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Title: A changing market for PFI financing: evidence from the financiers

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Keywords: PFI financing, credit crunch, financiers, risk transfer, UK

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Abstract: Responses to a questionnaire survey received from PFI financiers, and interviews with senior managers, show that as the credit crunch took hold banks became more risk averse. The prediction of Toms et al. that collusion between the state and the private sector might cease in the face of austerity does not appear to have occurred. Rather the state has intervened to benefit the private sector. We argue that two successive UK Governments intervened in the market to protect the role of private finance in PFIs but whether such interventions represent value for taxpayers' money is a question for future research.

Response to Reviewers: A changing market for PFI financing: evidence from the financiers

REVIEWER'S COMMENTS:

This is an interesting article with lots of promise. Its main arguments are that the financial / banking crisis had the potential to disrupt the PFI financing model in the UK which depends upon bank bond financing. This article takes the position that the banking crisis was less disruptive than might have been and this was because the UK government intervened to guarantee bond financing arrangements. The author(s) then employ a survey and response to questionnaires to take a 'financiers' view of the PFI funding model and use these responses to assess the extent to which the PFI funding model is disrupted or at risk.

AUTHORS' REPLY:

Thank you for this supportive comment, and for the helpful suggestions and links below.

I have a number of issues with the paper which are about structure and setting things up first of all. That is what is the objective of the paper and how is it generally structured needs tidying up

Section 1 on the Nature and development of PFI

I would like the authors to set up the introduction more powerfully. The first thing is the growth in UK PFI projects and funding details and charts showing growth in PFI. Also the projected on-going PFI costs to UK Government (unitary charge)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/267590/PU1587_final.pdf

AUTHORS' REPLY:

We have rewritten the introduction, and explained the impact of the credit crunch on the European PPP market.

The significance of UK PPPs in Europe has been highlighted in section 2.

Government departments can use PFI to leverage up their budgets without using their allotted capital budget—the investment is additional and not budgeted for.

In a typical PFI project, the private sector party is constituted as a Special Purpose Vehicle (SPV), which manages and finances the design, build and operation of a new facility. The financing of the initial capital investment (i.e. the capital required to pay transaction costs, buy land and build the infrastructure) is provided by a combination of share capital and loan stock from the owners of the SPV, together with senior debt from banks or bond-holders. The return on both equity and debt capital is sourced from the periodic "unitary charge", which is paid by the public authority from the point at which the contracted facility is available for use.

<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtreasy/1146/1146.pdf>

We need to have something on the finance structure of PFIs in terms of the use of SPVs and the typical leverage ratio (debt to equity funding). See NAO report 2012 for the cost structure of an average PFI.

Point about PFI as being highly leveraged which allows investors (equity) to take large profits when they sell on and exit from contracts. So authors also introduce the nature of the 'secondary market'

AUTHORS' REPLY:

We have explained the structure of a typical PFI project by drawing from the House of Commons Treasury (2011) report. The deliberate use of high leverage to maximise return on equity has been noted.

What is P2 and how is this designed to limit leverages returns to equity holders The structure of PF2 curbs the ability of primary investors to generate excessive profits and, consequently, the potential for windfall gains on secondary market sales through measures including a mechanism to share unutilised funds in the lifecycle reserve, the removal of soft services where contractors have typically included a risk premium in the pricing and the introduction of public sector equity

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/205112/pf2_infrastucture_new_approach_to_public_private_partnerships_051212.pdf

AUTHORS' REPLY:

We have discussed the 2010 Conservative-Liberal government's new approach to PFI in terms of its aspirations to curb down private sector profits, immediately after discussing the use of SPV to manage risks and use of leverage to maximise equity returns.

Section 3 Factors limiting/challenging the sustainability of PFI

A] The banking crisis and the role of bank finance: supply of funding and interest spreads
Quotes and data from surveys here

Response ..Government interventions to secure funding

B] The secondary market windfall gains and profits extraction ..Evidence on this

Response...PF2 -what is this and why these regulations introduced

C] The fact that accounting regulations have changed and so PFI risks are back on the Governments balance sheet (more on this)

D] Austerity packages are not yet implemented and budget cuts of up to 20 per cent envisaged

See table 2.11

<http://cdn.budgetresponsibility.org.uk/41298-OBR-accessible.pdf>

Problem is that PFI is split variable between departments (some will be more or less affected by austerity cutbacks)

Also Governments versus local authority responsibility

And variability in terms of capital and service cost arrangements

AUTHORS' REPLY:

We have restructured the paper as you suggest to focus on the factors challenging the sustainability of PFI. This is now section 4 which has four sub-sections and specified areas of government intervention. Thank you in particular for the link to the PBR report which was helpful.

A changing market for PFI financing: evidence from the financiers

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A changing market for PFI financing: evidence from the financiers

Abstract

Responses to a questionnaire survey received from PFI financiers, and interviews with senior managers, show that as the credit crunch took hold banks became more risk averse. The prediction of Toms *et al.* that collusion between the state and the private sector might cease in the face of austerity does not appear to have occurred. Rather the state has intervened to benefit the private sector. We argue that two successive UK Governments intervened in the market to protect the role of private finance in PFIs but whether such interventions represent value for taxpayers' money is a question for future research.

Keywords: PFI financing, credit crunch, financiers, risk transfer, UK

A changing market for PFI financing: evidence from the financiers

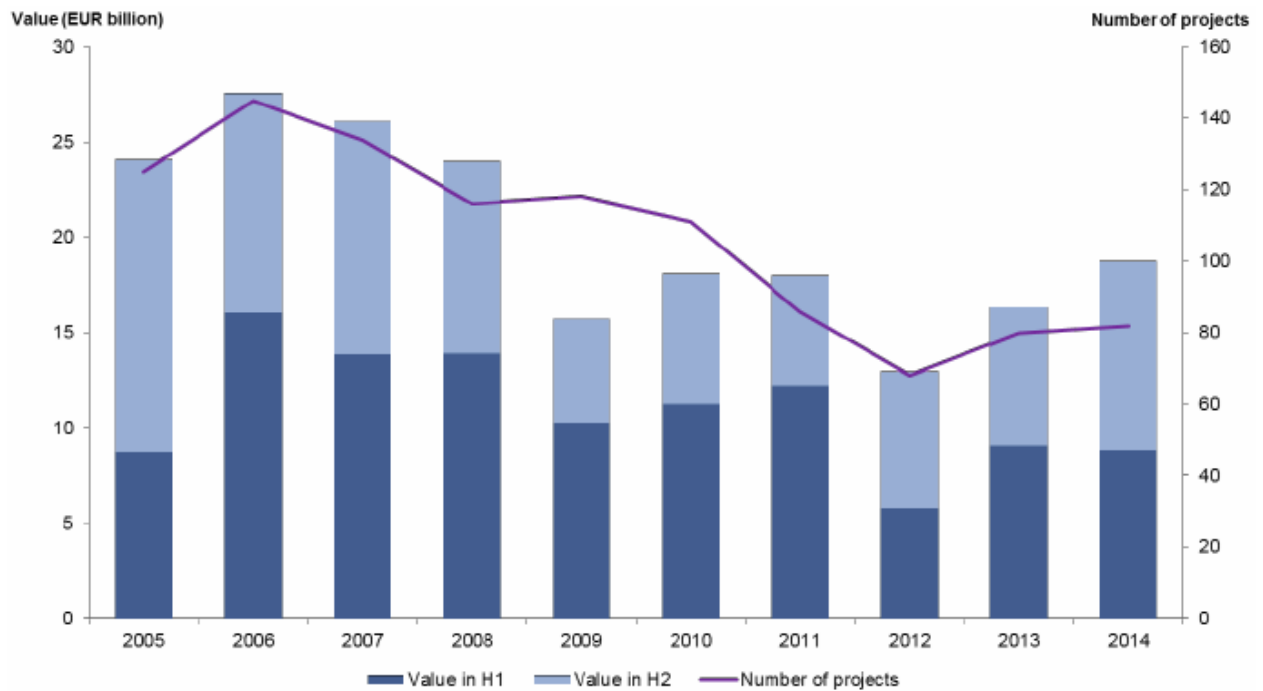
1. Introduction

For many years, the UK has been a leading proponent of policy initiatives that encourage the use of private finance and the involvement of private companies in the delivery of public infrastructure and some related services. Internationally similar policies have been developed in many countries, although the precise nature of the public-private partnership (PPP) or private finance initiative (PFI) arrangements, by which the policy is generally delivered, does vary across countries.

Before the credit crunch the global PPP/PFI market was growing substantially. In Europe the value of PPP transactions that reached financial close was approximately €29.6 billion in 2008, with 136 projects signed (Kappeler and Nemoz, 2010: 7; Burke and Demirag, 2015). This growth was supported by what Tom's et al., drawing on Miliband (1969), describes as collusion between "loose alliances of monopoly capitalists and monopoly regulators" (Toms *et al.*, 2011: 671). An entire public services industry grew up, which lobbied intensively and spent significant sums to create a sympathetic environment amongst politicians of all parties for more private involvement in public services (Gosling, 2008). But the credit crunch and the recession that followed led Toms *et al* (2011) to ask whether political and fiscal momentum might be mobilised to stop that pattern of collusion.

During the credit crunch the value and number of PPP transactions that reached financial close declined substantially (Refer to figure 1). A recent report by the European PPP Expertise Centre (EPEC, 2013) confirmed that in 2012 the volume of PPP activity was at its lowest level for 10 years. The value of deals that reached financial close was just €11.7 billion, with the transport sector accounting for the majority of such investment (EPEC, 2013). Post 2012, the European PPP market started to recover. In 2014, the aggregate value of PPP transactions which reached financial close in the European market grew to €18.7 billion, a 15% increase over 2013 (€16.3 billion), with 82 PPP transactions reaching financial close (80 deals closed in 2013) (EPEC, 2014).

Figure 1: European PPP/PFI market 2005-2014 by value and number of projects



Source: EPEC (2014, p.1) http://www.eib.org/epec/epec_market_update_2014_en.pdf

In practice, the economic environment reduced the global market for PPP finance especially senior debt and bond finance. The start of the financial crisis immediately created uncertainties in the PPP industry, to which governments responded. In the UK, governments made frequent interventions into the PFI financing market to improve investor confidence (Broadbent et al., 2008). Due to the shortages of private finance, paradoxically, the Government was compelled to release public money to support PFI projects (House of Commons, 2009). For example, the Infrastructure Finance Unit (IFU) provided £120m to complete a £582m waste project. This intervention was deemed to be successful as the NAO (2010) argued that HM Treasury's willingness to lend, improved market confidence to the extent that in the following 12 month period 35 new deals were signed without further loans from the IFU. However, this optimism has not lasted and the government still perceives that there is a shortage of capacity in the market, leading to various initiatives including changes in its policies on risk transfer (HM Treasury, 2012). All of this is aimed at making the various forms of PPP/PFI more attractive to private investors.

Hence this paper's objectives are to briefly outline firstly, the nature and development of the private finance market in the UK. Secondly, it outlines the challenges in this market

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place that threatened the sustainability of PFI and which led to interventions from two governments (Labour until May 2010 and subsequently the Conservative and Liberal Democrats Coalition) aimed at propping up a means of providing public services to which all are ideologically committed perhaps as a credit rationing avoidance strategy (Toms *et al.*, 2011). Thirdly, the paper investigates how these changes affected the financiers' perceptions of risk.

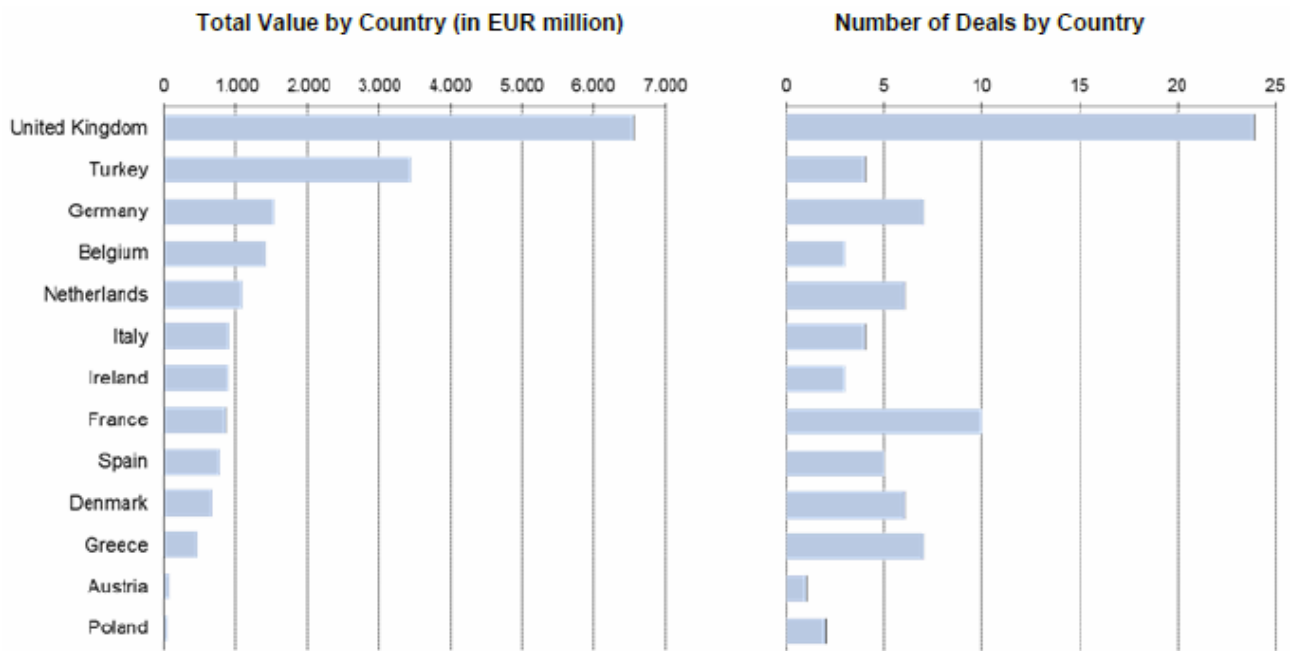
This paper contributes to the PFI financing literature (Asenova and Beck, 2003, 2009, 2010; Demirag et al., 2011, 2012), which identifies finance capital as the driver of the private finance policy whereby the nation state acts as broker (Armstrong, 2006; Asenova and Beck, 2010). We examine how financiers perceive the turbulent market through a questionnaire survey and interviews. Whereas prior studies often focus on case studies in specific sectors or rely upon a relatively small number of interviews, the questionnaire survey has wider coverage. Moreover, this study focusses on the perception of financiers and differentiates between different forms of equity and debt investors, because they have differing characteristics and have been subjected to different forms of pressures post credit crunch.

This paper is organised as follows. The next (second) section explains the nature and development of PFI in the UK. The third section explains the research methods. The fourth section presents the findings. It provides insights into the repercussion of the crisis on the PFI market and examines the interventions made by governments to prop up this market. It also discusses how the financiers perceived the changing PFI market. The final section concludes the paper.

2. The nature and development of PFI in the UK

PPP in the UK commonly takes the form of PFI, under which the relationships between the public sector procurer and private sector contractors are characterised and managed by legally binding long-term contracts for the infrastructure and underlying facilities management services. The UK is the biggest player in the European PPP market, as Figure 2 shows, both in terms of value and number of projects - 24 transactions closed in 2014 (compared to 31 in 2013) with a value of about EUR 6.6 billion (EUR 6 billion in 2013).

Figure 2: Country breakdown by value and number of transactions in 2014



Source: EPEC (2014, p.2) http://www.eib.org/epec/epec_market_update_2014_en.pdf

In a typical PFI project, the procuring authority signs a contract for 30 years or more with a private sector partner which is constituted as a Special Purpose Vehicle (SPV) to design, build, finance and operate a new facility (House of Commons Treasury Committee, 2011). To limit the risks to the amount of equity subscribed by the investors, each PFI project is delivered via a SPV established by the private sector consortium, which won the contract in a tender bidding process. In the early days, the equity raised typically comprised 1% pure equity and some 9% subordinated debt. Typically the remainder comprised senior debt from banks or bond-holders (NAO, 2012; Demirag *et al.*, 2012).

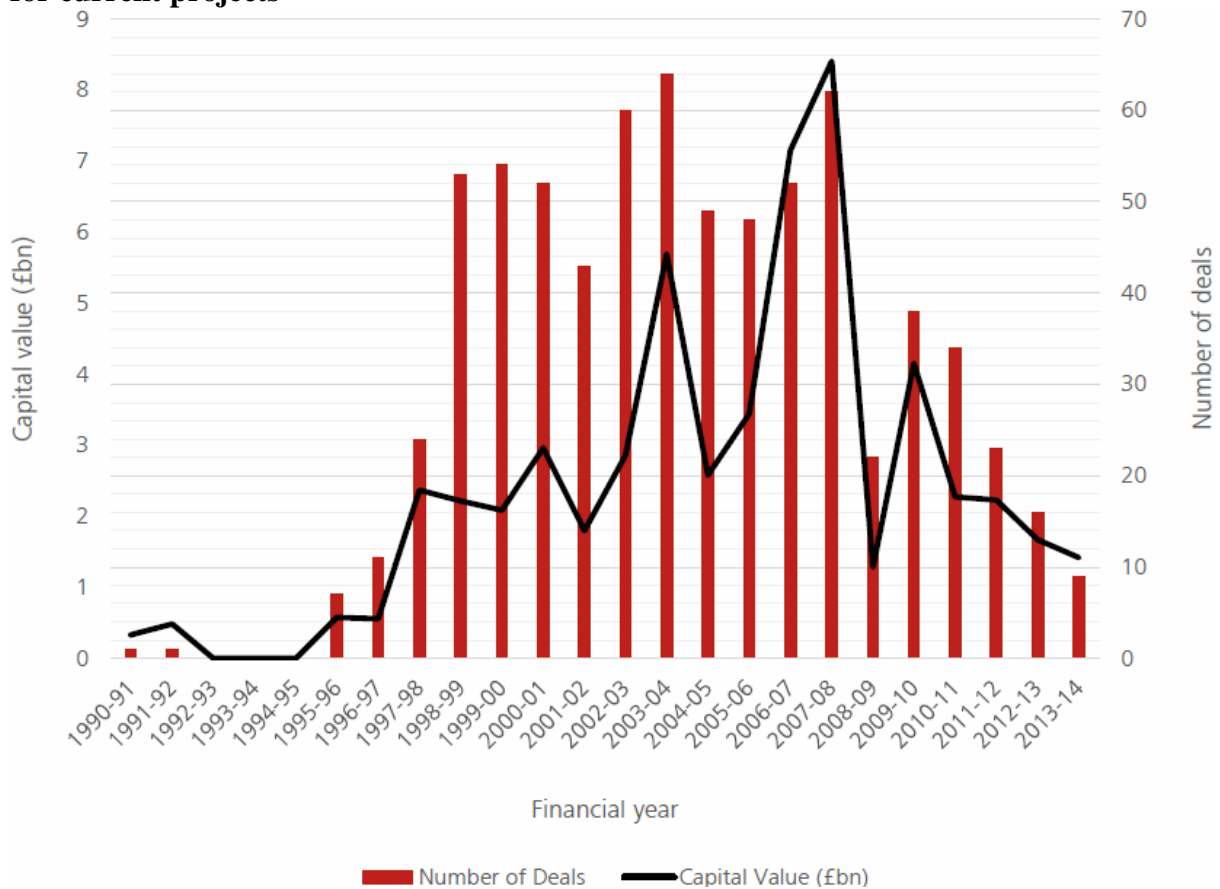
The SPV, which is usually a shell company, sub-contracts the tasks of the project to companies that are usually related companies of the consortium members. These sub-contractors have the range of skills needed to design build and operate the infrastructure and to provide selected related services. The consortium will usually establish relationships with one or more bank or bond-holders to provide the debt capital. The debt holders will sign a separate financing agreement with the public procurer, which will allow them step-in rights to protect the debt capital in the event that a contractor fails (Demirag *et al.*, 2011).

Payment is a deferred mechanism over the lifetime of the project. Once the facilities are available for use, the procuring authority makes a single annual payment, known as a unitary charge, to cover the capital and revenue costs as well as the financing costs. The fact

that the SPV is highly leveraged often allows the equity partners to make large returns on their equity investments, and take large profits when they sell on and exit from PFI contracts. Equity financiers do not exclusively rely on dividends and profits from the SPV to generate returns. They also generate profits by sub-contracting building and facilities management work to their related group of companies.

The PFI policy was first announced in 1992, but did not really begin to have an effect on service or infrastructure delivery until after a change of government in 1997. Since that time and until the start of the financial crisis the policy expanded rapidly both in terms of numbers and value of projects. As figure 3 shows, after a gentle start the number of deals and their capital value rose fairly steadily to a peak in 2003-04, maintained a lower but substantial level for three years, and then peaked again in 2007-08. Thereafter, as the financial crisis took effect the trend is substantially downwards. Nevertheless by March 2014, there were in total 728 current projects with a combined capital value of some £57 billion.

Figure 3: Number of projects reaching financial close and total capital values incurred for current projects



Source: HM Treasury (2014, p.8)

The projects are unevenly spread across departments. As of March 2013, Table 1 shows that The Department of Health has been the biggest source of projects by capital value, although The Department of Education has the most projects. However, these statistics only include projects that are current on that date, so that they exclude projects that were signed but were subsequently terminated. For example, the terminated London Underground project with a capital value of £16 billion significantly increases the value of projects signed by the Transport department.

Despite the fall in new activity over the period since 2007-08, the annual revenue spending continues to rise. For example, the UK's estimated future payments are expected to carry on rising well into the middle of the 21st Century as new projects come on stream (HM Treasury, 2007&2009).

Table 1: Total value of current PFI projects across government as at 31 March 2014

Department	Number of projects	Capital Value (£m)
Cabinet Office	1	6.7
Crown Prosecution Service	1	18.2
Department for Business, Innovation and Skills	1	21.8
Department for Communities and Local Government	74	2728.9
Department for Culture, Media and Sport	17	348.9
Department for Education	168	7799.5
Department for Energy and Climate Change	1	5.5
Department for Environment, Food and Rural Affairs	30	4073.2
Department for Transport	62	7878.8
Department for Work and Pensions	3	1102.7
Department of Health	123	12082.9
Foreign and Commonwealth Office	1	17.1
GCHQ	1	331.0
HM Revenue and Customs	8	862.1
HM Treasury	1	141.0
Home Office	28	1047.9
Ministry of Defence	41	9042.
Ministry of Justice	23	798.6
Northern Ireland Executive	38	1985.1
Scottish Government	83	5690.0
Welsh Government	23	566.7
Total	728	56549.5

Source: HM Treasury (2014, pp.9-10)

PFI was revised (in the form of PF2) by the 2010 Conservative-Liberal coalition government with the stated intention that this would limit the returns to equity partners and enable the public sector to share the equity returns. The intention was that PF2 should limit the ability of equity investors to generate excessive profits and, consequently, the potential

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for windfall gains on secondary market sales. Measures to achieve these aims included a mechanism to share unutilised funds in the lifecycle reserve, the removal of soft services where contractors have typically included a risk premium in the pricing and the introduction of public sector equity (HM Treasury, 2012).

3. Research methods

This study uses data collected from a survey of and interviews with PFI financiers. Drawing on the database of PFI projects provided by Partnerships UK, we identified one hundred and nine financial organisations, including equity financiers, banks that normally provide senior debt and bond holders whose loans may be cheaper than senior debt for the biggest projects. Initially, the survey was designed based on a literature review, government publications on PFI (e.g. HM Treasury, 2003a&b) and pilot interviews. Feedback from academics, consultants, and debt and equity financiers led to a revision. The questionnaire instrument was administered in July 2008. Non-respondents were followed up in October 2008. A response rate of 39.4% was achieved with 43 usable responses from debt and equity financiers. SPSS (Statistical Package for the Social Sciences) for used for data analysis.

Between June 2006 and May 2009, 29 interviews were conducted with 31 senior participants in six projects covering five sectors: hospitals, prisons roads, schools and social housing. Participants included SPV managing directors, senior managers at private equity firms and senior directors from banks. Between February and June 2009, eight survey respondents were randomly selected for follow-up interviews to further explore issues raised by the questionnaire but also to better understand the context of and rationale for the respondents' replies.

Interviews were mostly semi-structured in nature but towards the end of the interview supplementary structured questions were used to pick up any outstanding issues. Interviews were tape recorded, transcribed, and coded for analysis using Nvivo. Initially, codes were identified from key themes in the literature, but these were later extended to add new themes identified by the interviewees, such as sector specific risks and the role of agents.

For the purpose of analysis, transcripts were read several times to extract themes but also to understand the context of each coded section. Our interpretation has recourse to common perceptions across several interviewees but also to different perspectives. We triangulated key themes across secondary data sources to identify contrasting viewpoints and reduce the possibility for bias.

1 Interviews were anonymised with the following codes. Interviewees coded SD 1–8 are
2 employed by institutions supplying mostly senior debt, E 1–7 are from equity providers, and
3 CE 1-8 are from organisations providing both equity and either construction or facilities
4 management services. PS 1-8 are public sector employees.
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8 9 **4. Factors challenging the sustainability of PFI**

10 Although there is a long history of companies raising project finance, the PFI market was
11 innovative because of the lengthy contracts involving finance for 30 or more years.
12 Respondents reported their memories of the early market place as an environment
13 characterised by significant uncertainty about the types and nature of risks and the likely risk-
14 return rewards. Evaluation models to assess these new projects had to be developed, and
15 initially there was concern about their robustness. However, as the industry matured,
16 understanding of risk and its evaluation grew, evaluation models standardised, and a broad
17 range of risks were mitigated to limit the financiers' risk. Typically, SPV risks were assigned
18 to subcontractors or insured and debt products became commodified. Changes in the industry
19 were those normally associated with growth, as, for example, the increase in primary
20 investment funds and the development of a secondary market allowing investors to exit.
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31 But then the market place for PFI was hit by a number of inter-related factors which
32 challenged its sustainability. This new environment was characterised by less competition,
33 higher costs and was generally less receptive to PFI. However, as governments' policy
34 continued to favour private finance solutions to the supply of public services and
35 infrastructure a number of interventions were made. These challenging factors and the
36 related interventions, which are each discussed in turn, include: (a) the banking crisis and the
37 impact on the supply of finance with knock on effects in terms of rising interest rates; (b)
38 private sector returns and risks; (c) problems inherent in the PFI model; and (d) the change in
39 accounting regulations and forthcoming austerity packages.
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49 **(a) The banking crisis and the supply of finance**

50 Following the collapse of Lehman Brothers, a number of significant economic factors, such
51 as asset price inflation, disparities in current accounts, high leverage and credit becoming less
52 easily available, triggered the crisis worldwide (Claessens et al., 2010). A huge deficit
53 between bank loans and deposits resulted (Thorhallsson and Kirby, 2012: 802). Governments
54 suffered reduced access to risk free borrowing (Toms *et al.*, 2011) or were unable to raise
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1 funds on international markets, and together with budgetary pressures and poor regulation
2 this contributed to many countries' economic and financial problems.

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4 The global crisis led to significant debate about risk management in the banking sector,
5 which resulted in considerable revision of regulatory frameworks and caused a decrease in
6 the number of lenders to PFI projects (Vásquez and Federico, 2012). Some institutions left
7 the market place completely. The market, which was already characterised by limited
8 competition because of structural issues such as level of bid costs and time taken for
9 procurements, (Grimsey and Lewis, 2005) became 'even less competitive' (SD6). Another
10 outcome of the crisis was that many operational PPP projects had to be rescued by
11 Governments around the world (Claessens et al., 2010; Crotty, 2009), which in turn adversely
12 affected the availability of credit for this market (Farquharson and Encinas, 2010; Connolly
13 and Wall, 2011; Ang and Marchal, 2013).

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22 Regulatory changes also had a negative effect on funding for infrastructure investment.
23 These measures include the EU's Solvency II Directive, which has implications for insurance
24 firms, and the Alternative Investment Fund Managers Directive for asset managers (Ang and
25 Marchal, 2013). As of January 2008, the Basel II requirements, which are obligatory for
26 lenders subject to the Capital Requirements Directive, have caused much debate (CML,
27 2008). While it is the stated intention that overall capital requirements should remain largely
28 unchanged (BIS, 2004), concern has been raised that they may not only reduce the
29 availability of senior debt but they may also affect its pricing.

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37 This was followed by the introduction of Basel III which was approved in 2010 by the
38 G20 following the financial crisis (BIS, 2010). It was intended to reconfigure the approach to
39 regulatory and risk matters (PwC, 2011a) in the financial sector, in an effort to ease future
40 economic shocks (KPMG, 2011). That is, its primary aim is to improve financial stability
41 and to strengthen capital and liquidity requirements so that governments will not have to bail
42 out banks in the future (PwC, 2011a). KPMG (2011) and Burke and Demirag (2015) argue
43 that Basel III is expected to impact on the lending capacity of banks with the liquidity ratio
44 requirements exerting pressure on the ability of banks to engage in short term lending. Vecchi
45 et al. (2013) contend that this also has implications for banks' lending to PFI equity
46 providers, because much of the equity is in practice subordinated debt. For example, the
47 Basel III's stability ratios are likely to make PFI loans more expensive (HM Treasury, 2012).
48 It will also limit banks' long term lending to PFI projects because there must be matching of
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1 the liabilities and assets on banks' balance sheets inevitably resulting in shorter-term debt
2 with more expensive ratchets and refinancing requirements (PwC, 2011b).

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4 Furthermore, the credit crunch essentially wiped out the mono-line insurer credit
5 enhancement market. Previously a triple A rated mono-line wrap reduced the cost of debt for
6 PFI projects that typically otherwise attracted low investment grade BBB or BBB minus.
7 The mono-line carried the credit risk of the project, but there was sufficient arbitrage between
8 the price charged by the mono-line and the reduced cost of debt to the borrower. Post credit
9 crunch the mono-lines were unable to create this arbitrage benefit (Demirag *et al.*, 2010). In
10 practice, both bond and bank finance were restricted substantially (Wagenvoort *et al.*, 2010).
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16 Attitudes to risk also changed. Those players who remained in the market were more
17 cautious about financing deals. For example, interviewees explained that before the crisis
18 one lead bank was likely to lend all the senior debt, perhaps seeking syndication after
19 financial close, whereas post crisis deals could only be closed if a number of banks would
20 each lend a proportion of the total debt.
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25 *We have got a syndicate of maybe four or five banks...pre-credit crunch is all about*
26 *competition, driving down markets and so on... Post-credit crunch you have got the*
27 *situation where pricing is well above what it used to be and is always going to cost you*
28 *more to go through refinancing...*
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33 Contracting equity and pure equity investors agreed with PwC's (2011b) assessment that
34 banks were reluctant to lend long term. A typical quote suggests up to ten years:
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36 *Banks are looking to lend typically seven, eight, no more than ten years. (E5)*
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38 But even some debt holders recognised that this creates a mismatch between the project's
39 length and financing:
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41 *A lot of banks are pulling away, saying that we can't lend that long anymore and it*
42 *creates a bit of a quandary because when you have got a 25year concession and a bank*
43 *says, well we are only going to lend over seven years, it just doesn't make sense, you*
44 *know the finances just don't stack up to make it an affordable project. Seven years and*
45 *25 leaving a gap. (SD1)*
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51 However, not all senior debt lenders necessarily agreed that there was a problem. For
52 example, SD6 argued that banks could still lend over the longer term in the right conditions
53 but he accepted that refinancing would probably occur between seven and ten years into
54 projects. While this time frame necessarily creates additional risk for equity investors, the
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refinancing risk may also affect the public sector. Thus, the market environment has reverted to earlier times with re-negotiations during the PFI lifecycle:

We all hope that in the next seven years the banking markets will come back to some degree of normality, but the risk is that they may not... So there is a risk there that we didn't have before... we are taking lots of downside risk on the ability to be able to refinance in the future. (E5)

If refinancing was difficult a cash sweep would follow, entailing reduced returns for equity because the public sector would probably only share a proportion of this loss.

The nervousness about long-term lending in an uncertain market together with lack of competition inevitably affected loan pricing:

The length of a loan has now become a very important part of the pricing because banks are getting much more nervous about long-term lending. Because there is just more uncertainty about finance and the future (SD1).

Interest costs for PFI projects increased (Farquharson and Encinas, 2010). According to a House of Commons (2010) report, finance costs for PFI increased by up to 33% in 2009, impacting considerably on value for money (NAO, 2010), and increasing unitary payments compared to deals negotiated before the credit crisis (NAO, 2011). Although there must be questions about whether questionnaire respondents will accurately report the margins they achieve on PFI deals, the comparison between reported margins before and after the financial crisis does offer some insight. About two thirds of survey respondents were originally declaring margins in the range of 60 to 100 basis points on LIBOR (refer to Table 1), but at the later interviews respondents were declaring a range of 200 to 250 basis points as the credit crunch took effect.

Table 2: Average margin over LIBOR for debt, or spread over GILTS for bonds as declared by respondents

	%
100 + basis points	16.7
80 < 100 basis points	41.6
60 < 80 basis points	25.0
40 < 60 basis points	8.3
20 < 40 basis points	4.2
Less than 20 basis points	4.2
Total	100.0 n=24
Mode	80 < 100 basis points

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However, margins are affected by both the sector and the nature of the project:

...that is very project specific. I would say that you would expect a lower rate of return for that simple schools deal transaction ...to what might be a prison transaction where you are taking more operating risk. Within a certain margin there is some movement but it is not huge in PFI terms. (SD2)

But concern was also reported that the government had failed to negotiate with the banks to assist PFI lending, so that an estimated £1billion was added to contract prices over 30 years for 35 affected projects (House of Commons, 2010). This House of Commons report also pointed out failings that suggest a lack of control by HM Treasury. For example, it noted that the Treasury did not have full information on project financing costs during the credit crisis, and recommended that if PFI projects with low operating costs could be unbundled from their high financing costs and refinanced then the Government should be able to claw back some £400 million.

Government interventions (i) - The commitment to private finance

Early in the financial crisis the extant Labour government responded to the perceived lack of supply of finance by encouraging the European Investment Bank to hold more risk and to lend more, faster (HM Treasury, 2008). However, this was not particularly successful as there was over reliance on expensive bank finance and limited efforts to obtain more competitive finance from the European Investment Bank (House of Commons Treasury Committee, 2011). There is evidence that the credit crunch delayed the signing of new projects (Connolly and Wall, 2011), even though in the UK the extant Labour government sought to reverse the recessionary downturn by bringing forward capital spending. This may be because in practice it is difficult to quicken up investment, especially in sectors where planning permission is likely to be disputed.

In March 2009, the Labour government intervened with a temporary but politically controversial initiative that made available public money if private finance was not available on acceptable terms (House of Commons, 2009). Over a period of 12 months, between £1bn and £2bn (Leitch, 2009) was available to all PFI projects in procurement securing the future of a £13bn pipeline (Millett, 2009). The International Monetary Fund warned that such interventions should be contingent on circumstances so that moral hazard is avoided and justified on economic grounds only to support wider fiscal policy (Burger et al., 2009).

1 The change of government in 2010 brought significant uncertainty as the incoming
2 Conservative-Liberal Democrat coalition moved quickly to implement its deficit reduction
3 agenda at the same time as it also sought means to ease the raising of private finance. It
4 abolished the PFI-credit scheme, which provided a financial incentive to use this form of
5 financing, arguing that this would create a level playing field for all forms of public-sector
6 procurements. It also announced reductions in public spending, cancelled some on-going
7 capital expenditure, for example the Building Schools for the Future programme was
8 terminated, and constrained new capital expenditure. But this was paralleled with attempts to
9 encourage private financiers to commit resources through initiatives such as risk-
10 underpinning, and temporary capital contributions (HM Treasury, 2012).
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18 In 2011 the government launched an enquiry involving, it said, a broad spectrum of PFI
19 stakeholders, into the value for money in the existing PFI model (HM Treasury, 2011).
20 Despite the uncertainty in the PFI financing market and confirmatory suggestions in
21 academic literature that PFI's future was uncertain (Hodges and Mellet, 2012) because of
22 increased credit risks and costs, this enquiry essentially led to HM Treasury reaffirming its
23 commitment to using private finance. However, HM Treasury did concede the desirability of
24 change (Treasury, 2012), a point we will return to later.
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32 **(b) Private sector returns and risks**

34 There is only limited information about investors' rewards and risks from PFI projects in the
35 public domain. Information about rewards may be gleaned from a small number of academic
36 papers (for example, Acerete *et al.*, 2010; Shaoul *et al.*, 2011), which calculate the return to
37 date on specific projects but which carry the caveat that the projects have a long time to run,
38 and from National Audit Office reports. This latter source has examined rewards on some
39 individual projects, but in 2012 the NAO published aggregated results from a survey across
40 118 PFI operational projects. The NAO reported that investors in 71% of these projects
41 responded that their returns were equal to or greater than anticipated rates of return and that
42 of these 43% were forecasting significant improvements over initial expectations (NAO,
43 2012). Overall across some 700 PFI projects, investors have lost their investment or had to
44 inject more capital in only a few projects and indeed the NAO noted that there can be
45 reputation risks to private sector partners when high returns become public.
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56 The NAO indicated that the government is perceived as a very safe client to do business
57 with, and in any event the risks equity investors have been subjected to so far have been
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1 limited as risks are often passed on to contractors by means of fixed price contracts (NAO,
2 2012). Furthermore, as the PFI market matured and stabilised firms gained repeat businesses,
3 which reduced their risk (Toms *et al.*, 2011). However, this NAO report also pointed out the
4 importance of equity investors as risk takers. In addition to project related risks these
5 investors are also subject to risks associated with whether the bids will be successful, whether
6 their selected contractors fail or persistently underperform and that the life cycle costs will be
7 greater than anticipated.
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12 One specific risk that caused uncertainty when the early PFI projects reached financial
13 close, was how investors might be able to exit these investments. For some, the ability to exit
14 was important. About 20% of our questionnaire respondents signalled their intention to exit
15 before the end of the PFI term and only about two thirds definitely intended to commit over
16 the whole life of the PFI. Despite the initial uncertainty, prior to 2007 a reasonably settled
17 secondary market had evolved, in which equity could be sold to new investors or specialist
18 secondary market funds (PwC, 2008). Indeed, a study carried out by the European Services
19 Strategy Unit (ESSU) (2011) indicated that the sale of equity in PFI companies rose rapidly
20 during the 2000s and showed that sales actually increased through the global financial crisis.
21

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25 However, although the secondary market was growing, some equity investors were
26 inclined to hold the investment, at least for a period. A senior debt provider explained:
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32 *Everybody is trying to get a share of the primary equity...it's the top of the food chain.*

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37 *The contractors are now realising how valuable this equity is and might sit on it for a
while, and then sell it (SD5)*

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Others reported their desire to generate a reputation for holding their shares in PFI. By way of
example, CE4's advertising literature states it has not sold PFI shares, and E1 explained his
firm takes a long term investment perspective and would not normally sell PFI shares. But,
when pressed further, he agreed that the firm had sold eight PFI projects at, what he
explained was, 'an extraordinary moment in our history' (E1).

Investors' returns quickly became a controversial element of this industry, when the
earliest deals were refinanced giving primary investors substantial benefits but in some cases
increasing the projects' risks for the public sector (Edwards *et al.*, 2004). The refinancing
benefit was possible, because, especially in the early years of PFI, the construction phase was
often perceived to be high risk. Therefore after construction, PFIs that were demonstrating
good operational performance could be profitably refinanced.

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4 Furthermore, the financiers explained that as the industry matured interest rates became
5 lower than those fixed on the earliest projects because the industry was gaining experience of
6 PFI. Refinancing was therefore profitable:

7
8 *You refinanced it – basically you could make a big profit, and the equity made a big*
9 *profit out of it, and the banks were happy to recycle because they were just given their*
10 *money back. (CE2)*

11 As the bond and senior debt markets matured, it also became possible to refinance to raise
12 loans or fix interest rates that initially could only be fixed for perhaps ten years:

13
14 *As the PFIs become more mature ... the capital market has become more efficient,*
15 *such that you can borrow thirty year money against a thirty year project. In the early*
16 *deals interest rates could not be fixed for thirty years, they could only be fixed for*
17 *maybe ten years. (E5)*

18
19 Press reports quickly picked up on some very large benefits gained by private partners which
20 in the early contracts were not shared with the public sector. At interview respondents were
21 especially eager to address criticisms that early costs of finance were too high as risks were
22 over estimated. Respondents argued that high initial rates reflected deep industry uncertainty
23 about risk:

24
25 *The problem is the Government has been embarrassed...when nobody knew how this*
26 *sector was going to work, there are probably some unacceptable gains that have been*
27 *made. But having said that those early deals were pioneering... (SD5)*

28
29 Indeed this respondent argued that the industry had not been sufficiently robust in its own
30 defence:

31
32 *I'm not really sure why they're not more robust in defending the sector (SD 5).*

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34 As Table 3 shows, the main objectives of selling or refinancing reported by our respondents
35 were to increase the return or liquidity, and lower borrowing costs.
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Table3: Refinancing or selling on equity in PFI Projects

Reasons	Total	Number refinanced	Number sold on
Increase your return	29	18	11
Increase your liquidity	24	7	17
To take advantage of lower borrowing costs	14	14	0
Other private sector partner request	12	5	7
To manage your risk portfolio	11	3	8
To lower risk profile of project being refinanced	4	3	1
Smoothing of returns	3	2	1
Public sector partner request	2	1	1
As a result of contract renegotiations	2	2	0
Others	3	0	3
Total responses	n=36	n=36	N=36
Mode		Increase return	Increase liquidity

Although most survey respondents disagreed that risks were overestimated historically, the early opportunities for profitable refinancing that reduced as the market matured, might suggest the opposite.

Government interventions (ii)- Refinancing

Political pressure about refinancing gains built up as evidence emerged that such deals increased public sector risks (NAO, 2000) and press stories about high returns benefiting investors were sometimes matched with stories about poor or reduced public services (as for example in the case of the Norfolk and Norwich hospital). The inevitable consequence was that government intervened, and the refinancing market was changed prior to the credit crisis when HM Treasury and the PFI industry reached an agreement to share any gains on these transactions. But this agreement did not bring as much public sector benefit as had been anticipated, as fewer than expected deals were refinanced. Over 50% of questionnaire respondents had refinanced 10% or fewer of their projects. These financiers argue that after the very earliest deals, where the largest benefits were accrued, the difference between interest rates at financial close and in the operating phase reduced, so that there was less gain to be released. In particular, they argued the potential benefits of refinancing might not outweigh the costs, if the public sector shared such benefits.

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4 Furthermore as one interviewee explained, the higher market rates of interest after the credit crunch together with the transaction costs of refinancing meant that market conditions no longer supported the refinancing of projects:

5
6 *The competitive pressure of these transactions ...means that they have already been*
7 *priced very, very finely. And I do not see a huge opportunity to refinance in the*
8 *future... Refinancing is an expensive exercise, with lawyers involved, with running*
9 *financial models, and the question is, is it worthwhile for the private sector and the*
10 *public sector, doing a refinance on a project by project basis. (SD2)*

11
12 That is, refinancing became a downside risk where previously it was a profitable and
13
14 desirable choice. This may however prove to be a temporary phenomenon. While it has been
15
16 argued that risk may be mispriced when competition is intense (Keating, 2004), the reduction
17
18 in competition between banks may also have an effect on the price of risk, and in this case
19
20 risk is more likely to be overpriced. Thus, if economies strengthen and senior debt becomes
21
22 more competitive, opportunities for profitable refinancing may again occur.
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26 While the government's intervention to claim part of the refinancing gains for the
27
28 public sector had limited success it does appear to have changed investors' behaviour. Rather
29
30 than seeking to refinance it appears they used the maturing secondary market to sell
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32 investments, possibly with the aim of avoiding sharing refinancing gains NAO (2006). In the
33
34 previous five years, just 11% of our questionnaire respondents had refinanced compared with
35
36 28% who had sold more than half of their projects, indicating limited support for the NAO. A
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38 later report by the House of Commons (2010) report also suggested that the market for equity
39
40 sales was so strong that investors might be systematically realising gains on share sales in
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42 preference to the politically sensitive strategy of refinancing debt. Whitfield (2012) estimated
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44 the value of equity transactions as £12billion between 1998 and 2012.

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46 The House of Commons report recommended that the Treasury should investigate
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48 equity sales a position supported by the ESSU, which argued that infrequent and inadequate
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50 Government oversight of equity sales in PFI companies by HM Treasury and the National
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52 Audit Office meant that the scale of equity transactions and their profitability was
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54 underestimated. This report identified 240 PFI equity transactions involving 1299 PFI
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56 projects with an average profit of 50.6 percent average value of £10m. The report's
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58 recommendations included more government intervention in the form of a new standard PFI
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60 contract, which would impose a ceiling on the level of profits from such equity sales and
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62 should give the public sector 50 percent of any profit above a defined amount (ESSU, 2011).
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2 **(c) Problems inherent in the PFI model**
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4 The changing environment, post financial crisis also exposed flaws in the PFI model, both in
5 terms of the ways that potential projects were initially evaluated, financed and managed.
6 Many respondents reported that the credit crunch was not anticipated and in particular some of the
7 changes it brought about were not adequately taken into consideration in financing models. For
8 example, the models, and indeed the legal contracts, assumed that the direction of price movements
9 would be upwards. This affected the evaluation of many cost variables, such as facilities management
10 service prices which were expected to increase annually with inflation, however as CE7 explained the
11 negative adjustment being experienced in practice had not been conceived of as a possibility.
12

13
14 The crisis exposed the problems of financing projects on a very highly geared model.
15 Lenders who stayed in the market after the credit crunch, sought to reduce their risk by
16 demanding more equity finance in deals. But the contracting equity providers found this to
17 be especially problematic. They argued that the secondary equity market had become less
18 buoyant even if the primary equity market was not seen to be in crisis. Furthermore, this lack
19 of buoyancy was perceived by the construction equity investors to be restricting their ability
20 to recycle funds (CE7 and CE2). Although these investors make profit from both equity
21 investment and the contracting work, a number of interviewees explained that their main
22 interest lies in the construction work. After the infrastructure is complete they therefore wish
23 to sell the investment to support future initiatives. However, not all shared this view. In
24 some projects these equity providers indicated that returns were sufficiently attractive to stay
25 with projects. Furthermore, compared to the shorter term investment horizon of construction
26 companies, facilities management companies and private equity firms argued there was a
27 reputational advantage in making a long term commitment.
28

29
30 Equity investors expressed frustration at the management style of other investors.
31 Equity investors perceived that they were active and closely involved with the PFI projects
32 whereas senior debt holders were more passive:
33

34
35 *One of the failings of the PPP structure is it doesn't create active management, it*
36 *doesn't create active capital, it creates static business (E3).*
37

38 While equity investors always believed that bond holders were remote, this remoteness was
39 perceived to be more problematical in the more difficult post crisis environment. Greater
40 uncertainty coupled with the bond holders' fundamental lack of knowledge about the
41 underlying projects caused them to seek more financial and other information about projects
42

1 and more performance guarantees. This need for additional assurance was perceived as being
2 greater than that required by equity or senior debt investors, although the regulatory changes
3 affecting the banks also increased the senior debt holders' information requirements as their
4 appetite for risk declined. Significantly, the perception amongst equity holders was that this
5 in turn increased their own exposure to risk:
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9 *The risk has increased because of the attitudes of the banks... the risk in the deal*
10 *hasn't (increased) but the requirement in terms of corporate guarantees, bonding*
11 *requirements ... and the general scrutiny that they will demand... has increased the*
12 *risk. (E5)*
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18 ***Government interventions (iii) – The PF2 model***

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21 The UK government again intervened in the market in particular focusing on the perceived
22 lack of supply of equity finance. It proposed a restructuring of capital components for
23 consortia companies (Burke and Demirag, 2015) in which the government would be a
24 minority equity co-investor (HM Treasury, 2012). In a reformed version of PFI, known as
25 PF2, government would be a minority equity co-investor and at the same time the overall
26 gearing-level at about 75 % would be lower than in PFI, which was typically 90% or even
27 higher. This reform was intended to strengthen partnerships and risk-management in new
28 privately-financed deals and to enable access to more sources of debt and equity finance to
29 improve the VFM of the financing of projects (HM Treasury, 2012). Although PF2 has come
30 in response to serious criticisms about, for example, lack of value for money, lack of
31 evidence that risk actually transfers as intended by the contract and higher cost of private-
32 finance, the language of the new proposal suggests that alongside intentions for improving
33 VFM, the change is (equally) driven by a perceived need for seeking affordable private-
34 finance options (Burke and Demirag, 2015). Funding competitions were introduced for part
35 of the private sector equity. The rationale was to provide a transparent market, improve
36 affordability, and to encourage long term equity investors. In particular, the deleveraging of
37 the capital structure was intended as a credit enhancement to make debt more attractive to
38 long term lenders.
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54 In 2011, a PwC (2011b) report suggested that projects should be attractive to a wider
55 range of investors than previously, and that in particular institutional investors should be
56 incentivised to provide the long term finance needed for infrastructure investments. HM
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1 Treasury agreed, accepting the need for “more investors with long-term investment horizons”
2 (HM Treasury, 2012: 7) that match the long term nature of infrastructure projects. Perhaps
3 because the Treasury had previously been criticised for failure to incentivise such potential
4 investors (House of Commons, 2010), there was a concerted political campaign to present the
5 benefits of investment in public infrastructure to new potential investors, that is, pension fund
6 managers and insurance companies. In particular, a memorandum-of-understandings was
7 signed with players in the pension funds industry. In practice some niche and boutique
8 investment banks considered designing institutional project finance products, but to date there
9 appears little evidence of any initiatives coming to market.
10

11 Acknowledging the sharp increase in debt borrowing costs together with the lack of
12 availability of long-term debt, the Treasury review of PFI (Treasury, 2012) noted
13 government’s response in terms of initiatives including UK and housing Guarantees, the
14 setting up of the Green Investment Bank, and co-lending on projects. But the review clearly
15 emphasised a shift in policy towards growth enhancing projects as opposed to, for example,
16 the many health, education and prisons projects that had characterised earlier infrastructure
17 projects. Notably, eligible projects for the £40bn UK Guarantees programme would come
18 from the transport, communications, energy and utilities sectors.
19

20 Finally, PF2 was to be supported by a new central unit which would manage the equity
21 shares held by the public, so that the government could take a portfolio approach to its
22 investments balancing risk across projects. This represents a significant change of attitude in
23 terms of the focus project finance places on the fortunes of individual projects.
24

25 **(d) Accounting regulations and the austerity agenda**

26 Accounting regulations have changed since the start of the crisis. Of particular relevance to
27 this paper are the changes that determine whether or not PFI liabilities are recorded on the
28 public sector balance sheet or not. Prior to 2009 UK government accounting followed UK
29 private sector financial reporting standards, known as FRS, but in 2009 the government
30 adopted IFRS, which increased the likelihood that PFI liabilities would be on public sector
31 balance sheet (Heald and Georgiou, 2011). This balance sheet treatment arguably makes
32 private financing of public sector projects less attractive. Furthermore, post crisis the UK
33 government also started to publish WGA (Whole of Governments Accounts), with the first
34 set published in 2009-10. The WGA include an assessment of PFI liabilities (Ahmad,
35 Connolly and Demirag, 2014). The present value of future PFI obligations, including service
36

1 charges, was shown as £144.6 billion (HM Treasury, 2012, p. 15), although data collection
2 concerns suggest that this could be an underestimate (Shaoul, *et al.*, 2008).

3
4 Together these initiatives might have created a challenge to the sustainability of PFI
5 because the associated liabilities are more visible. However, this challenge is reduced because
6 the Eurostat rules for National Accounts establish different rules for assessing whether
7 projects should appear on balance sheet. Under Eurostat rules PFI projects may remain off
8 the National Accounts balance sheet, in which case the attraction of PFI remains despite the
9 move to IFRS and WGA. However, the accounting rules in relation to the National Accounts
10 are significant in an austerity environment in which much focus has been placed on measures
11 of countries' indebtedness.
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18 Available evidence from the Office for Budget Responsibility (OBR) suggests that
19 despite a period of austerity triggered by the financial crisis more austerity is forecast (OBR,
20 2014). For example, in its July 2014 report, the OBR identified the UK's Public Sector Net
21 Debt (PSND), the difference between liabilities and liquid financial assets, as representing
22 76% of GDP. The projection given is that this measure will peak at 78% of GDP in 2015-
23 2016. Although acknowledging that governments' do not normally use Public Sector Net
24 Worth as a target, the OBR noted that this measure of the difference between liabilities and
25 all physical and financial assets has fallen sharply from 2008 onwards, and by the end of
26 2012 was a significant negative value equal to some 13% of GDP.
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35 Looking further ahead the OBR's central projection is the likelihood that, based on
36 current policies such as health and pensions spending for an aging population, the budget
37 deficit will widen sufficiently over the long term to put PSND on a continuously rising
38 trajectory as a share of national income. This is a position that the OBR describes as
39 unsustainable. As the government has not set a target for PSND as a proportion of GDP, it is
40 not clear how this debt position might affect future austerity agendas, but the OBR suggests a
41 permanent need for some combination of spending cuts and tax increases (OBR, 2014).
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48 In this context there is a huge challenge to government's ability to invest in
49 infrastructure, and this in turn creates challenges in relation to PFI. In particular, the PFI
50 liabilities have their part to play in this overall message. According to the most recently
51 available WGA, capital liabilities resulting from signed PFI deals are £37billion. However,
52 significantly just £5billion of these projects are on public sector balance sheet for the
53 purposes of the National Accounts. The significance is that PSND and PSNW are calculated
54 from the National Accounts. That is much of the PFI liability is currently not counted as part
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1 of the PSND. Were it to be included the OBR estimates that this would increase the PSND by
2 an additional 2% of GDP.

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4 In response to criticism that the Treasury may have lost control over PFI
5 commitments, the government has introduced a control total of £70billion, which will apply
6 for the five years between 2015/16 and 2019/20, to cover all commitments on all existing PFI
7 and PF2 contracts funded by central government. The extent to which this limit will act as a
8 brake on PFI spending is unclear. Firstly, the limit does not cover PFI expenditure beyond
9 central government. Secondly, as the OBR's estimate of commitments for this same period is
10 currently running at £51billion, it argues that this provides 'substantial headroom' below the
11 £70billion limit for new spending (OBR, 2014 page 52).
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20 **5. Summary and conclusions**

21 This paper has examined the changing market place for PFI financing. This was an industry
22 that was growing rapidly through the early to mid -2000s. Early concerns about high risk and
23 lack of exit strategies had been largely resolved as the industry matured. But the credit
24 crunch is perceived to have reduced competition, increased the cost of finance, and reduced
25 its availability as the financiers became more risk averse. Altogether this new environment
26 led to a reduction in the numbers of projects reaching financial closure, and to a perception in
27 government that lack of private sector lending capacity was a major constraint in the UK
28 market.
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36 Initially, debt was perceived to be a greater constraint than equity as the credit crunch
37 hit the UK. In particular, some industry participants perceived that debt financiers were
38 unwilling to lend for the full term of the project, and that their demands for information,
39 performance guarantees and oversight increased. These demands had the knock on effect of
40 increasing the risks of other members in the PFI network. However, this changed when the
41 banks began to demand a reduction in the proportion of debt to equity. Compared to the
42 previous typical level of about 90%, respondents suggested a range of between 70% and
43 85%. That is, equity investors were being pressed to increase their investment just as the
44 secondary market became less buoyant, so that they were less able to recycle cash.
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53 This perception of a lack of capacity in the equity market probably explains why the
54 PF2 model involves equity input from the public sector. Whilst the government indicated
55 that the reform of PFI was intended to develop better public-private partnerships and increase
56 the transparency of PFI obligations, the PF2 model remains in many respects similar to the
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1 predecessor PFI with the major exception of the equity, and thus risk, sharing by the public
2 sector. It is as yet too early to evaluate the effects of PF2 on the private finance market. This
3 is an area for future research.
4

5 In 2011 Toms *et al.* (2011) suggested that the financial crisis and the austerity that
6 followed on *could* shift the political or fiscal momentum towards a cessation of the extant
7 collusion between the state and the private sector in driving forward PFI. However, this
8 paper argues that the state has continued to seek resolutions to perceived or actual problems
9 that are intended to be attractive to private investors. That is, the close relationship between
10 suppliers and the state remains intact.
11

12 Refinancing appears to have changed from generating profitability and liquidity.
13 Looking forward between 7 and 10 years when credit crunch deals will have to be refinanced
14 there is a potential downside risk. While primarily a problem for equity investors, knock on
15 effects for the public sector could follow as previous experience shows. For example,
16 contract terms may lengthen. For the PF2 deals the public sector as an equity investor will
17 also be directly at risk in refinancing arrangements. Again it is too early to evaluate these
18 effects.
19

20 Prior PPP literature usually treats the private sector as if it were a single entity. But this
21 paper shows that there are distinctions to be made between the senior debt lenders, those
22 whose interest is as equity investors and those who both provide construction or related
23 services and equity finance.
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A changing market for PFI financing: evidence from the financiers

REVIEWER'S COMMENTS:

This is an interesting article with lots of promise. Its main arguments are that the financial / banking crisis had the potential to disrupt the PFI financing model in the UK which depends upon bank bond financing. This article takes the position that the banking crisis was less disruptive than might have been and this was because the UK government intervened to guarantee bond financing arrangements. The author(s) then employ a survey and response to questionnaires to take a 'financiers' view of the PFI funding model and use these responses to assess the extent to which the PFI funding model is disrupted or at risk.

AUTHORS' REPLY:

Thank you for this supportive comment, and for the helpful suggestions and links below.

I have a number of issues with the paper which are about structure and setting things up first of all. That is what is the objective of the paper and how is it generally structured needs tidying up

Section 1 on the Nature and development of PFI

I would like the authors to set up the introduction more powerfully. The first thing is the growth in UK PFI projects and funding details and charts showing growth in PFI. Also the projected on-going PFI costs to UK Government (unitary charge)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/267590/PU1587_final.pdf

AUTHORS' REPLY:

**We have rewritten the introduction, and explained the impact of the credit crunch on the European PPP market.
The significance of UK PPPs in Europe has been highlighted in section 2.**

Government departments can use PFI to leverage up their budgets without using their allotted capital budget—the investment is additional and not budgeted for.

In a typical PFI project, the private sector party is constituted as a Special Purpose Vehicle (SPV), which manages and finances the design, build and operation of a new facility. The financing of the initial capital investment (i.e. the capital required to pay transaction costs, buy land and build the infrastructure) is provided by a combination of share capital and loan stock from the owners of the SPV, together with senior debt from banks or bond-holders. The return on both equity and debt capital is sourced from the periodic "unitary charge", which is paid by the public authority from the point at which the contracted facility is available for use.

<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtreasy/1146/1146.pdf>

We need to have something on the finance structure of PFIs in terms of the use of SPVs and the typical leverage ratio (debt to equity funding). See NAO report 2012 for the cost structure of an average PFI.

Point about PFI as being highly leveraged which allows investors (equity) to take large profits when they sell on and exit from contracts. So authors also introduce the nature of the 'secondary market'

AUTHORS' REPLY:

We have explained the structure of a typical PFI project by drawing from the House of Commons Treasury (2011) report. The deliberate use of high leverage to maximise return on equity has been noted.

What is P2 and how is this designed to limit leverages returns to equity holders The structure of PF2 curbs the ability of primary investors to generate excessive profits and, consequently, the potential for windfall gains on secondary market sales through measures including a mechanism to share unutilised funds in the lifecycle reserve, the removal of soft services where contractors have typically included a risk premium in the pricing and the introduction of public sector equity

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/205112/pf2_infrastructu_re_new_approach_to_public_private_parnerships_051212.pdf

AUTHORS' REPLY:

We have discussed the 2010 Conservative-Liberal government's new approach to PFI in terms of its aspirations to curb down private sector profits, immediately after discussing the use of SPV to manage risks and use of leverage to maximise equity returns.

Section 3 Factors limiting/challenging the sustainability of PFI

A] The banking crisis and the role of bank finance: supply of funding and interest spreads
Quotes and data from surveys here

Response ..Government interventions to secure funding

B] The secondary market windfall gains and profits extraction ..Evidence on this

Response...PF2 -what is this and why these regulations introduced

C] The fact that accounting regulations have changed and so PFI risks are back on the
Governments balance sheet (more on this)

D] Austerity packages are not yet implemented and budget cuts of up to 20 per cent envisaged
See table 2.11

<http://cdn.budgetresponsibility.org.uk/41298-OBR-accessible.pdf>

Problem is that PFI is split variable between departments (some more will be more or less
affected by austerity cutbacks)

Also Governments versus local authority responsibility

And variability in terms of capital and service cost arrangements

AUTHORS' REPLY:

We have restructured the paper as you suggest to focus on the factors challenging the sustainability of PFI. This is now section 4 which has four sub-sections and specified areas of government intervention. Thank you in particular for the link to the PBR report which was helpful.