

PFI and the National Health Service in England

Allyson M Pollock, Professor

David Price, Senior Research Fellow

Queen Mary, University of London

June 2013

Key points

- By April 2011, across the public sector, more than 700 PFI contracts had been signed in the United Kingdom with an estimated capital value of almost £50 billion in England alone and annual repayments estimated at £8 billion for 30 to 60 years.
- PFI has been the dominant form of procurement for large national health service (NHS) projects. More than 90% of the £11.6 billion of capital expenditure contracted to take place under England's hospital-building programme has come through PFI. By April 2009, 101 of the 133 new hospitals built between 1997 and 2008, or under construction, were privately financed.
- PFI costs drive service closures, bed and staff reductions due to the high cost of debt servicing and enormous transfers of resources from patient care to bankers, shareholders and financiers.
- PFI lacks accountability as the contracts are secret and hidden from public view.
- PFI involves a long term, 30 to 60 year, contract between the public and the private sector.
- Sovereign debt is always cheaper than finance borrowed privately for individual investments ('project finance'). Successive governments have argued that the higher cost of private finance reflects risk transfer to the private sector, which generates savings that outweigh the extra cost. However, risk can be transferred to the private sector by using fixed price contracts and public borrowing instead of private finance.
- Although governments justify PFI on cost efficiency grounds, they are usually thought to adopt the policy for fiscal not efficiency reasons. Most PFIs are not included on the public balance sheet and do not count as part of public borrowing totals. New investment can therefore be undertaken without any immediate increase in government spending or debt.
- The implications of manipulating spending figures and public sector debt in this way have serious long term implications.
- PFI simply alters the timing of payments to creditors; it does not eliminate them or bring extra resources. There is no economic case for off-balance sheet treatment.
- PFI borrowing costs are consistently higher than public borrowing costs. In 2002, Audit Scotland reported PFI borrowing rates 2.5% to 4% higher than the rates at which a public authority would have been able to borrow. In a study of the first 12 PFI hospital projects in England, Shaoul et al.

(2008) found private finance costs of about 8% – well in excess of the 4.5% available on public finance at the time.

- The difference between public and project rates of interest increased following the banking crisis. In 2011, the House of Commons Treasury Committee concluded that the cost of capital for a typical PFI project at that time was double the long-term government gilt rate.
- High financing costs include ‘unfair’ rates of return. PFI rates of profit have been shown to be excessive, that is, higher than conventional profitability for equivalent projects. In 2012, the National Audit Office (parliament’s financial watchdog) reported that “the public sector may often be paying more than is necessary for using equity investment”.
- PFI financing costs have recently been implicated in **fraudulent manipulation** of the interbank lending rate, or Libor.
- Many PFI companies avoid taxes by registering off-shore and using transfer pricing. In 2011, the House of Commons Treasury Committee reported a pattern of higher rates of profit and low corporation tax payments by highways PFI projects. In 2012, it was calculated that 91 shareholder companies investing in UK PFI infrastructure funds are located in tax havens and therefore not liable to capital gains tax. The funds had interests in a total of 314 PFI-created assets.
- High interest rates and excess returns affect levels of debt repayment. Cuthbert and Cuthbert calculated annual debt repayment to PFI consortiums between 1.49 and 2.04 times higher than the amount that would have been charged to the UK government if it had borrowed directly for the construction. In 2001, a parliamentary inquiry found that “the government could have secured 71% more investment by borrowing on its own account.”
- There is substantial evidence that value for money assessments have reflected a pro-PFI bias by giving the false impression that PFI projects are less costly than traditional procurement alternatives.
- **The high cost of PFI services and debt repayment has had a serious impact on NHS services by creating an affordability gap.** The first wave of hospital PFI projects was associated with average cuts in bed numbers of around 30 per cent and reductions in staffing.
- **There is a correlation between the presence of large PFI building projects and hospital deficits and reductions in services and staff.**
- The hospital payment system had underfunded 40 PFI hospital by 2005/06
- Annual PFI payments increase year-by-year because they are indexed to inflation. This is exacerbating affordability problems at a time of real term reductions in public expenditure and high inflation.
- The government has activated a bankruptcy and closure regime to deal with the financial crisis among public hospitals but has not sought to renegotiate contracts.
- PFI policy has suffered a lending crisis since the financial crash as the cost of bank borrowing has increased sharply. In 2011, the UK Treasury published proposals to reform PFI by moving to a model in which lending would be secured against user charges like tolls, equivalent to tax-farming, a system of contracting out tax-raising powers to private bodies.

Introduction

The private finance initiative (PFI) is a form of Public Private Partnership (PPP) introduced and used by UK governments since 1992. By April 2011, about 700 PFI contracts had been signed in the United Kingdom with an estimated capital value of almost £50 billion in England alone and annual repayments estimated at £8 billion.

PFI has been the dominant form of procurement for large national health service (NHS) projects. More than 90% of the £11.6 billion of capital expenditure contracted to take place under England's hospital-building programme has come through PFI. By April 2009, 101 of the 133 new hospitals built between 1997 and 2008, or under construction, were privately financed.¹

The policy has been controversial since its inception because of the relatively high cost of private finance compared with government borrowing. Special subsidies and the sale of property have been used to counteract high borrowing costs but the policy has led to affordability problems and service closure from the beginning.

Affordability problems have arisen because individual hospitals have been made responsible for the cost of PFI borrowing but the high costs of debt repayment has not been fully funded by the hospital payment system. As a result, the NHS clinical care budget has had to be redirected from patient care to paying for capital. These payments involve a transfer of wealth from public services to banks and shareholders and equity investors. The problem has been exacerbated by the financial crash and several PFI and non PFI hospitals in England's NHS are now facing bankruptcy and closure.

PFI, despite its scale, remains largely unaccountable. The government has refused in most cases to open PFI contracts to public scrutiny on the ground that they are commercially confidential. The payments are ring fenced and creditors have first call on NHS funds, including funds from other NHS services and non PFI hospitals. The lack of scrutiny and openness with contracts means that project monitoring and evaluation has often been poor or non-existent and even official inquiries, such as those by the National Audit Office, have been hampered by lack of data or its complete absence. As a result, systematic evaluative data is often lacking and researchers have had to rely on case study evidence. Case studies prepared by the present authors and colleagues are listed in appendix 1.

In this briefing we identify the main problems of PFI in the health sector as the transfer of scarce resources out of the system to bankers and shareholders which has resulted in distortion of resource allocation due to affordability problems with meeting annual PFI charges. The PFI policy is driven by government prioritising off balance sheet accounting and seeking to justify the policy with

¹ Department of Health (2008) 'List of new hospital schemes – Prioritised Capital Schemes – updated November 2008'. Available at: http://www.dh.gov.uk/en/Procurementandproposals/Publicprivatepartnership/Privatefinanceinitiative/Newhospitalschemes/index.htm?IdcService=GET_FILE&dID=176731&Rendition=Web. Accessed: 20 March 2009.

biased value for money ('economic') appraisal, high financing costs, and false claims about benefits of private sector efficiency including misleading use of time and cost overrun data in the public sector.

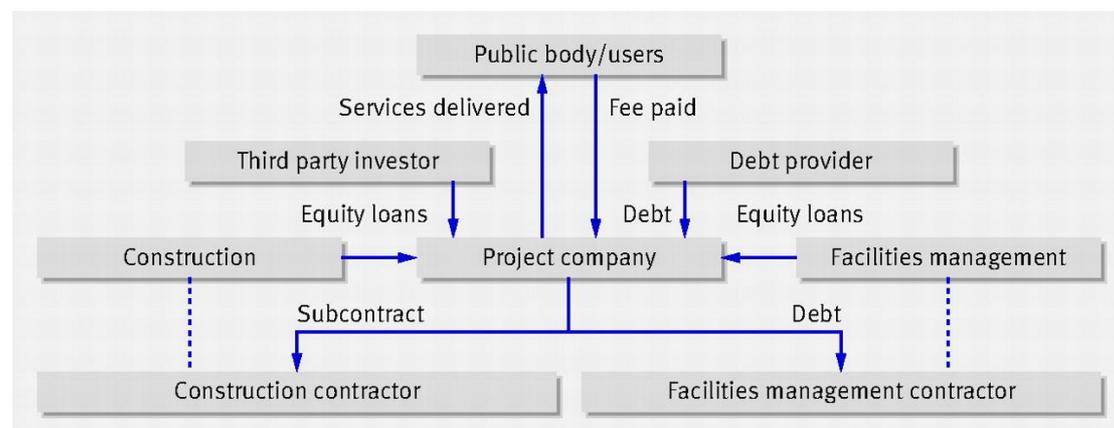
Background

PFI involves a long term, 30 to 60 year, contract between the public and the private sector. Under PFI, a consortium of investment banks, builders, and service contractors raises finance for new infrastructure and designs, builds, and operates the facilities for the public authority.

Two main types of private finance have been used since 1997, when the government passed an act of parliament guaranteeing repayment of the majority of PFI debts. Senior debt is low risk because the government guarantees repayment. It therefore has a relatively low rate of interest. Equity and subordinate debt is not legally guaranteed by the government and is only paid back after senior debtors have been repaid. It carries higher risk of non-payment than senior debt and therefore commands a higher rate of interest. This type of debt acts as a financial buffer by diverting commercial risk from the main source of funding and so reducing the overall cost of finance. Typically, 90% of finance for PFI schemes is low risk senior debt and the remaining 10% is higher risk equity.

A public authority enters into a PFI contract with a 'special purpose vehicle' (SPV) set up by a consortium of financiers, builders and service providers. The SPV is a shell company with no assets of its own. As well as private finance and construction, the consortium usually provides facilities management services such as laundry, maintenance services, catering, and cleaning (Figure 1).

Figure 1 Contractual structure of PFI partnerships



When the new facility is up and running, the public authority pays the SPV an annual performance-linked fee, known as a 'unitary payment'. The unitary payment is made of two elements. The first element is the availability fee, which covers interest and principal payments on the PFI debt and the accumulation of cash reserves to meet life-cycle costs. Unspent cash reserves built up in this way are the property of shareholders. The second element of the unitary payment is the service charge, which covers facilities management.

PFI does not provide extra resources

Sovereign debt is always cheaper than finance borrowed privately for individual investment projects ('project finance'). Successive governments have argued that the high cost of private finance compared with government borrowing reflects risk transfer, especially the risk of construction coming in over budget or being completed late.² (There are no substantial risks after the construction period). According to this argument, when the private sector takes on financial risk it has an incentive to generate savings that outweigh the extra cost.

Neither the government nor official auditors have provided compelling evidence to support this claim. On the contrary, as we show below (**'Bias in favour of PFI – value for money tests'**) cost comparisons between PFI and the public sector alternative have been systematically biased in favour of PFI and there is extensive evidence of poor value for contracted-out services. More fundamental, however, is the absence of any evaluation by government of private finance as a risk transfer mechanism. Construction risks can be transferred to the private sector by using fixed price contracts and public borrowing instead of private finance. This alternative, which would avoid the higher financing costs of private borrowing, has never been weighed against PFI.

The general lack of evidence explains why governments are usually thought to adopt PFI policy for fiscal not efficiency reasons.³ Most PFIs are not included on the public balance sheet and do not count as part of public borrowing totals. New investment can therefore be undertaken without any immediate increase in government spending or debt. In effect, the repayment programme for publicly borne debt is manipulated so as to avoid high up-front costs. PFI simply alters the timing of payments to creditors; it does not eliminate them. There is no economic case for this approach. The advantage is entirely presentational

Even in the UK, which has a deficit, government borrowing could be substituted for PFI debt without affecting fiscal balances, according to the House of Commons Treasury Committee in 2011: "An increase in government borrowing to replace PFI investment should not make it harder for the Government to meet the fiscal mandate which the Office for Budget Responsibility (OBR) monitor. As the borrowing is for capital investment it will not increase the cyclically adjusted current balance which the OBR measure."⁴

Exclusion of PFIs from the government's spending and debt totals has given rise to claims that PFIs generate additional resources. They do not. PFI debt is public whether or not it is on the government's balance sheet. All PFI debt is borne by the public either through tax-financing or through user charges such as tolls that directly or indirectly reduce government revenues.

² HM Treasury (2003), PFI: Meeting the Investment Challenge (HM Treasury, London).

³ Mark Hellowell and Allyson M. Pollock. The private financing of NHS hospitals: policy, politics and practice. Economic Affairs, March 2009.

⁴ House of Commons Treasury Committee. The Private Finance Initiative. 18 July 2011.

Local or provincial governments may use PFIs to evade central government capital spending controls but resources generated in this way are only additional in the sense that a budgetary constraint has been evaded. In 2010, the National Audit Office concluded that off-balance sheet treatment was a significant factor in the adoption of PFI: “Public authorities often have no alternative source of funding and feel pressured to use private finance because its treatment in financial accounts and budgets make it seem more affordable from the public authority’s perspective.”⁵ The NAO found this not only affected how a project was funded but often led public bodies to “shape the project to ensure it is off-balance sheet”

⁵ House of Lords Select Committee on Economic Affairs. Private Finance Projects and off balance sheet debt. February 2010.

Higher borrowing costs of private finance

PFI borrowing costs are consistently higher than public borrowing costs. In 2002, Audit Scotland reported PFI borrowing rates 2.5% to 4% higher than the rates at which a public authority would have been able to borrow. In a study of the first 12 PFI hospital projects in England, Shaoul et al. (2008) found private finance costs of about 8% – well in excess of the 4.5% available on public finance at the time.⁶

The difference between public and project rates of interest increased following the banking crisis. After the crash, the cost of public borrowing fell to historically low levels whilst bank lending rates increased, in some cases fivefold, as to raise their profits banks exploited the collapse of the bond market, the other main source of project finance. In 2011, the House of Commons Treasury Committee concluded that the cost of capital for a typical PFI project was then double the long-term government gilt rate (or official lending rate):

“The cost of capital for a typical PFI project is currently over 8%—double the long term government gilt rate of approximately 4%. The difference in finance costs means that PFI projects are significantly more expensive to fund over the life of a project. This represents a significant cost to taxpayers.”⁷

Since the banking crisis the UK taxpayer has had to rescue several of the banks lending at these inflated rates. To restore confidence in the financial markets and to free up lending, the UK government increased public borrowing to support the banking sector. It is this increased borrowing that lies behind the austerity drive across the public sector. In 2008-9, the government recapitalised the Royal Bank of Scotland Group (RBS) and the Lloyds Banking Group at a total cost of £37bn to become the major shareholder in both banks, holding 84% of RBS shares and 43.5% of Lloyds shares (REF). The government also agreed to protect RBS from losses on risky assets up to £282bn (table 1). The effect of government rescue is to transfer the risks, completely or in part, from the private sector back to the taxpayer.⁸ The banks are using the high interest rates and equity returns on PFI contracts to rebuild their balance sheets and reserves. These financing costs are excessive as we show below.

⁶ Shaoul, J., A. Stafford and P. Stapleton (2008) ‘The Cost of Using Private Finance to Build, Finance and Operate Hospitals’, *Public Money and Management*, 28, 2, 101–108.

⁷ House of Commons Treasury Committee. *The Private Finance Initiative*. 18 July 2011.

⁸ Pollock AM, Price D. *The private finance initiative: the gift that goes on taking* BMJ 2010; 341:c7175 doi: 10.1136/bmj.c7175 (Published 15 December 2010)

Table 1
Banks that are equity and senior loan providers for 102 NHS England PFI projects as of November 2008

Bank	Equity investor (43 projects)	Loan provider and equity investor in same project (19 projects)	Taxpayer bailouts
ABN AMRO	Yes	Yes	As part of RBS
Bank of Scotland	Yes	Yes	Yes
Barclays	Yes	Yes	No
HSBC	Yes	Yes	No
Lloyds TSB	Yes	No	Yes
NIB Capital Bank	Yes	Yes	No
Royal Bank of Canada	Yes	No	No
Royal Bank of Scotland	Yes	Yes	Yes

Excessive rates of return, fraud and tax avoidance

High financing costs include ‘unfair’ rates of return. PFI rates of profit have been shown to be excessive, that is, higher than conventional profitability for equivalent projects. Several attempts have been made to evaluate rates of return. In 2005, the UK government’s own evidence base suggested there were ‘excess returns’ to investors of 2.5%.⁹ In 2012, the National Audit Office (parliament’s financial watchdog) reported that “the public sector may often be paying more than is necessary for using equity investment” and that “in 84 of 118 projects [...], investors were reporting returns equal to or exceeding expected rates of return [generally of between 12 to 15 per cent]. Thirty-six of those projects were forecasting significant improvements [on the expected rate of return].”

In 2013, researchers calculated that sponsors of a sample of UK PFI deals extracted returns almost 10% above the market rate. Where access to normally confidential financial contracts has been obtained, researchers have been able to identify far higher returns to shareholders. An analysis of the financial projections for three hospital projects at the time the contracts were signed has shown that shareholders expected to receive £168m for £0.5m of equity invested in one hospital. In a second hospital, equity of £100 was expected to generate £89.14m. Whilst in a third, equity of £1000 was expected to generate £55.7m. These high rewards are contractually protected and underwritten by government.

PFI financing costs have recently been implicated in fraudulent manipulation of the interbank lending rate, or Libor.¹⁰ Libor is used to price financial instruments known as derivatives that are common to project finance. The European Union and the US Securities and Exchange Commission are investigating Barclays Capital and several other banks that invest in PFIs for misrepresenting the rate in order to mislead the market about the true cost of bank borrowing. The financial impact on the public sector is currently unknown.

In addition to earning excess rates of return and manipulating prices, many PFI companies avoid taxes by registering off-shore and using transfer pricing. In 2011, the House of Commons Treasury Committee reported a pattern of higher rates of profit and low corporation tax payments by highways PPP projects.¹¹ In 2012, Whitfield calculated that 91 shareholder companies investing in UK PFI infrastructure funds are located in tax havens and therefore not liable to capital gains tax.¹² The funds had interests in a total of 314 PFI-created assets (table 2).

⁹ PricewaterhouseCoopers (2005) Queen Elizabeth Hospital NHS Trust: Public Interest Report, London: Audit Commission.

¹⁰ Allyson M Pollock and David Price. PFI hospitals bear the cost of Libor manipulation. *BMJ* 2012;345:e5095 doi: 10.1136/bmj.e5095 (Published 30 July 2012)

¹¹ House of Commons Treasury Committee. The Private Finance Initiative. 18 July 2011.

¹² Dexter Whitfield. PPP Wealth Machine: UK and Global trends in trading project ownership. <http://www.european-servicesstrategy.org.uk/ppp-database/>. 2012

Table 2

PPP infrastructure funds located in tax havens

Company	Tax haven	No. of UK PPP assets	PPP projects
Semperian PPP Investment Partners Holdings Limited	Jersey	106	Previously known as Land Securities Trillium and Secondary Market Infrastructure Fund
HICL Infrastructure	Guernsey	67	Substantial stakes in hospitals, schools, police stations, Home Office Headquarters, London, and Dutch High Speed Rail
John Laing Infrastructure Fund	Guernsey	37	Range of schools, social housing, hospitals, courts, police stations and street lighting projects.
3i Infrastructure Fund (3i Groups owns 33.2%)	Jersey	18	Norfolk & Norwich University Hospital (36.8%), Alpha Schools, Highland (50.0), Osprey; Elgin Infrastructure Fund (joint venture with Robertson Group with 16 projects). Also 9% stake in Anglian Water owned by a private consortium.
International Public Partnerships (formerly Babcock Brown Public Partnerships)	Guernsey	53	Includes 31 health projects plus education, criminal justice and transport projects, plus others in continental Europe, Canada and Australia.
GCP Infrastructure Fund Ltd – Gravis Capital Partners	Jersey	7	Investments in Grosvenor PFI Holdings – South Essex Community Hospital, Stanley Primary Care Centre, Lanchester Road Childrens' Health Unit, Braintree Community Hospital); Investment in Leisure Infrastructure Investors Ltd in 3 PFI operational contracts.
Bilfinger Berger Global Infrastructure Fund	Luxembourg	12	Schools and health projects in UK plus a further seven projects in Germany, Canada and Australia.
Lend Lease PFI/PPP Infrastructure CIHL Holdings Limited	Jersey	14	5 hospitals, 7 school projects and 2 Treasury accommodation projects.
Total		314	

Source: ESSU Global PPP Equity Database 2012 and infrastructure fund websites 12 October 2012.

The impact of high rates of return on taxpayers

The effect of high interest rates and excess returns can be seen in levels of debt repayment. Cuthbert and Cuthbert calculated annual debt repayment to PFI consortiums between 1.49 and 2.04 times higher than the amount that would have been charged to the UK government if it had borrowed directly for the construction (table 3).

Table 3

Ratio of what the public sector could have borrowed at same cost relative to capital actually raised through private finance¹³

PFI project	Ratio of possible:actual borrowing for same cost *
New Royal Infirmary Edinburgh	2.04
Hairmyres Hospital	1.97
James Watt College	1.97
Highland PPP2 schools	1.49
Perth and Kinross office and car park	1.82
Hereford Hospital	1.68

* The ratio is calculated as the net present value of the stream of unitary charge payments (net of lifecycle, operations, and maintenance charges) to the net present value of the capital raised for the project. Net present values have been calculated at the appropriate interest rate at which the public sector could have borrowed.

In 2011, Hellowell, who analysed a single hospital scheme for the House of Commons Treasury Committee, reported “the government could have secured 71% more investment by borrowing on its own account.”¹⁴

In 2010, the National Audit Office estimated that between £500 million and £1 billion higher repayment costs had been locked into PFI deals as a result of high financing costs.¹⁵ In Portugal, the IMF, which is advising the country on its sovereign debt crisis, has called for contract renegotiations to address high and unjustifiable repayment levels.¹⁶

However, instead of renegotiation, in 2009, the UK Treasury opted to create a new fund to provide government loans to projects for which bank finance proved

¹³ Cuthbert, J. and M. Cuthbert (2008) ‘The Implications of Evidence Released Through Freedom of Information on the Projected Returns from the New Royal Infirmary of Edinburgh and Certain Other PFI Schemes’. Available at www.cuthbert1.pwp.blueyonder.co.uk.

¹⁴ House of Commons Treasury Committee. The Private Finance Initiative. 18 July 2011.

¹⁵ National Audit Office. Financing PFI projects in the credit crisis and the Treasury’s response. London: NAO, 2010.

¹⁶ Allyson M Pollock and David Price. PFI hospitals bear the cost of Libor manipulation. *BMJ* 2012;345:e5095 doi: 10.1136/bmj.e5095 (Published 30 July 2012)

insufficient. The UK government's willingness to support high returns to banks that the taxpayer has bailed out reflects its commitment to PFI policy.

PFI is a one hospital for the price of two policy.¹⁷ For every PFI hospital up and running the public sector is in fact paying the price of two. The new Government is sceptical about the PFI policy and the chairman of a parliamentary select committee (Public Accounts Committee) went as far as to call the scale of profits generated for the private sector "the unacceptable face of capitalism".¹⁸ However it has not opened the contracts and so there has been no proper public scrutiny.

¹⁷ Cuthbert J, Cuthbert M. Response to Scottish Futures Trust: consultation paper. <http://www.cuthbert1.pwp.blueyonder.co.uk/> (accessed 01 September 2010)

¹⁸ House of Commons Committee of Public Accounts. The refinancing of the Norfolk and Norwich PFI Hospital. HC 694. London: The Stationery Office Limited, 2006.

Bias in favour of PFI – value for money tests

This support has been evident in official value for money (VfM) assessments that are made as a condition of PFI approval. There is substantial evidence that assessments have reflected a pro-PFI bias by giving the false impression that PFI projects are less costly than traditional procurement alternatives.

The UK parliament has repeatedly questioned the lack of evidence in support of risk transfer and value for money claims. In July 2010, a National Audit Office paper to a House of Lords committee described value for money as “subjective judgements of risk, which can easily be adjusted to show private finance as cheaper.”¹⁹ The chairman of the Public Accounts Committee described PFI as “probably the most secure projects to which the banks could lend.”²⁰ The committee previously expressed concern over high interest rates, returns that contractors earn from PFI projects, and the risks they actually bear.²¹

Independent researchers, financial watchdogs and parliamentary committees have exposed various irregularities, including manipulation of the discount rate, unfounded claims about public sector costs, and exaggerated claims about PFI savings.

Cost and time Overruns

In particular, the assertion regularly made by ministers that PFIs lead to fewer time overruns and lower cost overruns during construction has been shown to be unfounded. UK government procurement policy has for many years depended on claims that compared with traditional procurement PFI reduces both the frequency and magnitude of cost and time overruns during the construction period. In 2003, the UK Treasury maintained that its research into completed PFI projects “showed 88% coming in on time or early, and with no cost overruns on construction borne by the public sector. Previous research has shown that 70% of non-PFI projects were delivered late and 73% ran over budget.”²² However, the research cited is unscientific and does not support the claim. The key data quoted for non-PFI projects is non-existent.²³

Value for money claims are built on sand

PFI accountancy firms and management consultancies, with the backing of government, have played a leading role in devising and conducting biased VfM

¹⁹ National Audit Office. Private finance projects. Paper for committee of economic affairs. NAO, 2010.

²⁰ House of Commons. PFI construction performance. Select Committee on Public Accounts. Stationery Office, 2002.

²¹ HM Treasury. Budget 2009: building Britain’s future. HC 407. Stationery Office, 2009.

²² HM Treasury (2003), PFI: Meeting the Investment Challenge (HM Treasury, London).

²³ Pollock, A., D. Price and S. Player (2007) ‘An Examination of the UK Treasury’s Evidence Base for Cost and Time Overrun Data in UK Value-for-Money Policy and Appraisal’, *Public Money and Management*, 27, 2, 127–134.

assessments. Arthur Anderson (a forerunner of Accenture), Mott MacDonald and KPMG have each been criticised for manipulating findings in order to promote PFI policy.^{24 25} The government also adopted biased findings of Mott MacDonald and KPMG studies as part of the official VfM approach.²⁶

Government departments and public authorities have also been shown to distort VfM assessments in order to support the PFI option and evade the government's budgetary controls. Researchers have identified several cases of distortion since 1998. In 2009, an official body, the National Audit Office, provided evidence of a central department falsely claiming that a PFI option was cheaper than conventional procurement. By 2010 the National Audit published advice that PFI was less likely than formerly to be a value for money and that departments should not presume privately financed project offered a cost effective solution.

Although PFI policy is justified by VfM claims, it was not until 2010 that the NAO made an attempt to assess performance outcomes and contract compliance among privately financed projects in the NHS.²⁷ However, the audit office was unable to undertake a systematic assessment because there had been insufficient monitoring at project level and because private contractors had withheld data from public authorities. For example, contractors did not disclose their spending on lifecycle maintenance.

Survey data showed that authorities devoted inadequate resources to contract monitoring, that contract enforcement was weak, that contractors regularly sought to pass risks back to the public sector, and that some authorities were paying more for PFI services than they needed to.

Where evidence was available, the audit office judged that some trusts were paying more for PFI services than they needed to but it could not examine sources of variation because of "the lack of reliable data." Service cost analysis could not be done after 2008-9 because "the NHS stopped collecting the data." The office identified substantial but unexplained variations in the facilities management fee component of the annual unitary charge. For example, in the sample of trusts the price for feeding a patient varied fourfold (from £3.16 to £12 a day) and the price per item of laundry varied from 20p to 96p.

The audit office concluded that, in the absence of formal mechanisms for assessing whether the initial prices which trusts agreed to pay for maintenance

²⁴ Pollock, A., J. Shaoul and N. Vickers (2002), 'Private Finance and 'value for money' in NHS hospitals: a policy in search for a rationale', *British Medical Journal*, 324, pp. 1205-1209.

²⁵ Pollock AM, Vickers N. Private pie in the sky. *Public Finance* 2000 Apr 14:22-23.

²⁶ Pollock, A., D. Price and S. Player (2007) 'An Examination of the UK Treasury's Evidence Base for Cost and Time Overrun Data in UK Value-for-Money Policy and Appraisal', *Public Money and Management*, 27, 2, 127-134.

²⁷ National Audit Office. *The performance and management of hospital PFI contracts*. London: National Audit Office 2010.

remain value for money, the price was likely to become unrelated to the actual cost of delivering the maintenance services.

Evidence of poor value for services contracted out to the private sector is not new. A 2007 unpublished, though informally circulated, review by the audit office, based on Healthcare Commission data, raised serious concerns about the relative cost and quality of security, linen and laundry services, portering, and cleaning services among the first wave of NHS PFI projects.²⁸

²⁸ National Audit Office (2007a), The operational Record of the First Wave of PFI Hospitals, unpublished paper.

High PFI costs have been underfunded

The NHS budget and payments to hospitals do not meet the high costs of PFI.

The impact of PFI payments on hospital budgets varies according to the rules and regulations of a country. In the NHS in England, hospital trusts have been required since 1990 to set aside part of their budget to pay 'capital charges' to the government (a cost of capital charge equivalent to 3.5% of the value of their buildings). They must also set aside a proportion of their budget to pay for buildings' depreciation.

The UK government originally assumed that these capital charges would be sufficient to pay the availability fee to the PFI provider when a PFI project was introduced to the equation. However, this was not the case. Capital costs under PFI required a much greater proportion of annual budgets than the government's capital charges that they replaced (table 4).

Table 4
Annual revenue implications of capital costs for eight PFI schemes comparing costs before and in the first year of PFI²⁹

Trust	Before PFI (capital charge as % of revenue 1998-9)	After PFI (capital charges+availability fee as % of projected revenue in 1st year of operations)
Hereford Hospitals	3.8	14.6
South Tees	5.6	13.1
Dartford and Gravesham	6.7	32.7
Greenwich Healthcare	2.1	16.2
Swindon and Marlborough	3.8	16.4
Bromley Hospitals	7.0	10.7
Calderdale Healthcare	3.4	13.1
North Durham Healthcare	4.2	12.2

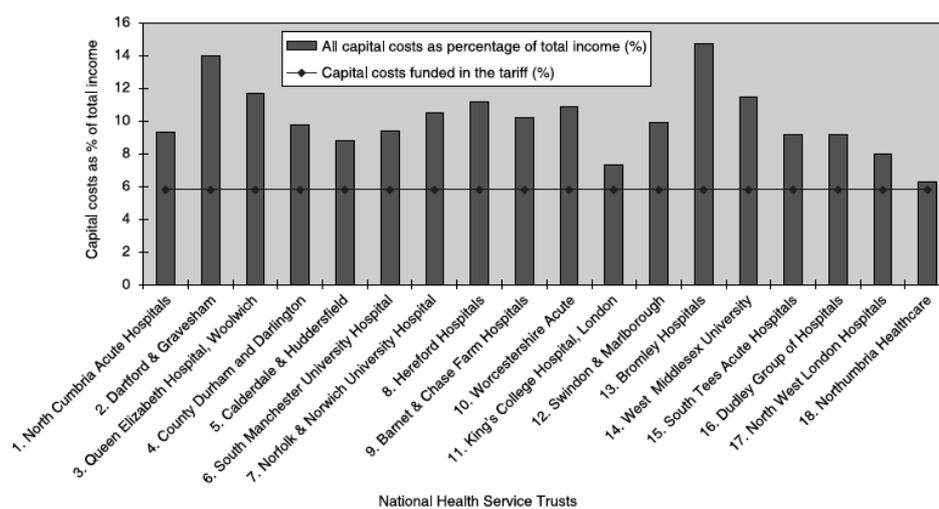
Refers to 1999-2000. All calculations include payments to Treasury on existing and retained estate. Data from Department of Health.^{16 17}

In 2002 a pricing system known as the national tariff hospital payment system was introduced. (The tariff is the UK equivalent of the diagnosis related group (DRG) hospital payment system). Under current activity-based reimbursement provisions for hospitals, 5.8% of the allocated resources are reserved for capital costs. However, the capital cost element in the tariff was in many cases less than the PFI fees actually paid. We found that of the 40 NHS trusts paying PFI unitary charges in 2005/06, had capital costs in excess of funding under the tariff. On average, trusts with PFI schemes that were operational and incurring charges in 2005/06 had capital costs of 8.3% that year – i.e. these trusts experienced an average shortfall in income of 2.5%.

²⁹ Pollock AM, Shaoul J, Vickers N. PFI and "value for money" in NHS hospitals: a policy in search of a rationale? *BMJ*. 2002;324:1205-1209.

However, many of the 40 PFI schemes that were operational in 2005/06 are small, and their impact on trust expenditure correspondingly minor. For the 18 trusts that were, in 2005/06, paying charges on schemes with a capital value of over £50 million, the impact of PFI costs was much more significant. For these trusts, average annual capital costs were 10.1% of total income in 2005/06, compared with 5.8% in the tariff. These trusts experienced an average funding shortfall of 4.3% (figure 2).

Figure 2: Capital costs for trusts with PFI schemes with a capital value of over £50 million, in 2005/06³⁰



Three short-term measures have typically been adopted to reduce or delay the budgetary impact of PFI repayments.

First, various subsidies have been used to delay the impact of PFI. They include the 'smoothing mechanism', 'deferred asset support', 'balance sheet support' and 'transitional support'. However, when the subsidies expire the hospital has to bear the full cost.

Secondly, land and property sales have been widely used to ease affordability problems by reducing the amount of money that has to be borrowed. For example, Edinburgh hospital received £15.4 million for city centre lands sales in annual fix instalments of £2.5 million between 2002 and 2006.

A third way of coping with underfunded repayment costs is by a process known as "debt sculpting". Debt sculpting involves lowering repayments in the first years of a contract and raising them in subsequent years. Arrangements of this

³⁰ Mark Hellowell and Allyson M. Pollock. The private financing of NHS hospitals: policy, politics and practice. Economic Affairs, March 2009.

type are frequently negotiated with private sector partners through the use of complex and very costly financial instruments known as 'swaps' (see below).

None of these measures offers a permanent solution to high repayment costs, nor are they designed to.

The impact of high PFI costs on NHS care

The high cost of PFI services and debt repayment coupled with underfunding has had a serious impact on NHS services. These effects have been evident since the policy began. PFI charges create an affordability gap that NHS organizations have sought to minimize at the project planning stage by reducing both the numbers of acute and community beds, services and staff (table). These cuts serve to redirect clinical spending to paying for capital. Extra money to bridge the affordability gap is also generated by selling land or by cutting services in other areas.

The first wave of hospital PFI projects was associated with average cuts in bed numbers of between 7 and 44 per cent, an average of around 30 per cent (table 5).³¹ By 1999, the government launched an enquiry into the national bed shortage that had resulted from these measures and called a temporary halt and a planned increase in bed numbers. But this policy was not enacted.

Table 5

Reductions in bed availability in England under private finance initiative (PFI) schemes

PFI trusts	Best available current bed Nos	Nos planned (including 5 day beds)	% Decreases
England			
Barnet General (Well House) Trust*	646	411	36
Bishop Auckland Hospital Trust	565	454	20
Bromley Hospitals Trust†	619	507	18
Calderdale Hospitals Trust ‡	832	508	39
Carlisle Hospital Trust	509	474	7
Dartford and Gravesham Hospitals Trust*	524	400	24
Greenwich Healthcare Trust	654	573	12
Hereford Hospitals Trust	414	250	40
Norfolk and Norwich Acute Hospital Trust	1 207	809	33
North Durham Acute NHS Hospitals Trust	750	450	40
South Buckinghamshire Hospitals Trust	806	Refused	

³¹ AM Pollock and Matthew Dunnigan. What happens when the private sector plans hospital services for the NHS: three case studies under the private finance initiative. *BMJ* 1997; 314 doi.

Swindon and Marlborough Hospitals Trust*	632	450	29
Walsgrave and Coventry Hospitals Trust	1 145	1083	5
Worcester Royal Infirmary Trust*	697	390	44
Total**	9 194	6759	26

Scotland

Lanarkshire Health Board^{16§}

All acute	1482	1256	15
All geriatric assessment	226	200	12

Lothian Health Board^{16¶}

All acute	2234	1442	35
All geriatric assessment	661	415	37
Total acute	3716	2698	27
Total geriatric assessment	887	615	31

*Bed numbers taken from NHS Executive³. All others were supplied by the trusts themselves. †Includes 127 five day beds. ‡Includes 45 five day beds. §Projected figures for Lanarkshire were supplied by the health board and are based on Monklands, Law, and Hairmyres Hospitals. ¶Projected figures for Lothian were supplied by the hospital trusts. **The total percentage of bed losses was calculated by excluding hospitals where PFI projections were unavailable. NB: Some of the percentage decreases will underestimate the true loss as data were unavailable for smaller hospitals due to close as part of the PFI agreement.

Service reductions notwithstanding, financial difficulties continued in operational PFIs and by 2006 the Audit Commission was noting a ‘marked correlation’ between the presence of new large building projects and the presence of hospital deficits.³² In a separate joint study in 2006, the National Audit Office and Audit Commission reported a higher incidence of deficits amongst bodies with PFI schemes than those without (31% versus 26%, respectively).³³

Our own analysis of NHS trust accounts for 2005/06 showed that this proportion is much greater for ‘major’ schemes – those which have a significant budgetary impact. In 2005/06, 50% of trusts with PFI projects with a capital value of £50 million or more were in deficit, compared with an NHS average of 23% for that year.³⁴ In addition, among trusts that did not record a deficit in 2005/06, several recorded underlying financial problems in their annual accounts.

³² Audit Commission, ‘Learning the Lessons from Financial Failure in the NHS’, pp.27 July 2006, London.

³³ National Audit Office and Audit Commission (2006) Financial Management in the NHS: NHS (England) Accounts 2004–05, London: The Stationery Office. Available at www.nao.org.uk/publications.

³⁴ House of Commons Health Select Committee (2007) NHS Deficits. First

At the time, ‘excess costs’ ascribed to PFI by the Commission and PricewaterhouseCoopers were contributing to multi-million pound deficits across hospitals in south London and elsewhere. Ward and bed closures and sales of non- PFI parts of the NHS estate were accelerated at several sites. PFI hospitals, such as the one in Worcester, which was only viable in the first place because of the forced closure of a neighbouring hospital, were contemplating further large scale staffing cuts and service reviews as a direct result of growing PFI deficits.

BOX 1 The effect of underfunded capital costs in two areas

To illustrate the effect of underfunded capital costs, we examine below the case of acute sector deficits in South East London, an area of severe deprivation and high health need, and Worcestershire.

South East London

This locality is administered by the South London and Maudsley Strategic Health Authority (SHA), which in 2007, showed that the financial problems relating to South-East London were worst at two PFI hospitals, Queen Elizabeth and Bromley.³⁵ By the end of 2006/07, the aggregate debt payable by the four district generals to the SHA had increased to over £180 million, with Queen Elizabeth and Bromley accounting for about 84% of this.

According to the SHA, the deficits of both trusts arise “because the cash costs of the PFI availability charge exceed funding for capital charges in tariffs.” The SHA suggested that the solution was “further substantial reductions in staff costs and staff numbers.” (p.10)

Worcestershire

The deficit problem is not restricted to London. Worcestershire Acute Hospitals NHS trust overspent by £4.9 million in 2005-06 and recorded a cumulative deficit of £31.8 million.³⁶ The trust attributed £7 million of this to the costs of the PFI charge in excess of that funded through the tariff.

The trust recorded its plans to reduce staff numbers by 675, and identified the need for a comprehensive review of services in neighbouring hospitals, questioned their sustainability and proposed substantial reductions in service. These cuts and service closures were apparently planned before contracts were signed in order to make the PFI scheme affordable.

By 2012, PFI was widely acknowledged to be a source of hospital deficit and the department of health identified seven hospitals in need of further special support.³⁷ Other hospitals only avoided deficits by further cuts in services. In at

Report of Session 2006–07, Volume II, London: The Stationery Office.

³⁵ South London and Maudsley Strategic Health Authority (2007), ‘Acute Sector deficits in SE London’. London.

³⁶ Pollock, AM., Price, D., Dunnigan, M., ‘Deficits before patients: a report on the Worcester Royal Infirmary PFI and Worcestershire Hospital reconfiguration’, June 2000, University College London, London.

³⁷ BBC News. Seven NHS trusts to get access to £1.5bn bailout fund. 3 February 2012.

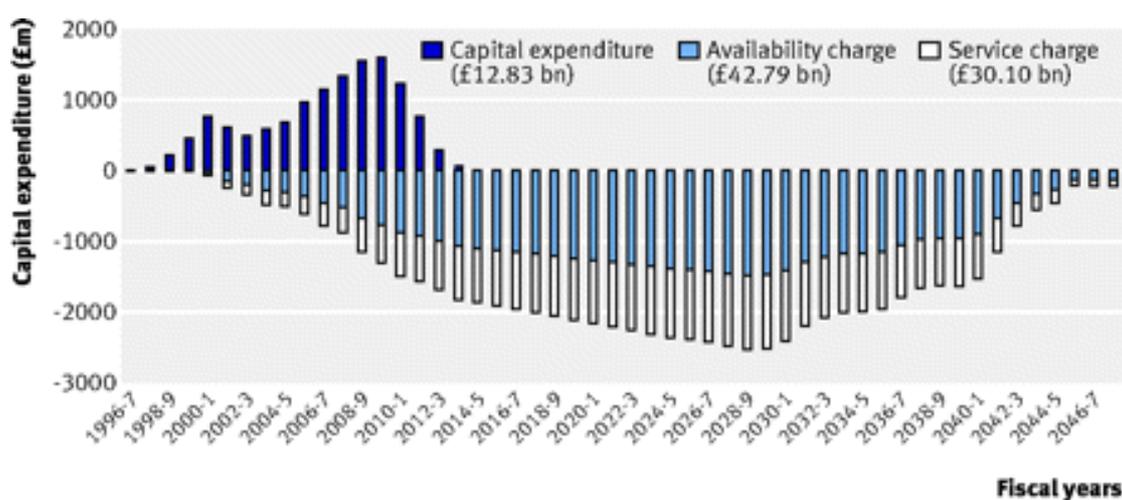
least one case, the National Audit Office concluded that the PFI contract was unaffordable from the word go and should not have been signed.³⁸

The government has attributed deficits in several NHS hospital trusts to “a legacy of PFI debts”.³⁹ But indebtedness is not a consequence of historic costs alone. In several cases deficits have deepened as a result of a built-in tendency for PFI payments to increase annually in a period when hospital income is falling. This is because in most PFI contracts annual cash payments are indexed to the rate of inflation so that they rise year by year.

The aggregate of all PFI repayments in 2009-10 is £42.79bn. In 2010-11, NHS Trusts paid the private sector a total of £0.87bn in availability fees. However, the annual aggregate payments are set to increase, and at a time of real term reductions in public expenditure (figure 3).

Figure 3

Capital expenditure and unitary payments for 150 UK PFI hospital projects signed by December 2009.⁴⁰



Indexation is arranged through complex financial instruments known as derivatives that add cash costs to hospital investment that would not otherwise be incurred. Although contrary to official guidance, certain types of derivative known as inflation swaps are widely employed in PFI deals. Inflation swaps can be used to lower initial PFI payments so as to make them look affordable when

³⁸ NAO, Report on Peterborough and Stamford Hospitals NHS Foundation Trust, 29 November 2012,

http://www.nao.org.uk/publications/press_notice_home/1213/1213658.aspx

³⁹ BBC News. Seven NHS trusts to get access to £1.5bn bailout fund. 3 February 2012.

⁴⁰ Hellowell M, Pollock AM. The private financing of NHS hospitals – politics, policy and practice. *Economic Affairs* 2009;29:13-19.

contracts are signed (they have no other function in the public sector).
Affordability problems materialise when payments subsequently rise.

The impact of PFI on staff

Reductions in staff numbers, terms and conditions and skill levels have been a direct result of contracting-out and the diversion of the patient care budget to pay off PFI debts.

Medical staffing has been affected by reductions in the patient care budget. Service-related savings, which often account for a significant proportion of total savings required, have been associated with reductions include management, ward nursing, ward management, maintenance, sterile supplies, clinical support and operating theatres.

Data on staff reductions is not systematically collected. The following table shows staffing proposals for Edinburgh hospital's PFI. It shows a proposed reduction in the medical and nursing budget of £14 million and associated staff reductions of 345 nurses and doctors (table 6).

Table 6

Edinburgh Royal Infirmary PFI, staffing projections, February 1997⁴¹

	1996 (whole time equivalents)	1996 staff budget (£m)	Projected (whole time equivalents)	Projected staff budget (£m)
Medical	544	28.0	499	25.0
Nursing	2,144	40.0	1,844	29.0
Clinical support	899	16.5	886	15.0
Admin & clerical	802	12.0	556	8.0
Ancillary*	502	N/A	312	N/A

⁴¹ Pollock AM, Dunnigan M, Gaffney D, Macfarlane A, Majeed FA. What happens when the private sector plans hospital services for the NHS: three case studies under the private finance initiative. *BMJ*. 1997;314:1266-1271.

Total	4,892	96.5	4,000	77.0
--------------	--------------	-------------	--------------	-------------

Non-medical staff have also been affected. The majority of NHS PFI contracts involve outsourcing 'soft' services, such as catering, cleaning, security, helpdesk support and portering. In the first deals, members of staff involved in these contracts were transferred from NHS employment to the private sector without protection of their terms and conditions. The policy led to trade unions protests and since June 2001 most facilities management staff involved in PFI agreements have transferred under secondment arrangements, and have thereby retained their NHS employment.

However, staffing numbers and wage levels for new employees are not protected. In June 2009, the public sector trade union, Unison, called for an end to outsourcing: "Allowing the private sector to provide these services undermines quality, lowers staff wages and conditions and is extremely inflexible."⁴²

⁴² Unison. Reclaiming the initiative: putting the public back into PFI. London: Unison, 2009.

Hospital bankruptcy and closure

Systems of public administration and consultation have been impaired by financial stress among PFI hospitals. Instead of seeking contract renegotiation, the government has elected instead to activate a failure or bankruptcy regime to deal with the crisis in hospital finances. Drawn up in 2006 by the Labour government but not used until 2012, the regime allows the government to appoint a special administrator to develop a financial recovery programme or to close the hospital. The special administrator has extensive powers, is not part of the health service and is not bound by public consultation rules that apply to other service reconfigurations. As a result, hospitals put into special administration may be closed in as little as 19 weeks.

The financially driven special administrator system is chaotic and ad hoc. Last Autumn, the Department of Health was unable to explain to the House of Commons Public Accounts Committee how it proposed to deal with financial failure in individual hospitals and could not reassure the committee that “financial problems would not damage either the quality of care or equality of access to all citizens, wherever they live.” Nor could it explain when trusts would be placed in special administration or exactly how the process would work.

In March 2012, the government introduced new legislation in effect abolishing the NHS in England by abolishing the duty on the Health Minister to secure and provide comprehensive care for all residents throughout England. It also gave new powers to NHS hospitals to raise up to half their income from private patients and enter into an increasing number of Public Private partnerships, a policy which is reflected in the reforms to PFI.

Treasury proposals to reform PFI

In December 2011, following the financial crash, the Treasury began consultations on reform of PFI in the light of a crisis in debt financing, or as the Treasury put it, reductions in “the appetite of bank lenders and bond investors for long term lending”.⁴³ Two factors prompted the review. The first was the collapse of the bond market as a result of a rise in the price of bonds relative to bank lending. The second factor was restricted long term bank lending following revised banking regulations (including Basel III, Solvency II and the Independent Commission on Banking).

To resolve the lack of lending, the Treasury proposed extending a model that would pass project risks to consumers through user charges (as gas, water and electricity privatisations do) and so give PFI projects access to the cheaper debt finance that they are currently denied. The proposal involves substituting the regulated asset based (RAB) model for the PFI concession model. RAB, which in the UK has been used mainly for airports, energy and social housing, involves protecting long-term lenders by passing the investment costs on to the customer via tolls or other user charges.⁴⁴ This reform is the equivalent of tax-farming, a system of contracting out tax-raising powers to private bodies and allowing user charges. User charges are a regressive policy.

⁴³ HM Treasury. Reform of the Private Finance Initiative. London, 2011.

⁴⁴ HM Treasury. National Infrastructure Plan 2011. London, 2011.

APPENDIX

Professor Pollock and colleagues: published evidence on PFI, 1997-2013

(Most publications are available online at <http://www.allysonpollock.com/>)

- 1 Pollock AM, Price D. PFI hospitals bear the cost of Libor manipulation. *BMJ* 2012;345:e5095.
- 2 Pollock AM, Price D, Liebe M. Private finance initiatives during NHS austerity. *BMJ* 2011; 342:d324.
- 3 Hellowell M, Pollock AM. Do PPPs in social infrastructure enhance the public interest? Evidence from England's National Health Service. *Australian Journal of Public Administration* 2010;69:S23-34.
- 4 Pollock AM, Hellowell M, Price D, Liebe M. Submission to the House of Lords Economic Affairs Committee Inquiry into private finance projects and off-balance sheet debt. Edinburgh: CIPHP, 2009.
- 5 Hellowell M, Pollock AM. The private financing of NHS hospitals – politics, policy and practice. *Economic Affairs* 2009;29:13-19.
- 6 Hellowell M, Price D, Pollock AM. The use of public private partnerships in Northern Ireland. Belfast: NIPSA 2009.
- 7 Pollock AM, Price D. Has the NAO audited risk transfer in operational private finance initiative schemes? *Public Money & Management*. 2008;28(3);173-178.
- 8 Hellowell M, Pollock AM. [Evidence to the National Assembly for Wales Finance Committee with regard to its inquiry on public private partnerships](#). Edinburgh; CIPHP 2007.
- 9 Hellowell M, Pollock AM. The PFI: Scotland's plan for expansion and its implications. *Public Money & Management*. 2007;5:351-354.
- 10 Pollock AM, Price D. An examination of the UK Treasury's evidence base for cost and time overrun data in UK value for money policy and appraisal. *Public Money & Management*. 2007;27;2:127-33.
- 11 Hellowell M, Pollock AM. PFI: friend or foe of primary care in Scotland? *Scottish Primary Care*. Jul 2006.
- 12 Pollock AM, Price D, Player S. The private finance initiative: a policy built on sand. London: UNISON 2005.
- 13 Dunnigan MG, Pollock AM. Downsizing of acute inpatient beds associated with private finance initiative: Scotland's case study *BMJ*. 2003;326:905-909.
- 14 Rowland D, Pollock AM. Understanding the Private Finance Initiative: value for money? *Developments in Economics* 2003;19:133-148.

- 15 Pollock AM, Shaoul J, Vickers N. PFI and “value for money” in NHS hospitals: a policy in search of a rationale? *BMJ*. 2002;324:1205-1209.
- 16 Pollock AM, Shaoul J, Vickers N. PFI and “value for money” in NHS hospitals: a policy in search of a rationale? *BMJ*. 2002;324:1205-1209.
- 17 Price D, Pollock AM, Player S. Public risk for private gain? The public audit implications of risk transfer and private finance. London: UNISON 2004.
- 18 Price D, Pollock AM. Debts, deficits and service reductions: Wakefield Health Authority’s legacy to primary care trusts. London: UNISON 2002.
- 19 Pollock AM, Price D, Dunnigan M, Deficits before patients: a report on the Worcester Royal Infirmary PFI and Worcestershire hospital reconfiguration. London: UCL 2000.
- 20 Gaffney D, Shaoul J, Pollock AM. Funding London Underground: financial myths and economic realities. London: Listen to London. 2000.
- 21 Pollock AM, PFI is bad for your health. *Public Finance*. 2000 Oct 6:30-31.
- 22 Pollock AM, Price D, Dunnigan M. The real cost of PFI in Worcester. *Public Finance* 2000 Jul 14:26.
- 23 Pollock AM, Price D, Dunnigan M. Kidderminster’s unkindest cuts. *Public Finance* 2000 Jun 9:28-30.
- 24 Pollock AM, Vickers N. Private pie in the sky. *Public Finance* 2000 Apr 14:22-23.
- 25 Pollock AM, Dunnigan M. Beds in the NHS: The National Beds Inquiry exposes a contradiction at the heart of government health policy *BMJ*. 2000;320:461-462.
- 26 Dunnigan M, Pollock AM. The downsized hospital hypothesis: a vision-based fallacy? *Br J Gen Pract*. 1999
- 27 Gaffney D, Pollock AM. Pump-priming the PFI: why are privately financed hospital schemes being subsidized? *Public Money & Management*. 1999;19:55-62.
- 28 Gaffney D, Pollock AM, Price D, Shaoul J. NHS capital expenditure and the private finance initiative - expansion or contraction? *BMJ*. 1999;319:48-51.
- 29 Gaffney D, Pollock AM, Price D, Shaoul J. PFI in the NHS - is there an economic case? *BMJ*. 1999;319:116-119.
- 30 Gaffney D, Pollock AM, Price D, Shaoul J. The politics of the private finance initiative and the new NHS. *BMJ*. 1999;319:249-253.
- 31 Pollock AM, Dunnigan M, Gaffney D, Price D, Shaoul J. Planning the ‘new’ NHS: downsizing for the 21st century. *BMJ*. 1999;319:179-184.

- 32 Gaffney D, Pollock AM. Downsizing for the 21st century: a report on the North Durham Acute Hospitals PFI scheme. London: UNISON 1999.
- 33 Gaffney D, Pollock AM, Shaoul J. Capital investment and the NHS workforce House of Commons Health Select Committee Future NHS Staffing Requirements 1999;3:Appendix 52-53.
- 34 Pollock AM, Gaffney D. Parliamentary briefing on PFI. 1999.
- 35 Pollock AM, Shaoul JE, Gaffney D. The Private Finance Initiative and NHS hospital development. Report submitted to National Consumer Council. Feb 1999.
- 36 Price D, Gaffney D, Pollock AM. 'The only game in town?' A report on the Cumberland Infirmary Carlisle PFI. London: UNISON 1999.
- 37 Gaffney D, Pollock AM. Has the NHS returned to strategic planning? The CPAG and the second wave of PFI. London: UNISON 1998.
- 38 Gaffney D, Pollock AM. Opening the lid on the PFI. A negotiators guide to PFI procurement documents. London: UNISON 1998.
- 39 Gaffney D, Pollock AM. Putting a price on the PFI: the illusionist economics of the Private Finance Initiative. London: UNISON 1998.
- 40 Pollock AM, Shaoul J, Gaffney D. The Walsgrave Hospitals PFI development. 1998.
- 41 Pollock AM, Shaoul J, Price D. Liquidating care to cure the deficit? The case of West Hertfordshire Health Authority's Review of Acute Care Services. 1998.
- 42 Pollock AM, Gaffney, D, Dunnigan M. Public health and the private finance initiative. *J Public Health Med.* 1998;20:1-2.
- 43 Pollock AM, Dunnigan M, Gaffney D, Macfarlane A, Majeed FA. What happens when the private sector plans hospital services for the NHS: three case studies under the private finance initiative. *BMJ.* 1997;314:1266-1271.
- 44 Gaffney D, Pollock AM. Can the NHS afford the Private Finance Initiative? London: BMA 1997.