PFI PROJECTS: THEIR SCOPE FOR DELIVERING VFM

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One of the key initial requirements for Private Finance Initiative (PFI) deals is to provide a convincing evidence of Value for Money (VFM). In the United Kingdom, this evidence is based on *the four pillars* set out by the National Audit Office (NAO), namely: i.Setting clear objectives, ii.Application of the proper procurement processes, iii.Getting the best available deal, iv Ensuring the deal makes sense. VFM is also supposed to be achieved through the three Es *economy*, *efficiency* and *effectiveness*. Whilst each of the three Es has been defined individually, no attempt has been made so far, to provide a coherent framework in which to measure an outcome in terms of VFM. This paper proposes a set of measures based on the definitions of *economy, efficiency* and *effectiveness,* in order to arrive at a framework for measuring VFM. This framework is then used to evaluate the NAO's own analytical framework, with a view to judging the scope for VFM in PFI projects.

Keywords: Private Finance Initiative, Value for Money, Procuring department.

INTRODUCTION

According to the NAO (2003) the private finance approach to providing services offers the prospect of better value for money (VFM). Whether those prospects are realised depends critically on how thorough the evaluation and audit processes are pursued by the respective procuring departments. The National Audit Office (NAO) has set out the guidelines for departments to provide a convincing evidence of Value for Money (VFM) of deals reached under the PFI.

There is an assumption that any project undertaken by the private sector will give better VFM than that by the public sector. Such assumptions are frequently based on the claim that the private sector, have more freedom to innovate, are exposed to risk and are subject to the disciplines of the market. Firstly such claims can and have been challenged and, even if such claims were true, it would not follow that the private sector would deliver greater VFM. The task of NAO is to set out the guidelines for departments to provide a convincing evidence of Value for Money (VFM) of deals reached under the PFI.

This paper develops an analytical framework based on the three Es: *economy*, *efficiency* and *effectiveness*. This framework enables a VFM index or score to be applied to any deal or outcome and thus provide a basis of comparison with other deals and with actual outcomes against expected outcomes. It will then be used to evaluate the NAO's own analytical framework for examining VFM deals under PFI.

THE VFM FRAMEWORK BASED ON THE THREE ES

The concept of VFM is related to concepts of *economy*, *efficiency* and *effectiveness*. Although, as Heald (2003), noted it is related in ways that are rarely made precise. "Its meaning has become institutionalised in terms of what public auditors, such as the National Audit Office (NAO) and the Audit Commission, do in its name" (Heald 2003)

Whilst each of the components is given a definition, no attempt is made to demonstrate how they relate to give a total definition for VFM. As a consequence no methodology is proposed for judging whether an outcome gives VFM or, in the case of competing options, setting them in rank order according to their VFM rating.

Each of the components is defined in the context of a PFI project order to derive an expression for VFM. From the expression it is possible to assign a VFM score in order to enable alternatives to be ranked. Further it should be possible to audit the actual outcomes against target VFM scores based on well-defined performance criteria.

Perfect systems can be analysed as transformation processes, where inputs are transformed into outputs. The systems model is based on manufacturing where *economy*, *efficiency* and *effectiveness* are easy to define In the case of services or more complex systems, they become more difficult to define. Nevertheless it is the relationship between the inputs and outputs that provide a basis for defining VFM in terms of *economy*, *efficiency* and *effectiveness* of the process or processes

PFI projects are not perfect systems in that they are complex and the provision of services to produce the required outputs is sourced from private contractors. *Economy* in this context is represented by seeking to obtain the best deal. The efficiency of the services is a matter for the service provider. The supervision of the service providers and its related cost, however, must be borne by the procuring department. The level of cost of undertaking supervision and the consequential cost of poor supervision is a matter of *efficiency*.

The value of the outputs from the services can only be judged against the required outputs. *Effectiveness,* therefore, constitutes the measure of actual outputs O set against the required outputs R, as expressed through the output specification and related documentation.

If *Effectiveness* is defined as output $O \div R$ it can be classified as follows:

Table 1: Categories of effectiveness

| 1	$O = R,$	$E_3 = 1$	Total effectiveness
2	$O < R,$	$E_3 < 1$	Partial effectiveness
3	$O \neq R,$	$E_3 = 0$	Zero effectiveness
4	$O > R_r$	$E_3 > 1$	Greater than expected effectiveness*
* This only applies where preferences are monotonically increasing			

In **Figure 1** VFM is defined as the ratio of value to cost. The ratio, however,

does not provide a basis for evaluating VFM. The reason is that the expected VFM on a PFI project may not be the same as the VFM achieved throughout the life of the project. What is required then, is a VFM index, which enables actual VFM to be reviewed against expected VFM at suitable intervals throughout the contract period.
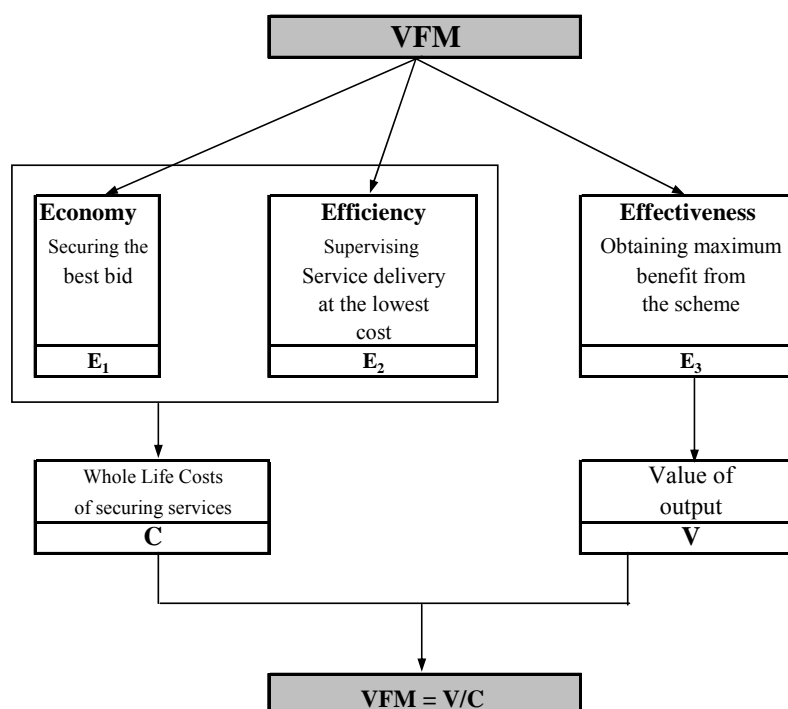
Figure 1: VFM Framework based on the three Es

The VFM index

In order to arrive at a VFM index the following definitions are necessary:
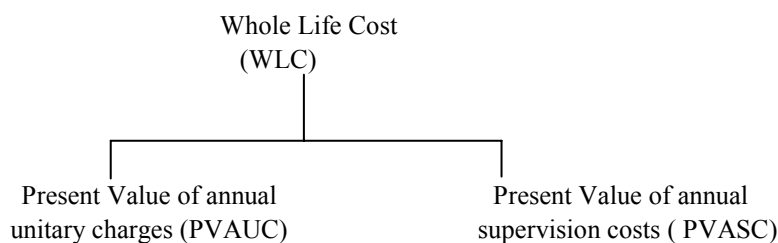
Figure 2: Whole Life Cost breakdown

The cost of securing value is the whole life cost of the PFI scheme, which comprises the present value of annual unitary charges to the service provider and the present value of the procuring department's annual supervision costs as shown in Figure 2.

It is necessary to distinguish between planned or budgeted WLC based on the PFI bid and the actual WLC in order to arrive at a whole life cost performance index.

Given that:

WLCp = whole life cost plan

WLCa = actual whole life cost

WLCPi = whole life cost performance index = $\dfrac{WLCp}{WLCa}$

Value = actual outcome O

Effectiveness E_3 = $\dfrac{\text{actual outcome } O}{\text{required outcome } R}$ = Value index

VFM = $\dfrac{\text{value}}{\text{cost}}$ = $\dfrac{\text{actual outcome } O}{WLCa}$

Value For Money index (VFMi) = E_3 x WLCPi

VFM$_i$ is the product of Effectiveness E_3 and the WLCpi

Although *economy* is not given explicit reference in the VFM index, it does form part of the WLCpi. It can be measured independently by comparing the bid price against an expected bid price based on an analysis of the market. The bid price is the PV of unitary charges over the contract period.

VFM index is expected to range between 0 and 1. The actual score would be based on questionnaires given to users of the facilities. Table 2 shows hypothetical scores given for both effectiveness (E3) and WLCpi.. VFM1 is the product of E3 and WLCpi. A reduction in both E3 and WLCPi has a severe impact on the VFMi. However where the actual output exceeds expectations or where an overall saving is made, a VFM index greater than one could emerge.

Table 2

Effectiveness (E_3)	WLCPi	VFM$_I$ = E_3 x WLCP$_i$
1.00	1.00	1.00
0.90	1.00	0.90
1.00	0.90	0.90
0.90	0.90	0.81
1.10	1.00	1.10
1.10	1.10	1.21

The VFM framework at this stage is conceptual and can be developed to incorporate a set of value criteria based on user experience. Its purpose at present is to judge the analytical framework set up by The National Audit Office (NAO) for evaluating PFI deals.

In the course of examining the VFM of deals reached under PFI projects, the NAO has developed an analytical framework. It is against this framework that the NAO audits what VFM Government departments have achieved and reports the findings to Parliament. This framework amounts to a hierarchy of statements expressed in terms of advice to the procuring authority. The first three levels are shown in **Figure 3**.

Below the third level, are the basic elements of the framework, which indicate the full scope of the VFM appraisal.

The framework does not address the three Es *economy efficiency* and *effectiveness*

in any direct way. Nevertheless, by examining the *four pillars*, it is possible to map the sub elements of the framework to the three Es within the VFM framework proposed in this paper. By so doing it is possible to evaluate the NAO framework against this proposed VFM framework based on the three Es.

THE NATIONAL AUDIT OFFICE ANALYTICAL FRAMEWORK
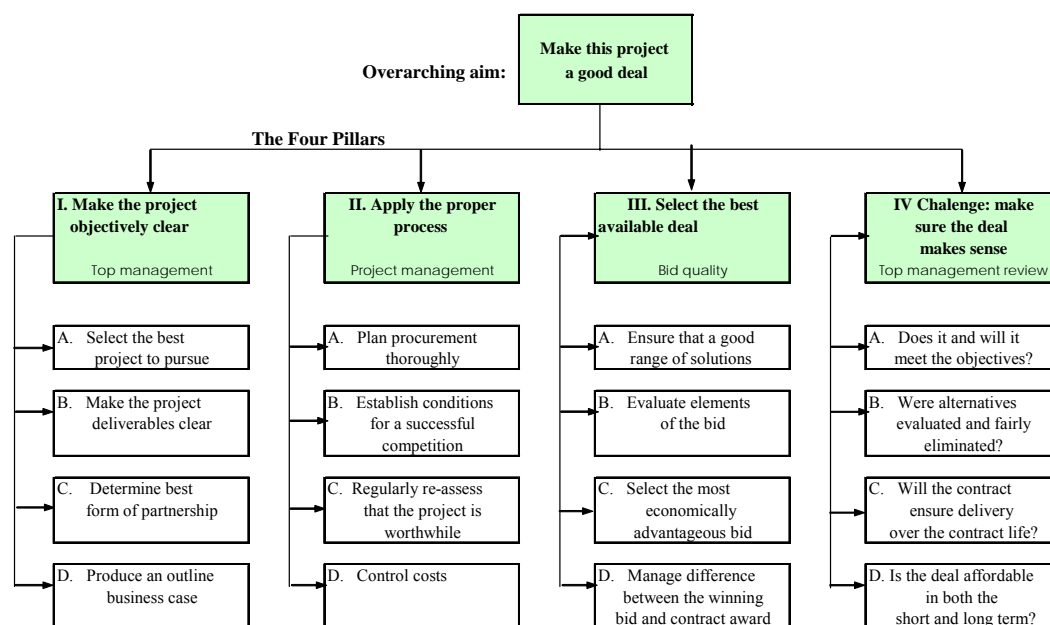
Figure 3: The NAO's analytical framework. HC 371 Session 2002-2003: February 2003

1. Setting clear objectives

2. Application of the proper procurement processes

3. Getting the best available deal

4. Ensuring that the best deal makes sense

1. Setting clear objectives
The requirement of setting clear objectives is a prerequisite of *effectiveness*. Much discussion in this section is given to ensuring processes are established by the procuring department for making proper judgements about the ability of the service provider to deliver the requirements. Particular attention is given to outcomes or outputs and establishing evaluation criteria. Good value for money therefore, depends on structuring the PFI deal in a way that ensures the outcomes meet the department's objectives. To ensure that the PFI deal is to meet the department's need an outline business case is recommended. The outline business sets out the objectives of the project as well as an option demonstrating that the PFI deal is the best of all available options.

2. Applying the proper processes

This requirement is mainly concerned with ensuring the right conditions are established for securing the best tender. Emphasis is given to securing the maximum competitive tension between bidders and the need to create a good specification of requirements. To ensure maximum competitive tension between bidders, it is

necessary to generate a good tender list. As negotiations progress, the procuring departments must ensure that the original purpose of the project is maintained.

The procuring department must be accountable for the costs involved in securing a deal. This requires costs to be controlled on a project basis and not on a department basis.

3.Select the best available deal

The procuring department must ensure that, a range of attractive solutions are submitted by the bidders, in order to select the most economically advantageous bid. This, according to the NAO, will be achieved by:

a) Obtaining a good range of solutions

b) Evaluating elements of the bid

c) Selecting the most economically advantageous bid

d) Managing the difference between the winning bid and the final contract

4. Making sure it makes sense

This requires that the deal on offer meets certain conditions, before final approval is given to the project. These conditions include that the deal:

a) meets the departments objectives

b) outranks all alternatives

c) ensures delivery of service over the contract life

d) is affordable on behalf of the department

Part 2 of the NAO report is about applying the framework. It outlines in detail the points for auditors to follow. As a consequence it largely mirrors the points covered under the *four pillars*. Two crucial points to emerge however are the requirement of the procuring department to identify scope for risk transfer and its cost and to undertake a public sector comparator (PSC).

Whilst the question of risk is covered extensively in the document, clearer guidance is to be found in the Treasury Taskforce (TTF 1999b) on the steps to be taken by the procuring department:

a) Create a risk matrix that identifies all risks.

b) Identify to whom the risk is allocated.

c) Estimate the cost the client would incur if each of the risks allocated to the. project company, materialises.

d) Estimate the probability of each of the risks materialising.

e) Calculate the Risk Transfer Premium (RTP) for each risk by multiplying the cost and probability.

A comparison of the two methods of procurements are taken from Rinytala 2005 and adapted from PFPE 1996b) is illustrated in Figure
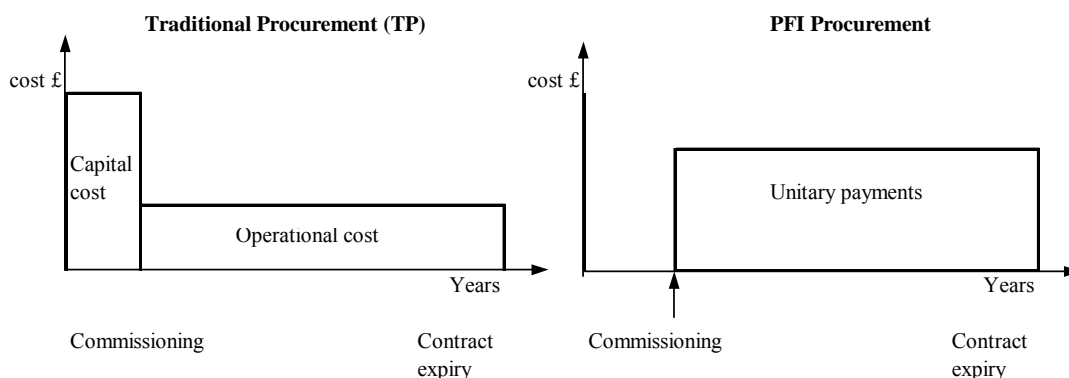
Figure 4: Comparison of payment in traditional and PFI procurement (taken from Rintala 2005)

A truer comparison, however would be to represent both on an Annual Equivalent (AE) basis and adjust for the Risk Transfer Premium. This would require the AE of capital cost of the TP method, to be added to the annual operational cost in order to give the combined AE for the traditional procurement as shown in figure.
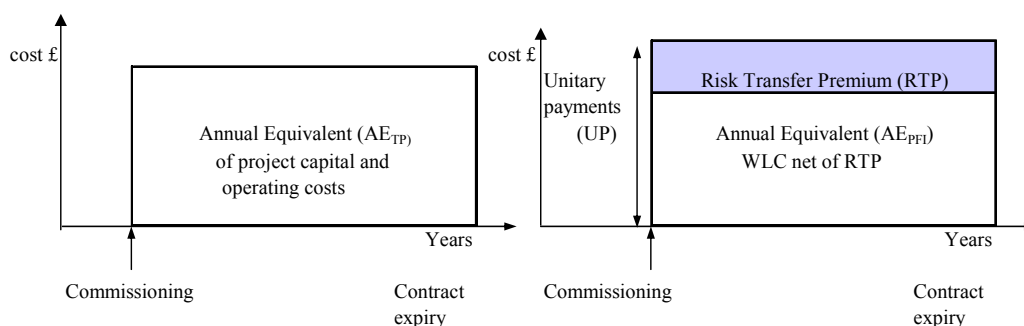
Figure 5: Comparison of Annual equivalent (AE) cost of Traditional and PFI procurements including risk transfer premium (RTP)

Based on the public sector comparator (PSC), PFI would give greater VFM if

$$AE_{TP} > AE_{PFI}$$

Where: AE_{TP} is the annual equivalent of the whole life cost of the project based on traditional procurement.

            AE_{PFI} is the annual equivalent of the whole life cost of the project based on PFI procurement net of the RTP

The guidance does not propose any methodology for estimating the cost the client would have borne had the risk materialised. Hence it is difficult to judge what constitutes a reasonable RTP.

If, as the as the NAO document states, the auditor should investigate whether the department identified scope for risk transfer and to have developed a comparator from the option appraisal, it would suggests that the auditor should follow an approved method of investigation. That approved method of investigation should include a method for estimating the RTP.

IT is clear that the NAO framework is primarily concerned with the most *economic* procurement route with an indirect reference to *effectiveness*. This falls well below the VFM requirement set out in this paper and based on the three Es. The cost to the procurement department, for example, is not just the whole life cost, in meeting unitary charges to the service provider but the cost associated with the resources demanded of the procuring department to ensure that delivery of the required outcome is to the required standard. *Efficiency* in this context, must be the actual cost against the budgeted cost of exercising this function, which in this paper is given as the whole life cost performance index (WLCPi)

Combined Framework
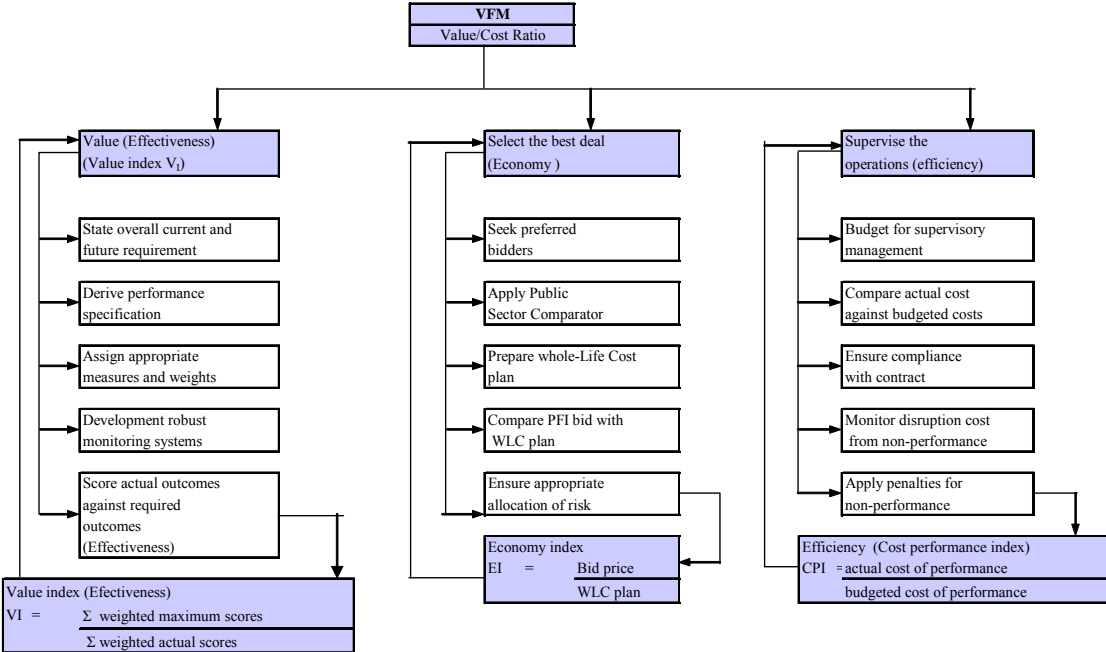
Figure 6: Combined analytical framework for measuring VFM

A combined framework has been produced that captures the important elements of the NAO framework and the one proposed in this paper. This has been done, by assigning the key elements of the NAO framework to the three Es as shown in Figure 3.

The NAO elements provide the basis of good practice and the means for auditing such practice.

Good practice alone, however, does not provide a basis for judging the level of performance by the project company. Performance requires a benchmark, in order to gauge the quality of the service maintained throughout the contract period and

the relationship between the procuring department and the project company. A poor relationship can result in either a lower standard of services, which amounts to a reduction in *effectiveness,* or a higher cost of managing these services to ensure the

required standard is maintained. Indices have been proposed for *economy, efficiency* and *effectiveness*, of a PFI deal, which in combination provides and index for VFM.

CONCLUSION

The NAO's analytical framework provides a mechanism for ensuring the prospects of VFM from the PFI projects. Whilst the three Es: *economy*, *efficiency* and *effectiveness* are not addressed directly, it is possible to map elements of the *four pillars* of the NAO framework on to the three Es.

The NAO framework, however deals only with the first phase of ensuring VFM from PFI deals namely *economy*. The implication of the framework is that once the best *deal* is secured VFM is assured. In other words *economy* is equal to VFM.

From the point of view of the VFM Framework, proposed in this paper, *economy* is just one of the three Es. It is no more than the best opportunity for obtaining VFM. That opportunity must be translated into obtaining value over the contract period at the least expense to the procuring department.

The combined framework proposes a way of dealing with the deficiencies of the NAO framework. Neverthless, it needs to be improved in at least three fundamental ways.

Firstly a method of arriving at an overall index of value needs to be developed that reflects the needs of the procuring department on behalf of the users of the services.

Secondly a standard method of assessing risk transfer premium (RTP) as part of the public sector comparator (PSC) needs to be developed. Finally, a method of determining the differential costs associated with securing the deal and managing the delivery of services by the project company needs to be established. Only then will it be possible to assess whether VFM is likely to be obtained and, more importantly, whether it is being delivered throughout the contract period.

REFERENCES

Heald, D. (2003) Value for Money tests and accounting treatments in PFI schemes. Accounting, Auditing & Accountability Journal. Vol. 16 No. 3 pp342-371

NAO (National Audit Office) 2003 PFI: Construction Performance, Report by the Comptroller and Auditor General. HC 371 Session 2002-2003: 5 February 2003

Rintala, K. (2004) The economic efficiency of accommodation service projects. Espoo 2004. VTT publications 555.