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Cost model

The government has swept aside opposition and committed itself to the use of the private sector in delivering public services. With private finance sure to have a growing role in the government's building programme, it's time to ask if PFI will be able to deliver. Davis Langdon & Everest reviews the performance of PFI projects and examines how the payment system works, as well as how it may develop in future.

Introduction: Developing PFI

The PFI model has become an established part of the procurement landscape. The report 'Building Better Partnerships' published by the Institute for Public Policy Research, recommends broad modifications to the process, whilst also arguing that the continuing role of PFIs and public-private partnerships is vital to the delivery of improved public services.

The potential for PFI to contribute to the improvement of services comes through the introduction of greater diversity in service provision, private sector management skills, more efficient use of existing assets and a stronger focus on desired outcomes.

The PFI model is also beginning to be adopted by the private sector. BT's £2.3 billion property and facilities management outsourcing deal with Land Securities Trillium is expected to break the mould for corporate PFI contracts that go beyond sales and leaseback deals.

PFI has had, in a short space of time, a significant effect on the delivery of capital assets to the public sector. Although the model has many critics, the PFI approach is delivering the largest public sector new-build and refurbishment construction programme in fifty years. This contrasts sharply with the level of public sector investment made between 1997 and 2001, which as a proportion of GDP, was at its lowest level since 1945.

The total budget allocation for PFI public expenditure in 2001-2002 is £8.67 billion. Capital investment averaging 11.5% of planned total public sector capital expenditure will be directed through the PFI over the next three years.

PFI's impact has not only been felt through an expanded public sector development programme, but also through its effect on providers, staff and end-users: -

- Many contractors involved in PFI are securing higher quality earnings from construction, FM and from their equity holdings in special purpose vehicles.

The financial incentives associated with PFI have been a major factor in generating sufficient momentum to conclude the complex PFI procurement process. The returns on PFI projects are

significantly higher than the 1-2% margins on conventional contracts, according to HSBC (see table 1).

- The opposition of the public sector workforce to PFI has gained a higher profile as part of the post-election 'summer of discontent' and will feature in potentially hostile debates.

PFI health projects where the non-clinical workforce remains employed by the public sector are being tested in response to these concerns.

- Public sector stakeholders are seeking more involvement in the PFI process. Kirklees Council has recently become the first public sector PFI client to purchase an equity stake in a SPV, obtaining a significant (30%) voting interest schools consortium.

- Design, specification and procurement expertise is migrating to private sector consortiums at the expense of the public sector, potentially limiting the scope for diversity in the provision of services by the public and private sectors.

There remains widespread concern about the appropriateness of private investment into public services. Although the IPPR report acknowledges that PFI has an essential role in the development of greater diversity in the provision of services, many issues need to be addressed to improve overall delivery on PFI schemes:

- Ensuring value for money by using a range of procurement options, rather than by having PFI as 'the only game in town'.

- Streamlining the PFI procurement process so that the ambitious government public spending targets can be met.

- Addressing staff concerns about employment conditions to ensure that they are motivated to provide good quality services.

- Ensuring the equitable treatment of project refinancing.

- Ensuring that the public sector comparator include a realistic valuation of all items of risk transfer, as well as the capital and FM related risks.

In summary, PFI projects are delivering an infrastructure that would not have otherwise been provided by public funding in the traditional sense, and have in some sectors resulted in genuine innovation. Against this background, there are concerns about the variability of performance on projects, value for money and the long-term future for private sector involvement in the delivery of public services.

Table 1: Indicative returns by contractors on PFI projects

Construction	3-5%
Facilities management	4-7%
Return on equity	15-20%
Source: HSBC	

Anatomy of a PFI agreement

Along with the service agreement, the output specification and the payment mechanism are essential elements of a PFI deal. The output specification sets out the outcomes expected from a project, indicating the risk allocation between client and supplier, and explaining how the services provided will be integrated with public sector services. Payment is at the heart of the risk transfer mechanism, putting it into financial effect.

This section examines some of the major components of an output specification and payment mechanism and illustrates how payment is determined by performance.

Output Specifications: These present user requirements in a way that can free service providers to develop innovative proposals. This approach to stating purchaser requirements has been proved to work well in sectors such as transport and prisons, where needs can be converted into outputs such as a target road capacity.

In other sectors, such as health, where the design and process issues are more complex and where the service component includes only ancillary services, output specifications need to be prepared in greater detail.

As a result, the output specification tends to be more prescriptive, giving less scope for the PFI consortium to propose design or service innovations, which in turn can reduce the scope for PFI bidders to deliver value for money solutions.

Irrespective of the level of detail in which outputs are described, the output specification must be unambiguous, conveying sufficient information to enable the PFI service to be priced.

When developing an outline specification, essential issues that need to be addressed include:

- The objectives of the proposed facilities.
- The extent of, and performance requirements for, core facilities.
- The ranking of the importance of service provision, to both facility and function.
- The identification of areas of potential change.
- The identification of services not included in the PFI deal.

Unitary Payment: The Unitary Payment puts the agreed risk transfer into place. Accordingly its principal functions are:

- To pay the contractor and service providers
- To provide an incentive for the provider to meet expected service standards.
- To enforce a system of disincentives that reflect the wider cost of the loss of a facility.
- To ensure that services failures are remedied promptly.
- To encourage long term efficiency gains.

Where unitary payment schemes are based on the established output specification model, monthly services payment levels will be related to the availability of facilities and the general quality of services provided. However, as broader social outcomes (such as targets to reduce hospital re-admissions) start to be considered as an element of the output specification, further quality-led components of the unitary charge may be introduced. In a recent, separate development, the concept of an 'event led' single unitary payment is being proposed, under which direct deductions for both service and quality failures are taken from a single, unified monthly payment.

Based on the established availability and service model, the main principles of the unitary payment are:

- No element of the monthly payment is guaranteed.
- All payments are related to the delivery of service.
- All payment follows the achievement of performance targets.

The main components of the conventional unitary payment model relate to the availability, performance, and to a lesser extent, the degree of usage of services.

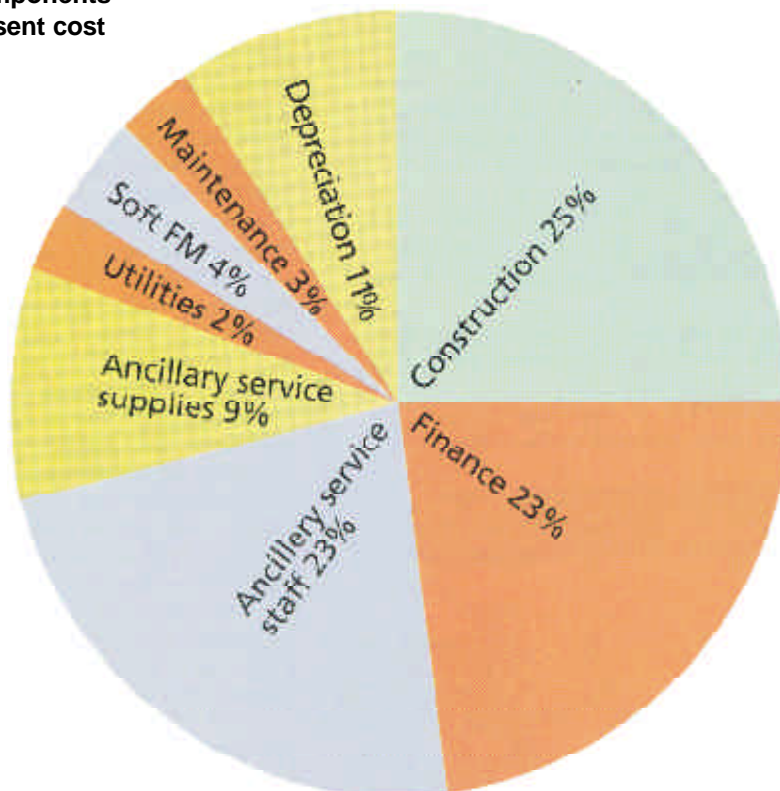
The availability component typically comprises the higher proportion of the unitary charge. Availability occurs when a space can be used for its proposed function during defined working hours. Unavailability, when a space is not available and payment can be withheld, can occur when the use of a space is prevented by health and safety, or access problems, non-compliance with environmental standards and so on. The penalty for unavailability is calculated based on a weighting of the importance of the space to desired outcomes, and the duration of the period of unavailability.

One of the problems associated with the application of the

Anatomy of a PFI Unitary Charge

Figure 1

Input cost components
£net present cost



availability mechanism is the tendency of end-users to continue to make beneficial use of areas despite the occurrence of an unavailability event. Consequently, on some projects, the severity of unavailability is also used to calculate the penalty charge.

Performance measurements relate to the achievement of standards set out in the output specification. Performance criteria include standards of maintenance, utilities, cleaning and other service elements. Under a performance regime, the maximum unitary payment is made when all service standards defined in the output specification are met. Deductions for poor performance are typically calculated using accumulated penalty points rather than a direct income reduction.

Penalty points are awarded if the performance target is not met within a specified rectification period. Under this system, once too many penalty points are accumulated, a deduction to the unitary charge will be made, with the amount and duration being determined by the overall points score.

In developing the performance-based component, it is important to ensure the measurement of performance is considered carefully to ensure the standards are objective and measurable, and that there is no risk of double-counting availability and performance penalties. The performance-based system should also incorporate incentive elements.

The relationship between the input costs of a PFI scheme and the unitary payment regime is complex. Figure 1 (below) illustrates the principal components in the context of an education project.

Case Study

This case study is based on the Cruciform Project, completed for University College London in summer 1999. It focuses on the main elements of risk transfer and the performance of the output specification and unitary payment mechanism. The case study illustrates how the payment structure needs to be considered carefully to put incentives in place that will ensure long-term service quality.

Background: The Cruciform Project is an early PFI project involving the refurbishment of a grade II-listed building to provide specialised

medical research and teaching accommodation. The scheme is not a typical PFI, in that the project was originally developed as a conventional construction project, that the purchaser part-funded the development and owns the building. The unitary payment is split into availability, performance and sinking fund elements. Capital costs and project funding are paid for on an availability basis, whereas the payment for FM services is based on performance.

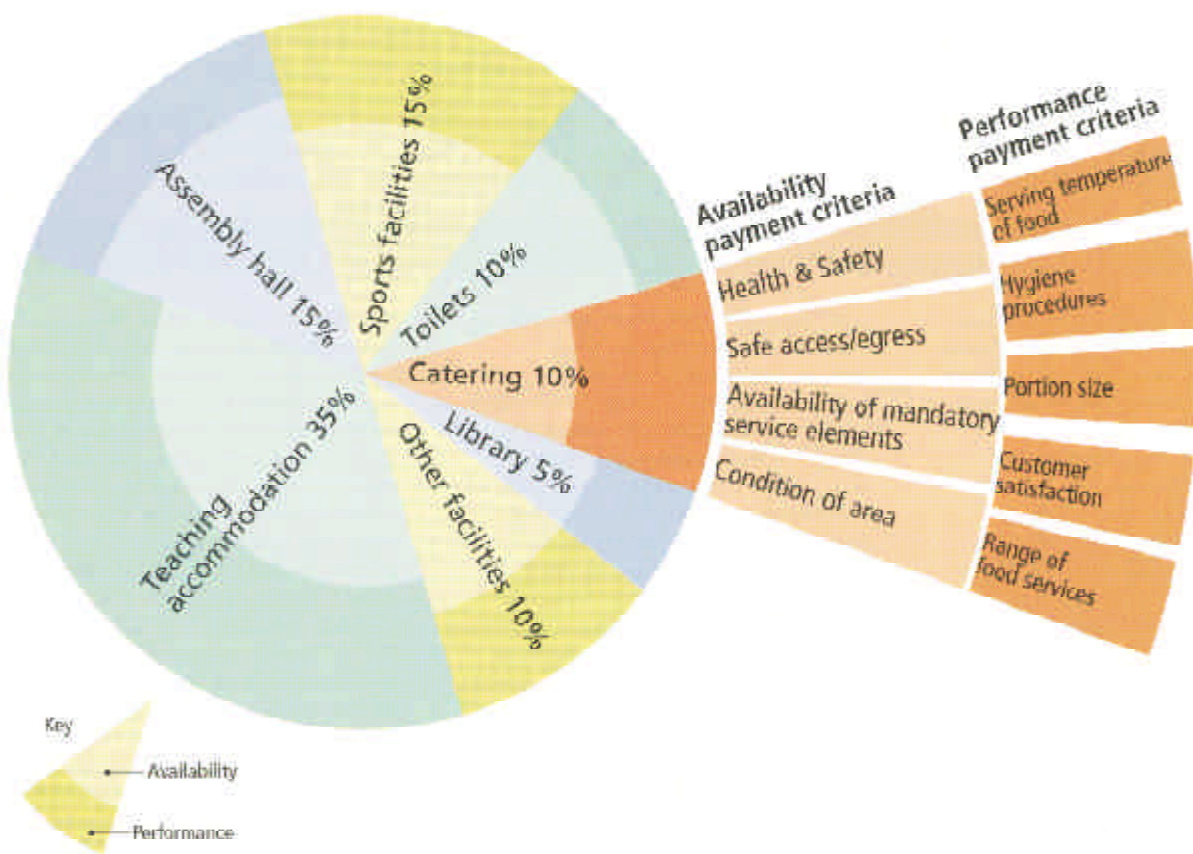
Risk Transfer: The principal elements of risk transfer to the service provider include design risks, construction cost and time risks, and FM responsibilities comprising maintenance and soft FM services, such as cleaning. Risks retained by the purchaser included latent defects on the existing building and planning consent risks associated with the existing building, together with all core services associated with research and teaching functions. The transfer of construction risks was essential, as the opening of a new united medical school was dependent upon the completion of the project on programme.

Operation of the Unitary Payment: Performance by the service provider has been good and, two years on, the agreed penalty regime has not been invoked. The purchaser has a good relationship with the service provider and management of the self-contained building is well resourced. Performance is monitored on a monthly basis. Although no problems have occurred, the purchaser recognises that some of the penalties built into the system may not reflect the full cost of a potential service failure. This has occurred because it had not been possible to appreciate the full implications of dependencies between different facilities when the output specification was drafted. The application of unavailability penalties has also been limited by the tendency of staff, used to working with sub-optimal facilities, to make beneficial use of 'unavailable' space, despite limitations in function or amenity.

Overall Performance: The principal benefit to the client of the Cruciform PFI scheme has been good control over build costs and programme. In general, the purchaser's expected FM standards have been met. Upon completion of construction, the integration of the construction and FM teams has also resulted in the effective management of defects and repairs.

Anatomy of a PFI Unitary Charge

Unitary payment components



Do PFI projects deliver value for money?

The analysis of whether PFI projects deliver value for money remains controversial. Value for money under PFI is obtained through a combination of service quality, cost reduction and risk transfer. Performance on projects has been variable and insufficient data has been collected.

Early research by the National Audit Office identified a wide range of performance relating to procurement, operations and the overall value for money achieved on individual PFI transactions. Estimates of the savings range from 3% for hospital projects, through 8-12% for roads and prisons, to 22% for the DSS property transfer, PRIME. These results confirm the analysis in DLE's previous PFI cost model, published in November 1996, that simple projects (for example, roads) are more suitable for PFI than more complex and risky ones in the health sector and so on. Figure 2 illustrates how various PFI project characteristics combine to determine the overall potential for PFI success

Value-for-Money Drivers in the PFI, a study published in January 2000 by Arthur Andersen and London School of Economics, identifies an average cost saving on a sample of 29 PFI projects of 17%. An important conclusion of the report is that 60% of cost savings can be attributed to risk transfer. Table 2, adapted from the recent IPPR report illustrates the importance of risk transfer in the delivery of value for money. The range of savings identified in the report is considerable, ranging from less than 5% to over 20%. The report concludes that only time will tell whether the operational benefits and value for money expected from PFI will be delivered.

These findings are supported by research by the Construction Industry Council entitled *The Role of Cost Saving and Innovation in PFI Projects*. In this study, median cost savings of 5-10% are reported, with higher savings being associated with more straightforward transport and custodial schemes.

Health sector projects are associated with lower savings or in some cases higher costs (+/-5%).

This study excludes the costs of finance, which if included would reduce the reported savings further. The report identifies project characteristics that determine the variation in cost savings: -

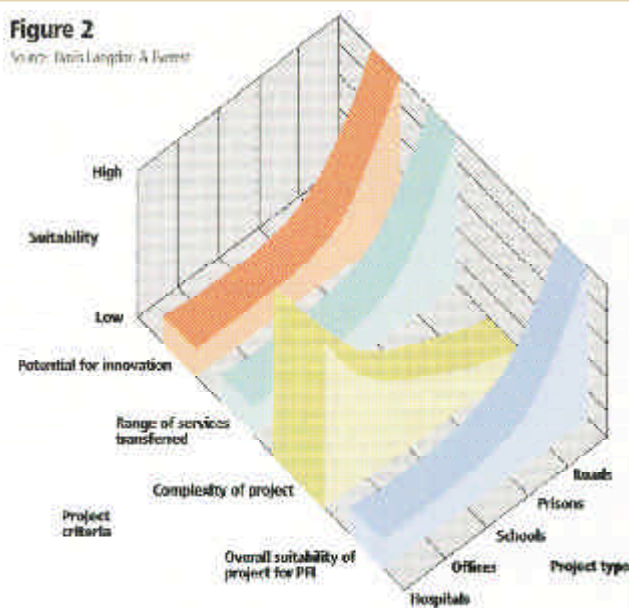
- Project type - custodial and transport projects yield the greatest savings.
- Whether the client is centralised or not. Decentralised clients such as NHS Trusts do not have the opportunity to develop expertise through the procurement of multiple PFI's.
- The quality and degree of prescription in the output specifications.

Table 2: Value-for-money comparisons of costs under PFI and PSC options

	Net risk added to PSC (£m)	RPSC (£m)	PFI scheme (£m)	PFI saving (£m)
Hospital				
South Manchester	20	2126	2124	2
Norfolk & Norwich	76	1682	1642	40
Greenwich Healthcare	46	1427	1410	17
Calderdale Healthcare	37	1362	1342	20
Worcester Royal	10	1098	1095	3
*Resultant public sector comparator				
Source: Building Better Partnerships, IPPR				

Figure 2

Source: Davis Langdon & Evans



- The effect of limitations in the scope of the PFI service element, which can limit the opportunities for generating efficiencies.
- Any uncertainty concerning changes in service requirements over time, which may result in higher risk allowances.
- The scope for innovation.

The CIC report concludes that for some of the most important PFI market sectors, particularly health and to a lesser extent education, PFI projects are currently structured in ways which make it difficult to achieve value-for-money solutions.

Performance of PFI projects - areas for improvement

Most analysis indicates that value for money is being delivered but variations in performance indicate the need for a greater consistency of approach. Developments aimed at addressing this problem include:

- Gateway Review. The government has introduced gateway reviews at five principal decision points for selected public sector projects. They feature an independent value engineering team. Reported benefits include cost reductions, clear communication of project issues to stakeholders and the setting of more predictable cost and time targets.
- Partnerships UK has replaced the Treasury Taskforce as a principal source of PFI procurement advice. It also functions as a PFI bank, providing seed capital and investment capital to projects that are not immediately attractive to the private sector.
- The Commission for Architecture and the Built Environment, the architectural watchdog, states the case for design being a major

component of the value-for-money equation. This effort is currently focused on PFI sectors where, it is felt that the achievement of design and service innovation is limited. Advice focuses on up-front design, quality of bidders and the ability of end-users to state requirements in output terms.

- The development of a small number of increasingly expert-branded service provider teams is helping to capture project knowledge, reduce bidding costs and develop innovation. The success of the PFI prison projects has partly been based on the emergence of a small number of expert teams. This expertise is being applied in other areas of construction, such as design and build.

Building Better Partnerships also includes a wide range of recommendations to improve the PFI/PPP process. Problem areas that continue to require attention include the standardisation of contracts, output specifications and payment mechanisms

across all sectors. This is a particular problem for de-centralised purchasers. Output specifications and payment mechanisms are also being reviewed to identify how they can contribute to directly delivering greater service quality and value. Output specifications that relate directly to service quality include:

- Roads based on an average speed of traffic rather than total number of journeys.
- Education based partly on educational attainment rather than solely on the availability and condition of teaching and ancillary spaces.
- Health based on measures such as readmission rates, shifting the focus of the PFI from the delivery of ancillary services to broader objectives based on medical outcomes.

A further problem is the need to sustain the flow of PFI projects to maintain expertise and interest. If the process were to be radically changed then this expertise and experience could be lost.