

# **The Declining Role of the State in Infrastructure Investments in the UK**

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## **Abstract**

This paper explores the increasing private involvement in social infrastructure projects in the UK since 1979. We begin by reviewing the effect of privatisation on the quantity of investment undertaken by the utility sector. We conclude that the evidence is consistent with the view that the private sector is capable of successfully raising the necessary finance. The history, theory and experience of the Private Finance Initiative (PFI) is then discussed. Five case studies of major PFI projects are reviewed covering hospital, prisons, computer services and transport projects. We conclude that the PFI has been a qualified success in the UK especially when compared with the experience under the previous regime of government procurement.

**Key words:** Private Finance Initiative, infrastructure, value for money test, privatisation, investment.

**JEL Classification:** L33, L50, L90

# **The Declining Role of the State in Infrastructure Investments in the UK**

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## Section 1: Introduction

Since 1979 there has been a massive reduction in the amount of government control over infrastructure investments in the UK. This has coincided with the coming to power of Mrs Thatcher in 1979 and continued under John Major. After 18 years of Conservative government Tony Blair became Labour Prime Minister in May 1997 and there has been a continuation of the previous trend.

This trend has been manifest in three major ways. First, the programme of privatisation of the government owned commercial enterprises has resulted in as much as 15% of Gross Domestic Fixed Capital Formation being transferred from the state sector to the government – most notably with the privatisation of telecoms, gas, airports, water, electricity and railways.<sup>2</sup> Second, the government has sold off millions of council owned houses and encouraged the formation of Housing Associations which attract public and private money to support new social housing. Since 1986 more than £10 billion has been raised from the private sector to support such housing while the share of private house building in total

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new build has increased sharply.<sup>3</sup> Third, in the early 1990s the government launched the Private Finance Initiative (or PFI) in an attempt to attract private sector support for a wide range of government projects in such sectors as health, prisons, transport and defence. To date this initiative has raised around £15bn of capital investment from the private sector and raises around 20% of the government's capital budget each year. Total government commitments to future payments under 200 contracts are estimated at £84bn over 25 years.<sup>4</sup>

The current UK Labour government has retreated a long way from the 'Old' Labour policy of seeking to control the 'commanding heights' of the economy and from the traditional view that investment had to be significantly socialised in order to stabilise fluctuations in overall economic activity. Indeed the current administration has not sought to reverse any of the privatisations of the previous two administrations and has plans to further privatise Air Traffic Control, the London Underground and the Post Office specifically in order to attract the sort of investment that these businesses require for expansion. Meanwhile the sale of council houses has largely run its course and is no longer a political issue. The Private Finance Initiative has become so mainstream that it is no longer to be thought of as 'an initiative' but part of the government's policy of Public-Private Partnerships (PPPs). Since the Labour government came to power the rate at which new deals are being signed under the PFI has actually significantly increased. There has been a quiet revolution in the way socially desirable investments are funded in the UK.

The UK trends in private involvement in infrastructure investments are not unique. Privatisation is a global phenomenon in many countries and industries. The Private Finance Initiative has been copied all over the world with South Africa among

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<sup>2</sup> CSO and ONS *UK National Accounts*.

<sup>3</sup> See National Housing Federation (1997).

those countries seeking to attract private capital into its prison building programme following the British (and the earlier US) model. Such models are attractive to developing countries which can attract foreign multinationals with access to superior management techniques and international capital markets to run and initially finance essential public sector investments with high up-front costs.

In this paper we survey the current UK scene on such private sector involvement in infrastructure investments in order to tentatively present lessons for other countries beginning to embark on a path of increasing private sector involvement in financing investments traditionally in the domain of the public sector. In the next section we briefly review the impact of the privatisation programme on infrastructure investment. In the proceeding sections we shift our focus on to the Private Finance Initiative. Section 3 details the history of the PFI. Section 4 examines the theory of private finance for public goods. Section 5 reviews the experience of the PFI in the UK. Section 6 provides details of 5 case studies of the PFI in action based on independent National Audit Office reports. Section 7 concludes.

## Section 2: Privatisation and Infrastructure Investment

In a previous paper we comprehensively reviewed the experience of the UK's liberalisation of public enterprises (Pollitt, 1999). We concluded that the deregulation and privatisation process yielded considerable benefits to consumers, shareholders and the government. While the number of employees fell sharply most of the leavers went voluntarily to other jobs or to retirement, while those who remained enjoyed higher pay. In sum all the major groups in society seem to have benefited from the process.

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<sup>4</sup> Nicholas Timmins, 'The Pounds 84bn question', *Financial Times*, 15 December 1999, p.20.

The sale of public enterprises transferred at least 7% of GDP from the public sector to the private sector. One of the primary factors behind this was a desire on the part of the government to improve the PSBR by asset sales and by removing the investment programmes of the firms involved from the budget deficit. Most of the utility privatisations came at a time when the physical infrastructure was beginning to crumble (especially in water and railways), there were rising EU directive compliance costs (particularly in water) or there was rapid technical progress leading to new investment requirements (notably in electricity and telecoms). Indeed for both the water and telecoms privatisation a desire to shift investment requirements into the private sector was a primary motivation for the government's privatisation plans. A detailed account of the effect of privatisation on investment in the electricity industry is given by McDaniel (1999).

This pressure to reduce the government's borrowing requirement is still a major factor behind continuing moves to privatise the few remaining significant public enterprises. The London Underground is estimated to require £7bn of improvement investment in the near future.<sup>5</sup> The 1999-2000 capital budget of the Department of Environment Transport and the Regions is just £4bn. Political pressure not be seen to favour the capital city and normal budgetary constraints make it difficult for the government to contemplate finding this sort of money within the public sector. The National Air Traffic Control System is currently suffering from a huge cost and time over run on the installation of new computer systems. The perceived failure of the upgrade project within the public sector and the need for new additional finance has led the government to announce plans to privatise Air Traffic Control in the 1999-2000 Parliamentary Session in spite of widespread opposition on the grounds of safety.<sup>6</sup> The Post Office has been the

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<sup>5</sup> 'Tube PPP plans', *The PFI Report*, July/August 1999, p.5.

<sup>6</sup> See [www.detr.gov.uk](http://www.detr.gov.uk) for details.

subject of continuing privatisation pressure since a failed attempt to privatise it in 1994. The main reason advanced for privatisation is that it is only in the private sector will the Post Office be free to raise the capital it requires for new investment in service improvement and for potential merger activity. It seems very likely that EU plans to liberalise the Postal market in Europe will eventually precipitate privatisation.<sup>7</sup>

Thus the desire to raise funds for investment has been a primary reason for privatisation since the privatisation of British Telecom in 1984. In 1983 the pre-privatisation telecoms, gas, airports, water, electricity and railways companies invested £7.6bn (at 1995 prices) and in 1995 the same sectors invested £9.7bn (railways were in the process of privatisation, all the others had been privatised). A chart of the real amounts of investment in the different industries is shown in Chart 1. The striking feature of this chart is the observation that privatisation did not seem to have much effect on the aggregate amount of investment being done in these industries. This observation is remarkable because the transfer of so much of the responsibility for investment from the public to the private sector might have been expected to create some disruption in the pattern of investment activity. Privatisation of investment has not been accompanied by the sort of fluctuations in investment activity that followers of Keynes' view of the socialisation of investment might have predicted.<sup>8</sup>

The reason for the apparent smoothness with which large quantities of investment obligations were transferred to the private sector lies in the fact that each of the industries above is regulated by RPI-X regulation (see Pollitt, 1999). Such regulation involves a 4-7 year review period over which prices are set. Allowed prices are set with reference to the detailed investment plans of the regulated

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<sup>7</sup> See Bergman et al. (1999, p.12).

<sup>8</sup> Keynes (1936, p.164).

companies. Paradoxically the need to submit medium term investment plans, subject to ex post explanations of why plans have not been met, has led to highly smoothed and predictable patterns of investment in these industries. Investment has not fluctuated as it might do in an unregulated environment in the private sector or equally as it might do in response to short term government budgetary constraints. It may be the case that 'gold plating' of assets (following the Averch-Johnson effect, 1962) may be encouraged by utility regulation. The statistics do not suggest that there has been a large surge in the amount of investment occurring in privatised industries.

Table 1 gives some information on what has happened to the sources of finance for investment in privatised industries. It was suggested above that privatisation would free companies from government budgetary constraints and allow them to borrow more freely on the capital market by issuing share capital and through debt financing. Electricity and airports have increased gearing, taking advantage of opportunities for expansion as profitable companies constrained from borrowing in the public sector. The initially highly geared water and rail industries have reduced gearing and increased equity holdings. The highly profitable British Telecom has been able to expand while reducing gearing as it has accumulated retained profits. Thus while some companies have been able to expand by borrowing on the capital markets, in general improved efficiency has improved profitability such that most new investment can be financed from retained profits.

The message from the UK privatisation of utilities is that well regulated companies have no difficulty in efficiently financing their investments.

### Section 3: The Development of the Private Finance Initiative (PFI)

#### 3.1 What is the PFI?

The PFI is 'one of the main mechanisms through which the public sector can secure improved value for money in partnership with the private sector. Through PFI, the private sector is able to bring a wide range of managerial, commercial and creative skills to the provision of public services, offering potentially huge benefits for Government.' (Treasury Taskforce Private Finance, *Partnerships for Prosperity – The Private Finance Initiative*, p.2)

There are currently three types of PFI project. First, those where the public sector buys *services from the private sector*. In this case the private sector is responsible for the capital investment and the public sector only pays for the delivered product. This is the most widespread form of PFI investment and has been used for new roads and prisons. Second, *financially free standing* projects are those where the private sector designs, builds, finances and operates an asset and recovers the costs through direct charges to users rather than from the public sector (e.g. for toll bridges such as the Second Severn Bridge and the Dartford River Crossing). The public involvement is in securing the planning and licensing in order to effectively create a state regulated private monopoly. Thirdly, *joint ventures* involve projects where the entire cost cannot be recovered from users and the government offers a part-subsidy in order to enable the project to go ahead (e.g. Manchester's Metrolink (a light railway) and the Docklands Light Railway Extension).

The PFI allows for several types of payment contracts which offer different combinations of risk and incentive to the private sector contractors. Thus there may be *long-term service contracts* based on service availability (e.g. prison contracts). These encourage firms to minimise lifetime costs in balancing capital costs with maintenance costs. *Trigger mechanisms* may involve payment only occurring when a service is actually supplied. This type of contract provides

strong incentives to avoid delays especially where the contract termination date is independent of when the service actually commences. *Payment based on availability* give good incentives to maintain assets.

The PFI works under a number of core principles. First, the private sector should genuinely assume risk. Second, projects undertaken with the private sector should deliver value for money (VfM). Third, private sector partners should be selected through a process of open competition.<sup>9</sup> The final decision rests largely on the VfM consideration.<sup>10</sup>

The process of signing a PFI project is potentially lengthy. It typically divides up into a number of steps. First, the public sector body concerned must define its service requirements, appraise the options and make the case for change in an Outline Business Case and obtain approval from the Treasury Task Force (now in the process of being replaced). Second, a fully detailed specification of the outputs, outcomes and desired allocations of risks must be prepared. Third, the government body needs to undertake a procurement process beginning with identifying suitable providers in order to get the best obtainable privately financed solution. This part of the process usually begins with an advert in the Official Journal of the European Communities. Fourth, in negotiation with the preferred bidder the definitive investment appraisal and Full Business Case must be completed and approval to go ahead obtained by the contracting agency. Fifth, the contract must be finalised, awarded and implemented.

### 3.2 The Evolution of the PFI

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<sup>9</sup> PFI contracts are advertised and details of offers are made known. This contrasts sharply with the previous procurement system (described in Blyth, 1987) where there was often a restricted bidding process involving departments contacting 'qualifying' firms directly and details of offers were not made known.

<sup>10</sup> See HM Treasury (1995).

The pressure for the PFI arose in the recession of the early 1990s. At that time the UK government was apparently caught between the demands for public sector investments and the limited capacity of current taxation to meet those demands. At that time the PSBR (fiscal deficit) was increasing and private sector investment in the public sector was seen as a way of improving the government's finances (see Clarke and Root, 1999).

The PFI is not a new idea. Italy, France and Spain have used private finance for building motorways for many years (see Public Services Privatisation Research Unit, 1997). Australia and New Zealand and the US have been using private finance in prison, road and hospital building for many years (Terry, 1996). The National Housing Federation (1997) note how the concept of a UK Housing Association which combined public and private finance in the provision of social housing dates from 1986. Terry (1996) discusses the financing of the Channel Tunnel as a free-standing private project in 1987 and notes that the Manchester Metrolink system was proposed in 1985. Blyth (1987) notes the influence of GATT (via the Government Procurement Code) and the EEC (via Directives relating to government procurement) in making the solicitation and award of government procurement contracts more open and competitive. The advertising of contracts in the Official Journal of European Communities is an example of this influence.

Until 1989 the UK public sector had operated under the Ryrie Rules (named after a Treasury civil servant). These rules prescribed the limits of private sector involvement in the financing of government projects (see McCarthy, 1995). Specifically, private investors in public projects could not be offered favourable risk terms and projects should yield benefits in terms of improved efficiency and profit commensurate with the cost of raising risk capital from financial markets. These rules meant that private sector capital could not be offered fair terms if it

was invested in government sponsored projects (the risk transfer aspect was not valued by the public sector). The aim was not to prevent private sector involvement but to stop ministers posting financial obligations into the future in order to get around budget constraints. In 1989 the Ryrie Rules were 'retired' by John Major while he was Chief Secretary to the Treasury.

The PFI formally began in 1992 with the Chancellor, Ken Clarke, announcing that there would be significant changes to the role of privately raised finance in the public sector (see Grout, 1997 and Kerr, 1998). The main changes were that self-financing projects could go ahead without the need to compare them to similar projects in the public sector and that leasing could be used to purchase services without the discounted value of the lease being used to count against the public expenditure limits.

In order to stimulate a flow of projects the Private Finance Panel Executive, the Private Finance Office within the Treasury and Private Finance Units within individual government departments were created in Autumn 1993. The objective was to 'increase the quality and quantity of the nation's capital stock' (HM Treasury, 1993). In November 1993 the Parliamentary Under Secretary of State for Health announced that NHS bodies would not be given government funding for capital projects unless they had explored PFI options first. In the November 1995 budget the Chancellor cut the NHS capital budget by 16.9% implying that the NHS was expected to attract £700m of PFI funding over 3 years.

The initial take-up of projects was very slow, however in November 1994 the PFI became the preferred option for the funding of capital projects. No public sector funding for a capital project would be approved unless the private sector project had been explored and found to be uneconomic. A private accountancy firm, Price Waterhouse, was appointed to train 5,000-10,000 civil servants in how PFI

projects were to be prepared. The PFI handbook *Private Opportunity, Public Benefit* (Private Finance Panel/HM Treasury) appeared in November 1995.

In 1996 the House of Commons Treasury Committee expressed doubts about the PFI. It questioned whether risk had been transferred to the private sector through the PFI and whether management of projects had improved and highlighted the fact that the Treasury did not appear to know what its total financial commitments were under PFI projects. The Treasury itself responded to private sector bidders concerns about the cost of bidding and the length of the process with the publication of *Private Finance Initiative: Guidelines for Smoothing the Procurement Process* (HM Treasury, 1996). In October 1996 the Environment Minister granted local councils new freedoms to enter into PFI schemes and promised £250m of revenue support over two years for those that did so.

As Figure 1 shows that the value of signed PFI projects began to accelerate towards the end of the Major administration. To mid 1999 PFI projects with a capital value of around £16bn have been signed (see Table 2). The private sector is investing around £3.8bn in 1999-2000 in projects and the government is paying out around £1.9bn under existing PFI deals. This represents less than 0.5% of the total government budget and around 10% of government capital spending. Payments are only projected to rise to a peak of £3.7bn by 2007-08, however they

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After the election of the Labour government in 1997 the new administration announced a review of the PFI under the chairmanship of Malcolm Bates, chairman of Pearl Assurance. Following his report a number of changes were made to the PFI. The Private Finance Panel Executive and the Private Finance

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<sup>11</sup> Figures from HM Treasury (1999), *Financial Statement and Budget Report March 1999 – The Public Finances*. Available at [www.hm-treasury.gov.uk/budget/1999/fsbr/29809.htm](http://www.hm-treasury.gov.uk/budget/1999/fsbr/29809.htm)

Office were replaced with a Treasury Task Force. This body confirms the viability of all significant projects before the procurement process in an effort to minimise procurement costs and to speed up the procurement process. Small projects can be grouped and only projects in priority listed areas are required to test against privately financed options. Compensation may now be paid to bidders if a project is cancelled at a late stage by the purchasing department. New legislation has been implemented to remove some initial legal uncertainties about whether contracts between public sector bodies and private sector contractors could be enforced (particularly between contractors and NHS Trusts). However the 'PFI' remains embodied in the rules of different government departments rather than in a single piece of legislation.

A second Bates review of the PFI was completed in March 1999. This has led to the creation of a new private-sector led body – Partnerships UK - which will employ City experts to help the private sector to get the best deal from the PFI (and other forms of what the government terms Public-Private Partnerships). This is being set up in response to certain large computer contracts which were signed under the PFI without a proper assessment of risk being done – apparently due to a lack of in house expertise in the Treasury (see section 6.2 for an example). Partnerships UK will succeed the Treasury Task Force and will itself be a partnership with a minority government stake. It will seek to win business from the public sector by offering high quality expertise on PFI contracts. It will provide some development funding to public sector bodies in order to get partnerships off the ground.

#### Section 4: The Theory of Private Finance for Public Projects

In this section we discuss the theoretical basis for the increasing private involvement in infrastructure projects.

Liberalisation – the introduction of market based incentives into industries where they did not exist previously – may give rise to a number of theoretical effects (see Pollitt, 97). First, property rights theories suggest that creating a market for ownership rights means that assets tend to get allocated to owners who can exercise them most efficiently (see Alchian, 1965). Second, bureaucracy theories suggest that government officials will tend to focus on other objectives (such as maximising the size of their budget) rather than efficiency maximisation (see Niskanen, 1968). If this is so, liberalisation can improve efficiency. Third, liberalisation may reduce influence activities by reducing the likelihood that lobbying will affect government policy (Milgrom and Roberts, 1990). Fourth, liberalisation effects the nature of regulation relating to an industry and this may effect the efficiency of production. The Averch-Johnson (1962) effect occurs under rate of return regulation, while misrepresentation of costs may occur under British RPI-X price control. Fifth, liberalisation may increase the cost of subsequent government interference and hence lead to a reduction in it (Willig, 1994).

On balance these effects seem to favour moves towards privatisation of state owned assets. Hart, Shleifer and Vishny (1997) go as far as to suggest that only under a narrow range of circumstances will state ownership be superior to public ownership. Specifically when opportunities for cost reductions that lead to non-contractible deterioration of quality are significant; innovation is relatively unimportant; competition is weak and consumer choice is ineffective; and reputational mechanisms effecting private firms (keen to win additional government contracts) are also weak.

Privatisation of utilities in the UK was reasonably straightforward because a large number of representative consumers already paid for commercial services from

companies that were financially viable. The transfer of these companies to the private sector could be undertaken without the need for charges to go up and regulation could be used to ensure that public service obligations – such as obligations to supply remote customers at subsidised prices could be maintained. Telecoms, gas, airports, water and electricity could thus be passed to the private sector without the need for any continuing implication for the PSBR.

Some activities however are not capable of being privatised and left to be financed by the private sector. The railway train operation is an example of this. The privatisation of the UK's train operating companies was very much in the mould of the PFI with private companies being asked to bid for the right to operate a rail franchise. The bidders had to say what was the minimum subsidy they would accept to run the part of the network they were bidding for. The government offered 25 train operating company franchises which involve declining subsidy levels which are set to fall from £2037m in 1996-97 to £729m in 2003-04<sup>12</sup>.

The case of the railways operating companies highlights one of the three reasons for continuing state support for certain activities – the fact that although the activity is commercial there are considerable *external benefits* to rail travel. These include the environmental impact of rail travel and their importance in servicing smaller local communities with access to the public transport network. The second reason for state finance is that some goods are *public goods*. This means the benefits are shared across the community in such a way that those who do not wish to buy the service cannot be excluded from the benefits created by those who do buy the service. A prison is a good example of this. The final reason for state support is the *undesirable distributional consequences* of charging for a potentially chargeable service. A hospital may be a good example of this – the

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<sup>12</sup> See Kain (1998).

state funds a National Health Service in order to maintain an equity of access to health care which is independent of financial circumstances.

Each of the above are reasons for state financing of certain services, they do not constitute reasons for monopoly state designing, building and operation of the assets required to deliver those services. Thus railways, prisons and hospitals can be built, designed and even operated by the private sector even if the state provides some or all of the finance for them. It is this fundamental distinction that lies behind the theoretical appeal of the PFI. It seems entirely reasonable to suggest that the government should always investigate the possibility that the private sector may be able to provide it with cheaper and/or better quality services by increased private sector involvement in the assets which produce those services.

PFI projects may pass the responsibility for the production process behind services to the private sector in a number of areas. First, *project management* may become the responsibility of a private contractor charged with delivering an asset at a fixed price. This has the effect of creating powerful incentives for cost minimisation on the part of the company. This is in sharp contrast to many state managed projects, such as nuclear power station building, which came in substantially over budget. Second, the government shifts its focus to the service provided and away from the *design of the assets*. This leads to private sector innovations in design where these can improve quality and reduce cost. It also leads to less risky designs which are most likely to work being undertaken. In the past the UK government tended to use big capital projects to subsidise speculative British innovation - greatly adding to the cost, rather than accepting tried and tested designs. Third, where the *operation of the asset* remains the responsibility of the private contractor this can yield cost reductions due to the strong incentives to cut costs. This may be important where the contractor is not paid until the asset has been made

operational (as with large computer projects) or where ongoing operation remains the responsibility of the contractor (as with private prisons). Fourth, the payment schedule offered by the government typically has the result of smoothing the government's payments relative to the project capital cost leaving the private sector to finance the capital cost. This has the advantage of allowing the private capital market to value the *financial risk* involved in the project. The relationship between the cost of the project and the financial risk creates strong incentives for private contractors to efficiently minimise risk. These incentives are absent when finance comes from the government budget where the price of finance (the interest rate on government bonds) does not reflect risk on individual projects.

Each of the above ways in which the private sector can improve the efficiency of the creation and operation of assets is enhanced by the fact that the private sector can involve specialist project managers, designers, operators and financial risk managers that may not be available within the public sector. This process is facilitated by competitive bidding for projects by different private sector contractors who 'compete for the field' (Demsetz, 1968). Such competition should lower prices if it is competitive. However in a repeated bidding game dominated by a few large contractors the process may become collusive and some of the potential benefits of the PFI may be lost.

Private finance for public services gives rise to a number of issues which individual projects must address (see Brealey et al., 1997, Grout, 1997 and Hall, 1998).

1. *Measurement.* The PFI can only work if outputs and inputs that are to be specified in a contract can be measured accurately. This is problematic for public services because they are often multi-dimensional and quality is difficult to assess. Thus the 'output' of a prison or hospital represents a measurement

challenge. Similarly it is not easy to assess the quality of the asset created (as distinct from the service that it creates). For example, can the quality of a road be measured easily?

2. *Incentives.* The most desirable aspect of the PFI is that it introduces private incentives into areas of public service delivery where they did not exist previously. However the extent to which this occurs depends on how well written the terms of the contract are. This may be a function of measurement. For instance a failure to specify that all of the equipment in a privately built and financed hospital must actually work when it is handed over to an NHS Trust would result in a strong incentive for the contractor to economise by not spending money getting the equipment operational.
3. *Public sector comparator.* An important issue in evaluating PFI contract bids is the comparative cost of doing the project within the public sector. Cross-sectoral comparisons pose three issues. First, interest rates used in the private sector are higher than in the public sector because the private sector accounts for risk while the public sector does not – this tends to inflate the financial cost of the private sector even though the cost to society may be the same. Second, private contractors will have to pay some tax on profits which can be recovered from the private sector which inflates their bids relative to the public sector. Third, no accurate public sector comparator may exist for big projects and thus the system may be biased towards PFI solutions to the funding of capital projects.
4. *Risk.* There are a number of different risks associated with PFI projects and these need to be efficiently allocated between the parties. Build risks reflect the risks affecting the costs of building the asset. These may arise because of strikes, technical problems or poor management. Service risks reflect the risks

affecting the cost of operating the asset once it has started to deliver services. These may arise because of fluctuations in the price of materials and labour. Volume risks are a particular service risk relating to the amount of services demanded by the government. These costs may be affected by government actions such as a change to sentencing policy affecting prison occupancy. Residual risk is the risk associated with the terminal value of the asset at the end of the contract. As physical asset lives are longer than financial lives fluctuations in the terminal value of the asset may significantly effect the price of a PFI contract.

5. *Flexibility.* The major disadvantage of PFI contracts is their relative inflexibility. This poses a government with the problem that it will find it expensive to break PFI contracts if they subsequently prove to not be meeting social needs. Thus private prisons and hospitals with PFI contracts can be shut down only if significant compensation is paid. It may also be difficult to renegotiate service delivery terms. Both the private sector and the government face potential hold up problems where one party can take advantage of changing circumstances to increase the cost to the other party if situations arise which are not specified carefully in the original contract.
  
6. *Mortgaging the future.* While a major advantage of the PFI is that it allows the fiscal deficit implications of large infrastructure projects to be smoothed this comes at the cost of transferring claims onto future governments. While the current total value of these claims in the UK is currently only 0.5% of total government expenditure on PFI projects the figure is nearer 10% for the Transport budget. What is an acceptable level of PFI commitments? It is

clearly an important political issue as to how much future budgets should be pre-allocated by earlier administrations.<sup>13</sup>

## Section 5: The Experience of the PFI

In this section we attempt to draw together some of the main observations to arise from the PFI programme as a whole before looking at five projects in more detail in the next section. A detailed list of signed PFI projects (to mid-1999) is given in Appendix 1.

### 5. 1 Positive Experiences

1. *The finance constraint has been lifted.* The PFI has been successful in attracting significant amounts of private sector capital spending. While the overall figures show that PFI expenditure by the private sector is ahead of PFI payments by the government it is possible to identify several large projects that probably would have been seriously delayed if they had not been financed by the PFI. These include the Channel Tunnel Railways Link and the Skye Bridge.<sup>14</sup> The PFI seems to be well suited to handling the high up-front capital costs of transport projects that yield extended streams of benefits. These projects would otherwise have absorbed a large percentage of their relevant budgets while they were being built if they had been conventionally financed.

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<sup>13</sup> There has been an ongoing debate about how PFI projects should be accounted for government budgets. The Accounting Standards Board (ASB) accounting standards only apply to the private sector but in 1997 the government announced it would comply with ASB's standard for PFI accounting when it was issued. The ASB ruling was that PFI payments need not be capitalised if it could be established that substantial risk in the capital supplying the service lay with the private sector. If this could not be established or if the contract looks too much like a lease it should appear in the accounts at its full NPV or net present value (see 'PFI accounting amendment goes ahead', *Accountancy International*, October, 1998 and Nicholas Timmins, 'Agreement reached on balance sheet regulations', *Financial Times*, 25 June 1999, p.10).

<sup>14</sup> See NAO (1997a).

2. *The Private Sector has responded enthusiastically to the PFI.* As experience with the PFI process has grown private contractors have come forward in order to provide services to the government. These companies have included significant numbers of foreign companies who can bring new ideas and technology into the UK public sector.
3. *Innovation has been stimulated.* Private sector bidders have innovated substantially in the types of contracts that they are prepared to offer and in the physical assets that have been installed. The NAO (1997c) noted the innovation in design and operation of prisons which was contained in the winning bidders plans for the new Fazakerley and Bridgend prisons. There have also been financial innovations with development of extended maturity bank loans for PFI projects and uninsured PFI bond issues.<sup>15</sup>

## 5.2 Negative Experiences

1. *The bidding process under PFI can be very lengthy.* Up to two years is required from the initial assessment within the public sector phase to the signing of the contract. This is because the process of inviting, preparing, assessing and refining bids and negotiating contracts is complex and procedural. This process certainly delayed the initial flow of signed contracts (see Cutler, 1997 and Gaffney and Pollock, 1999, for experience in the NHS). A survey of investors and non-investors in urban regeneration (Royal Institution of Chartered Surveyors, 1998) revealed that the main weaknesses of the PFI were that it was speculative, time consuming and overly bureaucratic and that too high a risk was been passed over to the private sector.

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<sup>15</sup> A. Warner, 'PFI spotting: the PPP track', *The Banker*, Volume 148, Issue 871, September 1998.

2. *The bidding costs are high.* The detailed and lengthy nature of the bidding process naturally implies an increased transaction costs under the PFI (Hewitt, 1997). Bidding costs can be substantial for each bidder, initial bids may cost £0.5m per bidder to prepare, whereas final bid costs for winning hospital building project may total £3m (Kerr, 1998). Wilkins (1998) estimates the tendering costs for all PFI projects in the pipeline in 1998 may finally total £500m. These costs are eventually reflected in the cost of contracts signed and are significant for most projects.
  
3. *There are often only a small number of bidders.* The statistics on which companies are actually involved in PFI deals reveal that a small number of firms act as legal advisors, financial advisors, contractors, funders, technical advisors, property advisors and facilities managers to PFI projects.<sup>16</sup> This has given rise to the suspicion that competition is much more apparent than real in the bidding process. On large individual projects (such as to build a hospital) there may, even initially, be only two or three serious bidders (e.g. for the Dartford and Gravesham Hospital (NAO, 1999b) there was only one bidder at the final bid stage).
  
4. *Cost overruns can be substantial.* There is often a considerable scope for cost inflation through the bidding process. The initial evaluation of the viability of PFI funding may be based on calculations which are massively exceeded by the final contract stage. Even after the contract has been signed contract terms may leave much of the cost risk with the government leading to considerable scope for cost inflation. The initial project to computerise payments at Post Offices (a £1.5bn project dating from 1996) has now been partially abandoned

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<sup>16</sup> For details of the most successful firms involved in the PFI see 'The PFI Report Database: leading *The PFI Report*, November, p.18.

at a cost of £620-940m to the government<sup>17</sup>. British Medical Association (1997) found that of 14 prioritised hospital schemes capital costs had already increased 72% by the tender stage.

5. *PFI contracts often have questionable risk properties.* On the one hand it is not clear to what extent the government can shift risk on to the private sector given the fact that its policies can affect the returns to contractors. Thus the government may have ended up paying for the high price of financing investments which its actions make more risky. In this case it may be sub-optimal for the private sector to bear the risk. On the other hand it may have proved too easy for the private sector to argue that it needed to be compensated for potential risks at the same time as ensuring that those risks remained with the government. The private sector's relative advantage in risk management may have facilitated this.

### 5.3 Overall opinions of the PFI

The government view of the PFI since 1992 has been extremely positive. This is striking because there have been high profile problems with individual projects (such as the Skye Bridge) and there have been a series of reviews of the PFI under both Conservative and Labour administrations. Yet the view taken has been to streamline the process and to expand its size and scope. The willingness of the Labour administration to embrace such 'privatisation' of public services can be seen in the wider context of its willingness to accept most of the pro-market policies of the previous Conservative administration.

One obvious explanation of this government enthusiasm for the PFI stems from the experience under the previous system of government procurement. In 1992 an

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<sup>17</sup> Nicholas Timmins, 'An explosive mixture', *Financial Times*, 27 July 1999, p.23.

National Audit Office (NAO, 1992a) report into the price of road contracts showed that the Department of Transport was paying an average of 28 per cent more for roads than the price originally agreed. A major problem was the unwillingness of the Department to transfer project risks to the contractor – something which the PFI aims to do. The National Audit Office also unearthed problems with contracting out by the Ministry of Defence in 1992 (NAO, 1992b). The Ministry was accused of failing to keep records over the 13 years of the contracting out process and of not having the expertise to assess contractors' bids. It seems that there were serious problems with government procurement *before* the PFI which put isolated problems with the PFI in context.

Unions have been critical of the PFI. In 1996 the public sector trade union, Unison, called on Scottish councils to boycott the PFI because it was a way of making 'cash strapped councils open up to public services for exploitation and commercial gain' (See Kerr, 1998). The 1998 Trade Union Congress backed a motion against the PFI and to reinstate 'proper capital funding to ensure the future infrastructure of the public services in a way which does not damage jobs and services' after the GMB union changed its previous policy of supporting the PFI.<sup>18</sup> The British Medical Association (the Doctors' union) recently stepped up its opposition to the PFI in the NHS following evidence that PFI schemes are costing much more than traditional schemes.<sup>19</sup>

The National Audit Office has completed a number of assessments of the value for money of large PFI projects. On the basis of this on-going experience NAO (1999a) highlights four key aspects of successful PFI projects: clear objectives; application of proper procurement processes; getting high quality bids; and

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<sup>18</sup> 'PFI gets the thumbs down from trade unions', *Supply Management*, Volume 3, Issue 19, 24 September 1998.

<sup>19</sup> Nicholas Timmins, 'Health service medical association to step up opposition to PFI', *Financial Times*, 5 July 1999, p.8.

ensuring that the final deal makes sense, if not it should be dropped or re-tendered. The results of ten NAO reports are summarised in Table 3. They reveal that the planning of the PFI project within the government authority involved was only patchily successful often resulting in long delays. The process of soliciting bids and specifying the contract was similarly mixed. In general the departments involved selected the best available deal. Finally, in several cases there remains considerable doubt as to whether the final contract actually represented value for money relative to a conventionally funded scheme. Overall the picture is of mixed success. In the next section we examine five of the above schemes in more detail.

## Section 6: Case Studies of PFI Projects

### 6.1 The Skye Bridge (NAO, 1997a)

This project involved the building of a toll bridge crossing to the Island of Skye off the Scottish coast to solve the problem of congestion and delays associated with the existing ferry service. The project needed to take account of the sensitivity of the environment, the cost of the existing ferry crossing and value for money. The winning consortium – Skye Bridge Limited – was a joint venture between Miller Civil Engineering, Dyckerhoff and Widman AG and Bank of America Financial Corporation. The result was a bridge which opened in 1995 with charges of £5.40 for a single car trip in high season, £4.40 in low season (though tickets of ten averaging £2.51 could be purchased. This compared to £1 for the Dartford Bridge and £3.90 return for the Severn Bridge.

The Scottish Office Development Department first advertised the competition to design, build, finance and operate the Skye Bridge in October 1989 (before the formal start of the PFI). There were six initial bidders with ten designs, three preferred bidders were chosen and two submitted qualifying bids. The contract

was awarded in April 1991. The department did not assess a public sector comparator because they had no intention of funding the project except through private finance. The nature of the original contract was that the company is allowed to recover a fixed discounted sum of £24m from users before the contract is terminated (over a maximum of 27 year period) subject to increasing the price by a maximum of 30% in real terms.

The bridge was completed after a local public enquiry which resulted in delays and design changes costing £3.8m (to protect a local otter population). The total cost of project was £39m (constant 1991 prices discounted at 6%):

paid by users of the bridge; £12m was paid to Skye Bridge Limited by the Department and £3m was the direct cost of advice and staff costs of the Department. The out-turn Departmental contribution to Skye Bridge Limited was 48% higher than had originally been expected due to compensation for delays and extra costs.

The NAO identified gains to the users from relatively low tolls (all but one of the categories of fare were lower in real terms than with the ferry), improved reliability and complete elimination of charges when the contract terminates (expected to be after 14-18 years). The Department gained by reducing its peak financing requirements and by transferring risks in building and operation to the developer. The NAO's advisors were satisfied that the project finance terms obtained by the developer were competitive (see Table 4 for these).

The tolls for the Skye Bridge have proved very controversial. In 1997 the Secretary of State for Scotland announced that the tolls would be cut by up to 50% with the reductions being financed by the taxpayer. This is estimated to cost the

government another £3m. It now appears that the PFI has just proved to be an expensive way to borrow more for a public project.<sup>20</sup>

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<sup>20</sup> James Buxton, 'Skye bridge toll cuts will be subsidised', *Financial Times*, 5 July 1997, p.4. and Nicholas Timmins, 'The Pounds 84bn question', *Financial Times*, 15 December 1999, p.20.

## 6.2 The Contributions Agency contract to develop and operate the National Insurance Recording System (NAO, 1997b)

This project was to replace the computerised National Insurance records held by the Contributions Agency by April 1997 at which time new and more complex Pension arrangements were due to come into effect. The NIRS-2 project as it was known became a PFI project in July 1994 and the contract was awarded to Andersen Consulting in April 1995. The contract involved replacing the previous NIRS-1 system, implementing new procedures before April 1997, converting all existing data to the new system, training users and ensuring backup procedures existed.

This project became part of the PFI in spite of warnings that inviting bids would add 6 months to the delivery date and that private sector computer projects had a history of overrunning. In the event the bid process was completed quickly with expressions of interest from 34 companies. Andersen Consulting made the cheapest bid by some margin – a mere £45m against rival bids of £125m and £146m. The nature of the contract is a 7-year contract for the provision of 15 different types of transaction. At the end of the contract there may be a new competition with a compensation payment due from another supplier taking over the existing system; if the Agency decides it no longer needs the system it will compensate the contractor directly.

The initial cost of the procurement exercise was estimated at £473,000 plus external advisors fees, the amount actually expended was £1.23m in 1994-95 including £325,000 of advisors fees. By the time of the NAO report the project had not been completed. The NAO was critical of the lack of detail in the contract terms over service quality and noted that most of the risk of delays or non-

completion lay with the Agency. However the contract does not pay anything to Andersen Consulting until the system is working. The NAO described the price paid as ‘strikingly good value’ because the Andersen bid was so low and because the cost of a public sector comparator was estimated at £329m.

The reason for the underbidding appears to have been Andersen’s intention to build a reputation which might gain them other contracts – their valuation of this

<sup>21</sup> Andersen had paid £3.1m in compensation by mid 1998 and their total costs have been estimated at £135m by mid 1999. The contract has now been delivered two years late.<sup>22</sup> The government has announced that such under bidding would not be accepted in the future, while an NAO spokesman recently declared that given the delays NISR-2 ‘can scarcely be regarded as a successful project.’<sup>23</sup>

### 6.3 PFI contracts for Bridgend and Fazakerley Prisons (NAO, 1997c)

The Prison Service sought private finance for two facilities: an 800 place prison at Bridgend, South Wales and a 600 place prison at Fazakerley, Merseyside. These were to be designed to cater for prisoners on remand, awaiting sentence, serving short sentences or awaiting transfer to another prison (Category B prisoners) and also for a small number of Category A (maximum security) prisoners. The contracts were awarded in 1995 after a 17-month process to Securicor/Costain for Bridgend and Group 4/Tarmac for Fazakerley.

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<sup>21</sup> Nicholas Timmins, ‘Andersen takes the pain for long-term gain’, *Financial Times*, 3 June 1997, p.11.

<sup>22</sup> Nicholas Timmins, ‘An explosive mixture: Britain’s attempts to involve the private sector in designing and operating technology for public services have resulted in some costly failures.’, *Financial Times*, 22 July 1999, p.23.

<sup>23</sup> Nicholas Timmins, ‘Companies warned over public sector IT contracts’ *Financial Times*, 4 November 1999, p.3.

The contracts are for the design, build, finance and maintenance of the prisons. Construction performance will be monitored by an engineering firm while each prison will have a Prison Services' Controller who will monitor service provision against the contract, with financial penalties for lapses. There were 10 initial pre-qualification bidders, 6 were invited to tender for the two contracts and 5 submitted bids for the both prisons. Three of the five bidders had overseas partners in their consortia. The Prison Service decided against awarding both contracts to the same bidder even though the Securicor/Costain bid was the lowest combined bid by 10%. They did this in order to stimulate competition in the sector and because of worries about the consortia's ability to handle two prison projects at once.

The contract transferred the risk of time and cost overruns to the contractors. The contract payment mechanism gives no payment until the prisons are operational. The contractors are paid for availability rather than actual usage. The contract price contains a fixed element relating to construction costs, some operating costs (non-salary costs) are fixed in real terms and further costs (relating to salaries) are indexed to 2% above the RPI. The contract runs for 25 years. The contract allows for some risk sharing of cost increases beyond the contractors' control, some benefit sharing if contractors profits are higher than anticipated and there are additional fees payable if the specified number of prisoners is passed. An identified shortcoming in the pricing is a lack of benchmarking of costs against other prisons at periodic intervals.

The NAO estimated that the prison contracts represented good value for money. Bridgend is expected to cost £266m over its contract life (against £319m in the public sector); Fazakerley is expected to cost £247m (against £248m). The contract letting costs were £1.55m (+140% over the original estimate). There has been significant risk transfer, additional funding was secured and there was

innovation in building, design and operational methods. The financing arrangements for the projects are in Table 5. The prisons are now operational having been built 45% faster than the average for public prison projects.

#### 6.4 The first four design, build, finance and operate road schemes (NAO, 1998)

The Highways Agency sought and negotiated contracts for 4 road schemes over the period December 1993 to March 1996. The road contracts were awarded for 30 years and involve the government paying a shadow toll based on actual road use according to the number of cars and other vehicles using the roads. Table 6 details the road schemes and gives the estimated contract price and the price of a traditionally financed public road. The public sector comparator cost is the sum of the NPV (net present value) of the construction cost plus the operation and maintenance costs plus the NPV of the risk transferred to the consortia.

Table 6 shows that all but one of the roads is expected to yield considerable benefits.

The NAO was critical of the cost of the bidding process. The process was delayed due to the complex information required. The bidding costs were reckoned to be over £11m for the four winning bidders with substantial costs being incurred by the unsuccessful short-listed bidders. The NAO pointed out that the wrong discount rate had been used in comparing the bidders prices with the public sector comparator cost – if the correct figure had been used the A419/A417 assessment would have yielded negative benefits for a PFI project.

The operation and maintenance of each road is monitored by a Department Representative. The Highway Agency can terminate the contract if performance criteria are not met. The roads must revert to the public sector in good condition. The residual life of the road is 10 years for 85% of the road pavement on handback. Payments are based on complex audits of traffic flows and there are clauses which allow for additional payments if the road is upgraded.

## 6.5 The Dartford and Gravesham Hospital (NAO, 1999b)

This was the first major hospital PFI deal and involved a hospital Trust looking for a 400 in-patient bed hospital. The outline business case was made in 1995 and the deal was signed in July 1997. The hospital should be operational in Autumn 2000 with a construction time of 44 months as compared to an average 66 months for publicly built hospitals. The project has a NPV of £177m.

Under the terms of the deal the contractor, Pentland, will receive an inflation indexed fee of £1.32m per month (1996 prices) made up an availability payment and a performance related element. Pentland will be responsible for seven facilities management services including building management and maintenance and catering while the NHS Trust will be responsible for clinical services. The contract will last 25 years from the date of opening. Pentland bears the construction risk, but the cost of legislative changes are shared with the Trust.

The bidding process involved 13 initial expressions of interest and 4 indicative bids. Two final bidders were selected but one dropped out and did not submit a final bid. Pentland's final bid was 33% higher than its indicative bid reflecting changes made by Pentland and by the Trust. The NAO noted significant benchmarking both by the Trust in its evaluation of the only final bid it received and in the terms of the final contract which allow for Pentland to apply for performance related fee increases subject to Pentland carrying out benchmarking against costs in other hospitals.

The final savings resulting from the project were estimated to be around 3% relative to traditional procurement (or £5m). This small expected saving means that the final cost could turn out to be higher than under traditional procurement.

The Trust bears the volume risk. The cost of external advice to the Trust was substantial at £2.8m, though much of this reflected the fact that this was the first major hospital deal under the PFI.

## Section 7: Conclusions

There has undoubtedly been a huge transfer of control of the financing, building, operation and management of investment projects from the public to the private sectors in the UK since 1979. This has occurred without a noticeable reduction in the quantity and quality of the investment or of the associated services. It is difficult to argue against the observation that the privatisation of utilities has resulted in very considerable benefits for customers, shareholders, the government and in many cases workers. The investment programmes of the utilities have continued to be financed and there has been significant new entry and innovation in most sectors. The PFI attempted to extend the principles of privatisation to services which continue to be purchased by the government.

The assessment of the PFI is more difficult than that for privatisation. This is because the PFI is made up many different deals, most of which are at early stages and many of which have involved significant learning curves for the civil servants and contractors involved.<sup>24</sup> The NAO assessment of 10 major projects (see Table 3) suggests that the PFI can yield big savings and most usually yield some, however some deals have been bad value. The PFI is heavily concentrated in a few government departments who enjoy differing amounts of success with it. The NHS seems to be struggling to make it work consistently while the Prison Service and the Highway Agency seem to have mastered the process.

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<sup>24</sup> House of Commons Committee of Public Accounts (1999).

At its best however the PFI provides finance for cash-strapped departments, saves time and money, stimulates innovation and efficiently allocates risk. At its worst it leads to unreasonable future claims, costs money and time and ineffectively and expensively allocates risk. It remains to be seen how the balance between the best and the worst scenarios will alter over time as experience with the PFI grows and as projects mature. As public sector comparators cease to be available it will prove more difficult to assess the comment that ‘many of the assumed benefits of the PFI would appear to be available to better managed and controlled conventional procurement’.<sup>25</sup>

The PFI raises a number of issues which are still up for discussion. First, what improvements are possible to the system? Improved project measurement and specification and a standardising of the process will yield significant benefits. Second, to what extent will claims set up under the PFI prove a burden to future generations? The issues of a lack of bidders, long contracts which are costly to alter and mortgaged budgets may prove bigger issues in the future than they are at the moment.<sup>26</sup> Finally, to what extent can the lessons of the PFI be transferred to the developing countries? If relatively well-trained British civil servants and a relatively transparent public procurement system struggle with the PFI, it seems unlikely to be a good option in countries where the PFI may involve increased scope for corruption and expensive contracting and processing mistakes by civil servants.

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<sup>25</sup> House of Commons Treasury Committee (1996).

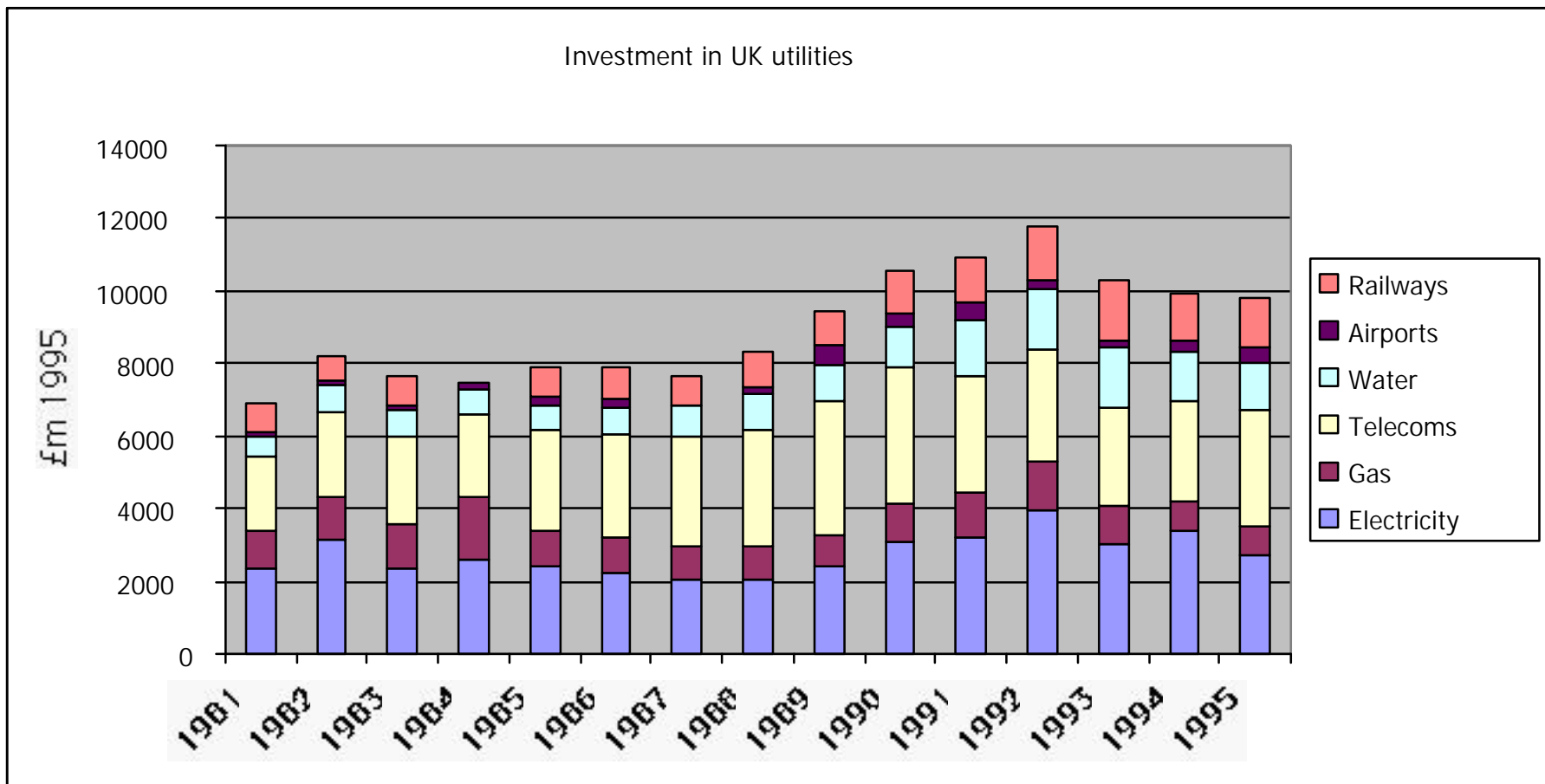
<sup>26</sup> See Heald and Geaghan (1997).

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**Chart 1**

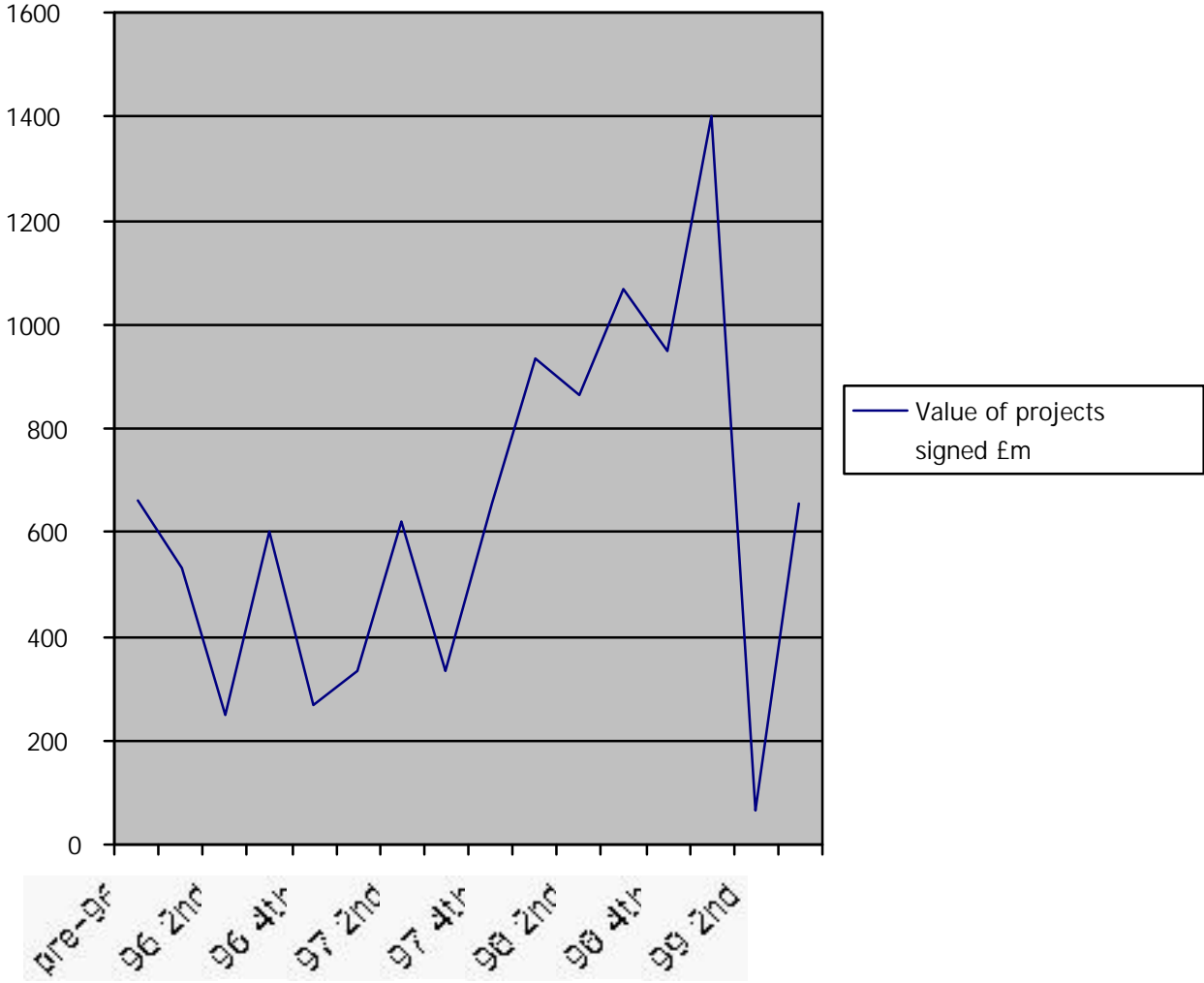
Sources: ONS Business Monitor PA 1002; Company Accounts; DETR; CRI (1996).

Notes: Electricity, Gas, Water = Census of Production Industry; Airports = BAA plc; Telecoms = BT and Mercury; Railways = DETR figures.

Current prices deflated by GDFC deflator in ONS *UK National Accounts*.

Electricity, Gas and Water calendar years; Airports, Telecoms, Railways financial years.

**Figure 1**  
**Value of PFI projects signed £m**



**Table 1 – Gearing Ratios\* in Selected Privatised Firms**

<i>Company</i>	<i>Gearing Ratio - before privatisation 1980</i>	<i>Gearing Ratio – after privatisation 1999</i>
Electricity - CEGB	17.9 (1982)	57.4 (PowerGen) 57.0 (National Grid 1998)
British Telecom	50.0 (1983)	17.0
British Rail	50.1	25.4 (Railtrack)
Anglian Water	92.3	44.7
British Gas	3.6 (1982)	0.7 (Centrica 1997)
British Airports Authority	16.7	32.0 (1998)

\*Gearing Ratio = Long term borrowings / Total assets less current liabilities.

Sources: Group Accounts.

**Table 2 – Signed PFI Deals (by Central Government) to Q3 1999.**

Department	Signed Projects	
	Number	Value (£m)
Defence	25	1185
Department of Social Security	3	670
Education and Employment	22	533.5
Environment, Transport and Regions	53	10376.8
Health	57	2098.3
Home Office	21	747
Other	20	606
Totals	201	16236.6

Source: *PFI Report*, November 1999, p.19.

**Table 3 – The summary NAO evaluation of 10 major PFI projects**

	<i>Skye Bridge</i>	<i>National Insurance Computer</i>	<i>Four road schemes</i>	<i>Immigration and Nationality computer</i>	<i>M74 road scheme</i>	<i>The privatisation of social security offices</i>	<i>Dartford and Gravesham Hospital</i>	<i>RAF non-combat vehicles</i>	<i>DSS Newcastle Estate</i>	<i>Prisons</i>
<b>Planning</b>	Good	Bad	Good	Good	Good	Good	Poor	Bad	Bad	Good
<i>Process</i>	Probably all right	Good	Probably all right	Very good	Probably all right	Good	Poor	Bad	Bad	Good
<i>Best deal</i>	Yes	Very good	Yes	Yes	Yes	Yes	Yes	Probably	Yes	Probably
<i>Value for money</i>	Very Dubious	Probably	Probably	Probably	Yes	Yes	Probably	Yes	Dubious	Yes

Source: *Financial Times* from NAO.<sup>27</sup>

<sup>27</sup> Nicholas Timmins, 'The £84bn question', *Financial Times*, 15 December 1999, p.20.

**Table 4 – How the Skye Bridge was financed**

<i>Type of finance</i>	<i>Amount £m</i>	<i>Interest rate</i>	<i>Term</i>
Commercial bank debt	Up to 6.0	LIBOR + 1.25%	14 years
European Investment Bank loan	13.0	Fixed at 10%	18 years, including a grace period of 7 years
Index-linked loan stock	7.5	RPI + 6%	20 years including a 14- years grace period
Sponsored capital – equity and equity-like index linked convertible loan stock	0.5	Estimated at 26.4% * (18.4% in real terms)	Estimated at 18 years *

\*Dependent upon the financial performance of Skye Bridge Limited and not fixed; actual returns depend on a range of variables, including actual traffic flows, inflation, etc.

Source: NAO (1997a).

**Table 5 – The Financing of the Bridgend and Fazakerley Prisons**

<i>Type of finance</i>	<i>Amount £m</i>	<i>Interest rate</i>	<i>Term</i>
<i>Bridgend</i>			
Base Loan Facility	72.0	9.6235% to date of operation 9.4735% first five years 9.5735% for remainder	15/11/2013
Standby loan commitments	5.0	LIBOR+1.65% until operational LIBOR+1.5% for first five years LIBOR+1.6% for remainder	15/11/2013
Equity/subordinated debt	15.6	Projected 19.4% after tax	
<i>Fazakerley</i>			
Base Loan Facility	92.5	£82.6m at 9.0945% until operational 9.5945% until 15/12/05 LIBOR+1.5% thereafter Balance LIBOR+1% until operational thereafter LIBOR+1%	15/12/2015
Working capital facility	3.0	LIBOR+1.5%	15/12/2015
Equity/subordinated debt	8.1	Projected 12.8% after tax	

Source: NAO (1997c).

## **Table 6 – The first four PFI roads**

### **M1-A1 (Yorkshire) Link**

type	ranges from 2 to 5 lane dual carriageways
length	totals 30 km + 22 km side roads
expected NPV of shadow tolls	£232m (ex. VAT)
public sector comparator	£344m (ex. VAT)

### **A1(M) Motorway Alenbury to Peterborough**

type	all motorway
length	21 km of motorway
expected NPV of shadow tolls	£154m (ex. VAT)
public sector comparator	£204m (ex. VAT)

### **A419/A417 Swindon to Gloucester**

type	single/dual carriageway
length	52 km
expected NPV of shadow tolls	£112m (ex. VAT)
public sector comparator	£123m (ex. VAT)

### **A69 Carlisle - Newcastle DBFO project road**

type	single/dual carriageway
length	84.3 km with new bypass of 3.2 km
expected NPV of shadow tolls	£62m (ex. VAT)
public sector comparator	£57m (ex. VAT)

Source: NAO (1998).

## Appendix 1 – List of major PFI projects to mid-1999.

Department	PFI Project	Contractor	Date signed	Capital value £
DCMS	British Library Bibliography		1996	22
DCMS	Royal Armouries Museum, Leeds		1996	42
Defence	Armed Forces Personnel Administration Agency	EDS	Nov-97	150
Defence	Army White Fleet Germany	Ryder	Feb-96	52
Defence	Attack Helicopters - Apache Simulator Training	McDonnell Douglas / GKN	Feb-98	250
Defence	Cosford and Shawbury - Accommodation		(1-)4/99	15
Defence	Defence Fixed Telecommunications System	Inca	Jul-97	70
Defence	Fire Fighting Training for the Royal Navy		Apr-99	20
Defence	Hawk Synthetic Training Facility	Reflectone	Dec-97	10
Defence	HMS Nelson	Amey FM	Sep-96	20
Defence	Joint Services Command and Staff College		(10-)12/1998	88
Defence	Lyneham Sewage Treatment	Wessex Water	Aug-98	5
Defence	Material Handling Equipment	Cowie Interleasing plc	Sep-96	18
Defence	Medium Support Helicopter Aircrew Training Facility		Oct-97	100
Defence	Naval Recruitment and Training Agency	Flagship	Aug-96	100
Defence	RAF Fylingdalesdales (Power Station)		(1-)4/99	6
Defence	RAF Light Aircraft - Bulldog Replacement		Oct-97	30
Defence	RAF Lossiemouth (Family Quarters)		(10-)12/98	34
Defence	RAF White Fleet	LEX Service	Jul-96	35
Defence	RNAS Yeovilton (Family Quarters)		Aug-98	8
Defence	Services Defence Helicopter Flying School		1996	118
Defence	TAFMIS	EDS Defence	Aug-96	14
Defence	Tidworth Water and Sewage	Thames Water	Feb-98	10
Defence	Tornado Simulators		(5-)8/99	77
DfEE	Clarendon College, Nottingham	Morrison	Sep-97	16.5
DfEE	Dorset CC - Colfox School		before 2/98	12
DfEE	Dudley MBC - Schools IT Network		(1-)4/99	10
DfEE	ESCOM (Employment Service Communications & Guidance System)	Siemens	Feb-97	5
DfEE	Greenwich University		Oct-97	11
DfEE	Hillingdon School (Barnhill Community High)		(1-)4/99	25
DfEE	King's College London & UMOs	European Land and Property Corporation	Dec-97	142
DfEE	LB of Enfield -School		(1-)4/99	25
DfEE	Leeds LEA - Cardinal Heenan High School		(5-)8/99	10
DfEE	Portsmouth CC - Secondary School		(1-)4/99	14
DfEE	University College London - Cruciform		Dec-97	31
DfEE	University of Brighton (2 projects)		(5-)8/99	14
DSS	Benefit Payments - BAPOCL (withdrawn?)	Pathway (ICL)	May-96	1400 total
DSS	DSS Longbenton Offices	Newcastle Estates Partnership	Jan-98	160
DSS	NIRS	Andersen Consulting	?	150
DSS	PRIME	Partnership Property Management	Apr-98	4000
Environment	Brent Council - Chalkhill Estate		(10-)12/98	100
Environment	Brent Street Lighting		(1-)4/99	10

Environment	Docklands Exhibition Centre	Light Rail Group	Sep-96	100 + total
Environment	Docklands Light Railway		1995	200
Environment	Harrow Office IT		?	8.5
Environment	Hereford & Worcester Waste Management		(1-)4/99	70
Environment	Isle of Wight Waste Management	Island Waste Services	Oct-97	13
Environment	Islington Depot and Vehicle Services		(10-)12/98	29
Environment	Kirklees Waste Management	United Waste Services	Mar-98	41.6
Environment	Lambeth Contract Services	Lambeth Service Team	Oct-97	350
Environment	Millenium Tower		?	?
Environment	North East Derbyshire DC -Property Management		before 2/98	?
Environment	North Wiltshire DC-Property Rationalisation		(1-)4/99	10
Environment	QE2 Conference Centre Catering Project		Feb-97	20
Environment	Sheffield CC- Office Accommodation		(5-)8/99	110
Environment	South Gloucester Council - Integrated Waste		(1-)4/99	?
Environment	Surrey CC - Lifestyle Centre		(1-)4/99	16
Environment	West Silvertown Urban Village	East Thames Housing Group	before 10/97	100
Foreign & Commonwealth Health	Berlin Embassy		(10-)12/98	25
Health	Queen's Medical Centre Nottingham University NHS Trust - IT		(5-)8/99	18.5
Health	Queen's Medical Centre NHS Trust, Nottingham		(5-)8/99	11
Health	Lancaster Priority Services NHS Trust		(5-)8/99	6.5
Health	Herefor Hospitals NHS Trust		(5-)8/99	62
Health	Black Country Mental health		(10-)12/98	6
Health	Bromley Healthcare		(10)12/98	118
Health	Calderdale		Jul-98	63
Health	Carlisle	Health Management Group	Nov-97	60
Health	Chelsea and Westminster Healthcare NHS Trust	Kensington Housing Trust	Mar-98	7
Health	Chelsea and Westminster Healthcare NHS Trust		(10)12/98	8.5
Health	D'ford & Gr'sham		before 01/03/1997	150
Health (W)	Glan Hafren NHS Trust - Chepstow Community Hospital	KINTRA	Feb-98	10
Health	Leeds Community & Mental Health Services Teaching NHS Trust - 'Omnibus' Project	Revival Properties Ltd	Sep-98	40
Health	Mayday Healthcare		1997	8.5
Health	NHS Strategic Tracing Service		(1-)4/99	12
Health	Norfolk and Norwich Hospital	Octagon Healthcare	1997	193
Health	North Durham Acute Hospitals NHS Trust	Consort Healthcare	mid-1997	96
Health	North West London Hospitals NHS Trust		(1-)4/99	18
Health	Northallerton Health Services NHS Trust	Primary medical Property Investments	1997	8.5
Health	Northwick Park & St. Mark's Hospital NHS Trust	London Financial Group led consortium	?	25
Health	Northwick Park & St. Mark's Hospital NHS Trust: Maternity Unit		?	21
Health	Nottingham Health Authority	Mill Group	Nov-97	15
Health	Oxfordshire Mental Health NHS Trust		1998	18
Health	Oxleas		1997	45
Health	Queen Elisabeth Hospital, Greenwich		?	84

Health	Queen Mary's Sidcup NHS Trust		Sep-97	5.7
Health	South Buckinghamshire		Dec-97	29
Health	South Durham NHS Trust - Bishop Auckland Hospital		(5-)8/99	41
Health	South Manchester University Hospital		Sep-98	100
Health	Sussex Weald & Downs NHS Trust		(5-)8/99	23
Health	St. Peter's Hospital NHS Trust		(10)12/98	5
Health	Stockport Healthcare NHS Trust		Aug-98	8
Health	Surrey County Council - Residential Homes		Mar-98	29
Health	Thames Gateway NHS Trust Acute Psychiatric Unit		?	60
Health	University Hospital Wales - Cardiff	Britannia Impreglio/APCOA	Jun-96	20
Health	Wellhouse NHS Trust - Barnet Hospital		(1-)4/99	5
Health	Westminster CC - Residential Home		May-98	5 +
Health	Worcester Royal Infirmary NHS Trust		(1-)4/99	80
Health	Wythenshawe Hospital - South Manchester		Aug-98	70
MAFF	Broadland Flood Alleviation		(5-)8/99	135
Home Office	Agecroft Prison, Salford	UK Detention Services	Jul-98	74
Home Office (W)	Ammanford Police Station		(10)12/98	25
Home Office	Bridgend Prison	Securicor Custodial Services	1996	74
Home Office	British Transport Police (London) HQ		(1-)4/99	50
Home Office	Fazakerley Prison/ HMP Arcourse		1996	88 (?)
Home Office	Greater Manchester Fire Station		before 01/06/1997	5
Home Office	Home Office Pay Service		(10-)12/98	60
Home Office	IND: Gatwick		?	12
Home Office	IND: IT	Siemens Business Services	Apr-96	41
Home Office	Lowdham Grange Prison	Premier Prison Services	Jan-97	32
Home Office	Norfolk Police Authority		(10)12/98	26
Home Office	Police Authority Divisional Headquarters -Derby		Dec-97	16
Home Office	Prison Service Agency - Telecoms	Racal Managed Services	before 01/03/1997	6
Home Office	Prisons Energy		(10)12/98	36
Home Office	Pucklechurch Prison		(10)12/98	30
Home Office	STC Cookham Wood	Tarmac / Rebound	Mar-97	10
Home Office	STC Hassockfields - Medomsley		(10)12/98	5
Home Office	STC Rainsbrook Onley	Group 4 / Tarmac	Jul-98	10
Home Office	Thames Valley Police Southern HQ		1999	30
Home Office	United Kingdom Passport Agency (2 contracts)		Jul-97	15
Home Office	Welsh Office - Osiris (IT)	Siemens Business Services	Jun-96	13
Home Office	West Dorset Divisional Police Headquarters		(10)12/98	15
Home Office	Wiltshire Constabulary. Police Air Support		?	?
Inland Revenue	IR Bootle		(10)12/98	15
Inland Revenue	IR Manchester & Stockport		Feb-97	32
Inland Revenue	IR Office Accommodation, Edinburgh		Oct-97	6
Inland Revenue	IR Office Accommodation - St John's House Boode		?	12
Inland Revenue	Newcastle Estate (L'benton)		?	120
Inland Revenue	Glasgow		Oct-97	10
Lord Chancellor's	Local County Court System - LOCC S	EDS	Sep-96	14
Lord Chancellor's	Magistrates' Courts' Committees (LIBRA)	ICL / Unisys	Dec-98	183

Lord Chancellor's	Resource Accounting - ARAMIS	CSL Group Ltd/Unisys/Deloitte and Touche	Feb-98	30
Lord Chancellor's	Northern Ireland Courts		?	30
MAFF	Broadland Flood Alleviation		1999 (?)	135
NI - Crown Prosecution Service	Northern Ireland Court Service - Belfast		?	35
NI - Education	Dept of Education for NI - Drumglass High School		(5-)8/99	5
Post Office	Pathway (formerly BA/POCI)		(5-)8/99	120
Serious Fraud Office	Docman		Jan-98	15
Trade & Industry	Coal Authority		1996	5 +
Trade & Industry	DTI IT - ELGAR		(1-)4/99	26
Trade & Industry	Engineering and Physical Sciences Research Council		(10)12/98	18
Trade & Industry	RA Strategic Partnership		1999	14
Trade & Industry	National Physical laboratory		(10)12/98	82
Transport	Birmingham Northern Relief Road	Trafalgar House & Tritecna	before 2/98	300
Transport	Channel Tunnel Rail Link			4300
Transport	Croydon Tramlink		1996	200
Transport	Dartford Bridge		1987 (!)	150
Transport	DLR Extension	Tramtrack Corydon Ltd.	Sep-96	200
Transport	Escalators		(1-)4/99	80
Transport	Islington (LA)		1999	22
Transport	Kent IT		1999	7
Transport	Lambeth		1999	10
Transport	LU Power Supply	Powerlink	Aug-98	250
Transport	Luton Airport Parkway		?	20
Transport	Manchester Metrolink	Altram	Apr-97	125
Transport	Midland Metro Line One	Altram	before 3/97	145
Transport	Northern Line Trains		(10)12/98	400
Transport	Oceanic Flight Data Processing System (OFDPS)		before 2/98	30
Transport	Prestige Ticketing- London Underground	Transys	Aug-98	197
Transport	Second Severn Crossing		1995	330
Transport	Tranche 1: A1 (M) Alconbury to Peterborough		before 10/97	128
Transport	Tranche 1: A417/ A419 Swindon to Gloucester		before 10/97	49
Transport	Tranche 1: A69 Newcastle to Carlisle		1996	9.4
Transport	Tranche 1: MI-AI Link Road		before 10/97	214
Transport	Tranche IA. A30/ A35 Exeter to Bere Regis		before 10/97	75.7
Transport	Tranche 1A: A50/ A564 Stoke to Derby Link	UK Highways M 40	before 6/97	20.6
Transport	Tranche 1A: M40 Junctions 1 - 15	Autolink	Oct-96	37.1
Transport	Tranche AI: AI 9 Dishforth to Tyne Tunnel		1996	29.4
Transport (W)	A55 Road		(1-)4/99 (?)	132
Transport	Bute Avenue, Cardiff	Citylink	Apr-98	120

Sources: *PFI Report* and *Private Finance Quarterly*, Summer 1997, pp.41-48.