenditure on ‘conventional’ public sector investment had taken place. When there is political concern and pressure over the size of budget deficit, the use of PFI appears a way around the perceived constraints imposed by the size of the budget deficit. But, of course, the PFI does involve future expenditure by government (stretching over 25 to 30 years). In due course, this is likely to place rather greater pressure on the level of public expenditure than would have been the case through ‘conventional’ public expenditure for two reasons. First, the adoption of something like a ‘golden rule’ (that governments can borrow to fund capital expenditure but not, over the course of the business cycle, to fund current expenditure) would mean that there would be limits on current expenditure (in line with taxation) but no specific limits on capital expenditure. The ‘golden rule’ has been formally adopted by the UK government, and there is considerable discussion over amending the Stability and Growth Pact along similar lines so that budget deficit limits apply to current budget only.

Second, the time profile of expenditure under PFI is rather different to that under ‘conventional’ financing, with the latter being much more ‘front loaded’ than the former. When the present value of the two streams of expenditure are similar, the total (undiscounted) expenditure under PFI will be greater than under ‘conventional’ financing. Consider a project
which may be financed either through PFI 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 PFI. Even allowing for growth, of GDP, the costs of PFI relative to GDP will be higher than the costs of the ‘conventional public investment’. Although PFI reduces pressures on public expenditure in its early years, it places much more pressure in its later years.

We would argue that the manner in which PFI is treated in government accounts has generated incentives to use PFI in an era where reducing budget deficits has been high up the political agenda. However, we have indicated that the future impact of PFI may well be to reduce rather than increase public sector expenditure on investment.

4. **Additional investment?**

It is often argued that the PFI provides additional investment for the public sector. For example, Paul Boateng, then Financial Secretary to the Treasury argued that ‘for the future we plan 100 new hospital schemes - including 26 new PFI hospitals to be up and running by mid 2005 - eight already up and running, 15 more at various stages of construction. An investment in our nations health that would not have been possible without finance from the private sector’ (Boateng 2001). In a similar vein, another government minister has argued that ‘The ability to raise capital from the markets does of course require the prospect of a commercial return - something which is not intrinsically on offer for facilities such as hospitals or schools or prisons where we do not charge the customers. But the Private Finance Initiative, with the concept of paying for a service over 20 - 30 years, rather than paying for a building in one go, has created a means of providing a commercial return on such projects. Thus we have a vehicle for private capital in projects which were previously the unchallenged domain of public funding’ (Falconer 2001).

The argument that the PFI provides additional finance for the public sector and enables projects to proceed which would not otherwise have been possible is essentially spurious. However public sector investment 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. As Sussex (2001) argues, ‘if we observe that more NHS investment is made now with the PFI than was made before it was introduced, then this is the result simply of a political decision to increase investment. Given the government’s current tests of fiscal prudence, there appear to be no current macroeconomic reasons for preferring
PFI to Exchequer financing, or for regarding one approach as any more affordable than the other’.

Consider what the limitations on the level of public investment actually are. In a fully employed economy, then resources used in one direction 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 the case. 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.

The limitation on public sector investment may be thought to be one of finance and funding. 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. In either case, the public sector is borrowing from the private sector. 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.

5. Risk transfer

The general idea 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 PFI. The cost of finance under different regimes (e.g. PFI, ‘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 PFI, 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.

The general approach of the government to the issue of risk transfer is well summarised as: ‘The appropriate sharing of risks is the key to ensuring value for money benefits in PFI projects are realised. The benefits described above all flow from ensuring that the many different types of risks inherent in a major investment programme, for example construction risk or the risk associated with the design of the building and its appropriateness for providing the required service, are borne by the party who is best placed to manage them. This section goes on to outline how risks are typically allocated within a PFI project between the public and private sectors, and within the private sector between the various parties involved.

The Government’s approach to risk in PFI projects does not seek to transfer risks to the private sector as an end in itself. Where risks are transferred, it is to create the correct disciplines and incentives on the private sector to achieve a better outcome. The general principles behind the Government’s approach to risk-sharing in PFI are:

• the Government underwrites the continuity of public services, and the availability of the assets essential to their delivery; but

• that the private sector contractor is responsible, and at risk, for its ability to meet the service requirements it has signed up to. Where it proves unable to do so, there are a number of safeguards for the public sector and the smooth delivery of public services in place, but the contractor is at risk to the full value of the debt and equity in the project; and

• the full value of that debt incurred by the project, and the equity provided by contractors and third parties, is the cap on the risk assumed by the private sector.

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.’ (Treasury, 2003a, p. 35)

The issues which arise in this context include the following:

(i) The pricing of risk

The significance of the answer to this question is illustrated by the following taken from a report of the Public Accounts Committee of the House of Commons.

‘Figure 3: The final comparison between the PFI bid and the Public Sector Comparator
Net Present Value (£ millions)
The exercise also showed broadly similar services to be retained by GCHQ under each option of £99 million (PFI) and £94 million (comparator). These are not significant to the comparison made. The table (which excludes retained services as described above) shows that the final IAS bid cost some £71 million less than the Public Sector Comparator, including estimates for technical transition. The technical transition costs were much lower in the Public Sector Comparator at £68 million because GCHQ assumed it would remain on two sites and use some of the existing buildings if the PFI deal did not go ahead. Technical transition would, therefore, be less complex and costly. The PSC technical transition would deliver significantly less benefit to GCHQ and result in later additional expenditure to modernise its infrastructure.

The technical transition costs for the PFI deal shown above cover the first five years only.

*Source: GCHQ*

The Comparator included £151 million for additional risk as a measure of the average cost overrun of 24% in public sector managed projects. This figure was the percentage given by the Treasury, who said that it was at the bottom of the range and it arose from a study carried out by a firm of consulting engineers. This risk allowance in itself more than accounted for the difference between the PFI bid and the Comparator and had done so in other projects as well.

Other PFI deals had used different, lower risk addition percentages; and with a range of other adjustments available from the use of different discount rates (and the way service costs were spread), it seemed to us that the Public Sector Comparator figures could be used to demonstrate any result required. Such uncertain figures risked clouding the issue of value for money and could cloak a predisposition to go in for PFI.’ (Committee of Public Accounts, 2004)

Others have similarly comments that ‘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 PFI 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 PFI 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, pp. 1208).

(ii) is ‘risk’ effectively transferred from public sector to private sector

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. The financial realities of NATS’ business meant the affordability gap could not be bridged without raising charges and contributions from the state, and reducing investment and service delivery, all of which contradicted the Government’s stated objectives. Thus the 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. Our study confirms that with the exception of a partial analysis of refinancing, there has been no systematic evaluation of the relationship between risk and the cost of private finance to the taxpayer, either before or after contract revision and financial restructuring. 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)
‘In conclusion, 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).
‘[R]isks can be transferred only through a contract that identifies them. Yet there is reason to cast doubt on the claim that contracts offer a means of transferring financial risk. Where a trust wishes to terminate a contract, either because of poor performance or insolvency of the private consortium, it still has to pay the consortium's financing costs, even though the latter is in default. It would otherwise have to take over the consortium's debts and liabilities, given that the lending institutions make their loans to the consortiums conditional on NHS guarantees. In such cases “the attempt to shift financial responsibility from the public to the
private sector fails. De facto, a risk-sharing arrangement results from force majeure,” as the Railtrack collapse has shown’. (Pollock, Shaoul and Vickers, 2002, pp. 1208-9)

(iii) is there a net change in the amount of risk?

There are two points to be considered here. The first is that when risk is considered in a probabilistic manner and when there is no significant (differential) impact of risk on behaviour, then the public sector benefits from ‘the law of large numbers’ in terms of risk. Consider the case where a range of similar projects are undertaken, each of which has a stream of costs subject to random factors, and the variance of the stream of costs of an individual project is assessed at $\sigma^2$, and this is treated as a measure of risk. The variance of N projects is then $\sigma^2/N$. In so far as the random factors are correlated across projects (arising from say common weather conditions or economic circumstances), then the reduction in the variance as N rises will be less than indicated. Thus having the projects undertaken on an individual basis and with the risk of individual projects separately priced, then the degree of risk is then greater for the separate schemes than for the pooled arrangements.

The second is that as far as the public sector is concerned there is a potential loss of flexibility under the PFI arrangements. It is well known that any contract drawn up for any significant period of time suffers from issues of flexibility in so far as the contract cannot possibly specify reactions to all changes in circumstance. Seeking to do so would entail extremely long contracts, and may not be possible in a world with some degree of uncertainty. The PFI 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 ‘While the healthcare environment is changing rapidly, PFI, with its 30–35-year contractual time horizon, is acknowledged to be inflexible. Once built, it is difficult and expensive to modify any hospital, but the process is more complicated and expensive for PFI projects. … 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)
‘Recent developments in finance theory throw increasing doubt on the appropriateness of the NPV rule in capital budgeting since the cash flows from a project cannot readily be forecast beforehand and argue that much of the value consists of the options that are opened up once a project has started: real options pricing models. But 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. It can then be said that in that regard PFI arrangements increase overall risk rather than diminish it.
In this exercise, the distinction between risk and uncertainty should 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. [somewhere: 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.
‘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)

6. Cost of finance
The initial appearance is that a PFI scheme in effect replaces direct borrowing by government with indirect borrowing, and moves from government being able to borrow at the lowest rates (on government bonds) to borrowing through more expensive channels. The conclusion that the cost of finance is raised through the use of PFI is to some degree countered by the argument that there is a shifting of risk and the private sector is bearing the risk – at a cost reflected in the higher cost of capital.
The Treasury have sought to address this argument that PFI finance is more expensive than ‘conventional’ public investment finance in the following way. They argue that ‘there are two common assertions made to justify the claim that the private sector cost of capital exceeds the public sector cost of capital:

‘Governments can borrow at a risk free rate of interest’

This is not the case, there is a risk premium either way, it is just explicit in the price of private capital. 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.

‘The government are better at diversifying the risk than the private sector’

This assertion is based on the Arrow-Lind theorem, an academic theory which assumes that project returns can be treated as wholly independent of National income. In fact this is rarely the case as public investment is not risk free’. (H M Treasury 2003a, p. 124).

The Treasury estimate that ‘since 1995, this “all-in” cost of private finance has fallen from 13.5 per cent to just under 10 per cent by 2001.’ (H M Treasury 2003a, p. 123) which would be significantly above the interest rate on bonds. Although the cost of private finance fell, it is also the case that the interest rate on government bonds also fell over this period by around 3 percentage points.

The Treasury then argues that ‘The study [by PricewaterhouseCoopers] suggests that the most appropriate benchmark to use for the WACC [Weighted Average Cost of Capital] is the regulated utility sector. Further assumptions used in the study are the risk free rate of return, being the long term government bond yield, and the equity market risk premium, which is assumed to be 5 per cent’. (H M Treasury, 2003a, p.126)

- ‘The average spread between the project IRR [internal rate of return] and benchmark WACCs has been some 2.4 per cent in total;
- on our assumptions about unsuccessful bid costs this reduces to between 1.1 per cent and 1.7 per cent - say 1.4 per cent. To the extent that the assumptions on bid costs are changed it affects conclusions on the allocation of the spread but not the total figure of 2.4 per cent;
- some 0.7 per cent of the spread is explained by swap costs;
- after considering other factors, we believe the other 0.7 per cent indicates excess projected returns to investors, and that this is due to structure issues that limit competition in the PFI market;
• bidders’ target equity returns average 14.5 per cent over the period before adjustment for bid costs, whereas the cost of equity implied by a traditional WACC calculation is in the range 8.3 per cent - 9.4 per cent depending on the assumptions used;
• there is some evidence that spreads were increasing until 1998 but that since then this has reversed;
• changes in the general capital market environment – such as declining interest rates and margins – have been reflected in PFI financings to the benefit of the public sector; and
• we expect the trend towards reduced returns to continue. The effects of steps already taken to standardise processes and share market information have not yet been fully reflected in closed deals because of the length of the procurement process.’ (H M Treasury 2003a, p.127).

Hence the cost of capital is around 8 to 9 per cent and the internal rate of return is significantly above the cost of capital; on that basis the cost of capital is substantially above the bond rate, and then there is a further ‘premium’ being paid to the PFI contractors.

The PwC study identifies certain features of PFI which could give rise to such a spread:
• the risks of political intervention given the novel nature of this form of contract, the long term nature of the commitment and perception of political risk;
• corporate investors may use corporate hurdle rates, based on for their core business on pricing their investors, which in PwC’s view will nearly always be higher than is appropriate for PFI projects;
• returns may be influenced by the requirements of debt funders and their cover ratio requirements;
• long periods of negotiation which result in financing terms being agreed early, but closed at a later date after financial markets have moved favourably.’ (H M Treasury 2003a, p.127)

Another aspect which points towards 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.

‘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. Improved financing terms have
also been possible in early PFI projects as PFI has become an established procurement method with which the financing market is familiar. Lower annual financing costs improve the returns that can be paid to the private sector shareholders.’ (National Audit Office, 2002, p.1).

‘Since June 2001, most new PFI deals have included arrangements to share refinancing benefits 50/50. Pending the finalisation of revised guidance with proposed contract terms, it had taken some time for the 50/50 policy to be widely adopted by departments although they were increasingly seeking some sharing of refinancing benefits in new contracts’ (National Audit Office, 2002, p.23).

It would then appear that the cost of finance is indeed higher under PFI than for ‘conventional’ public investment, though the extent of the difference and how far the additional cost is justified by risk transfer may be a matter of debate.

7. Efficiency gains?

As part of the process leading to the adoption of a PFI project, a comparison has to be made between the proposed PFI and a ‘public sector comparator’ (PSC). The claims that the PFI projects are more cost effective than ‘conventional’ public sector projects have been examined by reference to the comparisons between PFI and PSC. In making use of these comparisons two obvious problems arise: the PFI schemes which proceed are those which are believed to be more cost effective, whereas there are some potential PFI schemes which do not proceed as there are judged to be less cost effective.

The UK government has recently recognized that relatively small projects may not be as suitable for PFI as large 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)

‘The Government’s policy is to use PFI only where it represents the best procurement option and as shown above, this is unlikely to be the case for projects with a small capital value. It is important then that local authorities have the flexibility to develop such projects through a wide range of procurement routes, choosing the most appropriate option that delivers the best value for the project. This flexibility is part of a wider commitment to devolve responsibility to local councils to meet local priorities, increase local choice and improve performance by removing unnecessary controls that stifle local innovation.’ (HM Treasury, 2003a, p. 87)
Second, given the pressures to adopt PFI rather than ‘conventional methods’, there are clear incentives to overstate the costs of the PSC alternatives. Further, the PFI is carried through whereas the PSC is not, making a genuine comparison fraught with difficulties.

‘There 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)

Two particular issues have arisen in making comparisons between PFIs and PSCs. The first concerns the appropriate discount rate to use. 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 government 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 second arises from the treatment of risk. It has been seen above that the notion of the transfer of risk is an important feature of PFI. Since it is argued that under the ‘conventional’ public sector project, much risk is borne by the public sector whereas under PFI the bearing of risk is transferred to the private sector, then allowance for the costs of bearing risk should be made when the PSC is drawn up. But how that risk is assessed and measured becomes a significant importance is the judgement between the PSC and the PFI, and yet the measurement of risk is problematic, as noted above.

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 table below lists the high level value for money data we extracted from 29 FBCs received following a request from TTF to departments. We examined several other FBCs which did not include a PSC and which are therefore not included in the table.

5.4 Four figures are quoted:
the Net Present Cost (‘NPC’) of the PSC. This is the net cost (taking into account any project revenues) estimated by the public sector of undertaking a project itself and producing the same or similar outputs under conventional procurement. The NPC should include an estimate of the risk that would be retained by the public sector compared to the PFI option;
the NPC of the PFI option. This is the cost to the public sector of making payments to the service provider over the life of the contract. The payment profile should assume that no deductions are made for poor performance;
the estimated saving to the public sector in NPC terms of entering into the PFI contract. This is the difference between the NPC of the Public Sector Comparator and the NPC of the PFI option; and the estimated cost saving as a percentage of the NPC of the Public Sector Comparator.

5.5 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 of 20%. On the basis of the public sector’s own figures, the data therefore suggests that the PFI offers excellent value for money.

5.6 Of course, the headline PSC savings form only part of the picture. As we noted above, the jury is still out on the extent to which PFI contracts will deliver the benefits promised. Where projects are not 100% successful then the apparent benefit of the value for money saving will be diminished. This point has been demonstrated most visibly in the IT sector where there have been a number of high profile problems in delivering against the original specification.’ (Arthur Andersen and Enterprise LSE, 2000)

However, it has also been noted that ‘The estimated basic construction costs in the final Comparator were increased by 24 per cent in line with Treasury advice on historical cost overruns on large scale public sector projects. … As in other PFI cases, the adjustment for risk on construction costs of the public sector alternative more than accounts for the estimated
cost difference between the comparator and the PFI deal.’ (National Audit Office, 2003, p.25).

The basis of this argument is that there have been cost overruns on past ‘conventional’ public investment projects but that similar overruns either do not occur under PFI or if they do the consequences are absorbed by the contractors rather than the government. It can be first noted that for some of the examples given above cost overruns do occur under PFI arrangements. The recent withdrawal (voluntary or otherwise) of Jarvis from a range of PFI contracts in the face of substantial financial losses may suggest that there are cost overruns. As the method of calculation of the 24 per cent figure cited above has not been revealed, we cannot be sure that a like-for-like comparison is being undertaken: the costs of public investment can be affected by inflation, changes of specification etc.. But the main point here is that the main argument for lower costs under PFI arises from the nature of the contract. The PFI contract is in effect a fixed price contract which can also contain bonuses for early completion and cost penalties for late completion. These features could readily be incorporated into ‘conventional’ public investment contracts, which would reduce (or remove) any cost advantages of the PFI arrangements.²

8. Conclusions

This paper has sought to sketch out some of the issues involved in the evaluation of the PFI experience in the UK. However, we would argue that the following conclusions may be derived. First, if PFI does give rise to additional investment, then that comes not from finding some additional sources or finance but rather through a political decision which views equivalent expenditures on PFI and on ‘conventional’ public sector investment from a different accounting perspective. Specifically the way PFI and ‘conventional’ public investment is treated in the public accounts initially favours the use of PFI, even when a more transparent comparison would not do so. Further, over the long term, we have argued PFI involves a larger burden on the public accounts, and may diminish rather than enhance public investment.

Second, the cost of finance under PFI is likely to be greater than it is under ‘conventional’ public investment. This means that the cost in terms of public expenditure of PFI is that significantly greater than ‘conventional’ public investment. The difference in the costs of

² It would though that any form of fixed price contract, whether PFI or ‘conventional, would be one which a company would be reluctant to enter into for major unique and innovative projects where the costs can not be estimated ahead of time.
finance may be attributable to different risk bearing. Under ‘conventional’ public investment more risk would be borne by the public sector than under PFI. However, that risk bearing is not represented by a numerical cost in the public accounts. The cost of risk arises from variability of costs and benefits, and not from the average (expected) level of costs and benefits.

Third, the claimed efficiency gains of PFI over ‘conventional’ public investment appear to arise predominantly from the pricing of risk in the public sector comparator (PSC) and from the perceived overrun of costs under ‘conventional’ public investment. The PFI contracts typically have a range of penalty clauses for underperformance, late delivery etc.. It is unclear as to why the use of similar contractual arrangements would not generate similar behaviour in the case of ‘conventional’ public investment.

References

HM Treasury (2003a), PFI: meeting the investment challenge, accessed on www.hm-treasury.gov.uk
National Audit Office (2002), PFI refinancing update, HC 1288 Session 2001-2002:


*Public Private Partnerships – the government’s approach*, Stationery Office, 2000


Unison (2004), Public risk for private gain? *The public audit implications of risk transfer and private finance*, report research and written for UNISON by Allyson Pollock, David Price and Stewart Player
Table 1: Private Finance Initiative: estimated capital spending by the private sector (signed deals) projects in £ million

<table>
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<th>2004-05</th>
<th>2005-06</th>
<th>2006-07</th>
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<tr>
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<td>Health</td>
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<tr>
<td>Home Office</td>
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<td>Constitutional Affairs</td>
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<tr>
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<tr>
<td>Foreign and Commonwealth Office</td>
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<tr>
<td>Trade and Industry</td>
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<td>3</td>
<td>4</td>
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<td>39</td>
<td>23</td>
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<td>Work and Pensions</td>
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<tr>
<td>Total</td>
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Notes: PFI activity in local authority projects is included under the sponsoring central government department.

Source: HM Treasury, *Budget Report* 2004, Table C17
Table 2: Estimated payments under PFI contracts- April 2004

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Source: HM Treasury: *Budget Report 2002*