

Technical Note No. 1

HOW TO ACCOUNT FOR PFI TRANSACTIONS

1. INTRODUCTION

Status of Treasury Taskforce Technical Notes

1.1 This Note is one of a series of papers to be issued by the Treasury Taskforce providing practical guidance on key technical issues which arise from the implementation of the Private Finance Initiative (PFI). This Note will primarily be used by purchasers/financial advisers to determine the accounting treatment of PFI transactions and public sector auditors who will need to comment on the proposed accounting treatment. It will also be used by procurement teams who will need to understand how accounting judgements will be made so that they can ensure the necessary data is available. The text of this Note is available on the Internet at <http://www.treasury-projects-taskforce.gov.uk>. Additional copies of the Note are available from the Treasury's Public Enquiry Unit on 0171 270 4558/4860/4870.

Background

1.2 To remove the uncertainty surrounding the accounting treatment of PFI transactions the Treasury, in accordance with recommendation number 15 of the Bates Report on PFI, issued interim accounting guidance on 29 September 1997. This guidance was issued with the intention of being an interim measure pending the deliberations of the Accounting Standards Board (ASB), who subsequently issued a draft Application Note on 11 December 1997.

1.3 Following a period of consultation the ASB published its Application Note (AN) in final form on 10 September 1998 entitled "Amendment to FRS5 - Reporting the substance of transactions: Private Finance Initiative and Similar Contracts". The Treasury liaised with the ASB during the development of the AN and welcomed its publication as an important step forward for creating a universally accepted framework for ensuring consistent financial reporting of PFI transactions.

Objective

1.4 The objective of this Note is to provide additional practical guidance for certain public sector bodies (see paragraph 1.7) on the following areas of the AN to ensure the over-arching principles of the AN are consistently applied.

| Contents of the Application Note | Additional | Section Guidance |
|----------------------------------|------------|------------------|
| Features | X | |
| Overview of basic principles | X | |
| Separation of the Contract | ✓ | 3 |
| Should SSAP21 or FRS5 be applied | X | |

| | | |
|---------------------|----------|---|
| How to apply SSAP21 | X | |
| How to apply FRS5 | ✓ | 4 |
| Required accounting | ✓ | 5 |

1.5 Section 2 provides some further guidance on the roles of the purchaser and their auditors during the procurement process.

Terminology

1.6 This Note should therefore be read in conjunction with the AN (copies can be obtained from ASB publications, telephone number 01908-230344) and to ensure consistency the same terminology has been adopted as follows:

- ≠ The entity (for the purpose of this guidance the public sector body) that requires services under the PFI contract is referred to as the **purchaser**.
- ≠ The entity (a private sector contractor usually in the form of a special purpose vehicle) that provides services under the PFI contract in return for payments from the purchaser is referred to as the **operator**.
- ≠ The road, hospital, prison, school, IT system, military equipment etc that is the subject of the PFI contract is referred to as the **property**. Unlike other statements and documents dealing with PFI the word **asset** is reserved for items that are recognised in the balance sheet.

Scope

1.7 This Note has been approved by the Financial Reporting Advisory Board (FRAB) to the Treasury and is mandatory for all bodies preparing their financial statements in accordance with the Resource Accounting Manual. The Note is also mandatory for Non Departmental Public Bodies, Trading Funds, NHS Trusts and those Public Corporations that prepare their financial statements in accordance with an Accounts Direction issued with the approval or consent of the Treasury. It is a matter for CIPFA/ LASAAC Joint Committee to determine the status of this guidance for Local Authorities.

Value for Money

1.8 The objective of PFI procurement is to provide high quality public services that represent value for money for the taxpayer. It is therefore value for money, and not the accounting treatment, which is the key determinant of whether a project should go ahead or not. Purchasers should focus on how procurement can achieve risk transfer in a way that optimises value for money and **must not** transfer risks to the operator at the expense of value for money.

Effective Date

1.9 Paragraph F60 of the AN makes clear that the provisions of the AN should be applied in private sector financial statements relating to the accounting periods ending on or after 10 September 1998, which requires the accounting treatment of

all previous PFI transactions to be reassessed under the AN. The effective date of application for public sector bodies will be announced by means of a Dear Accounting Officer (DAO) letter from the Treasury. Any issues arising from the effective date of application should be discussed with the Treasury.

2. ACCOUNTING TREATMENT

2.1 To ensure no late “surprises” in the proposed accounting treatment of PFI transactions it is important that purchasers, and their financial advisers, keep the auditors fully informed as the level of information and supporting documentation increases during the procurement process. It is recommended that the following outputs are obtained at the different stages of procurement.

| Stage | Purchaser | Auditor |
|------------------------------------|--|---|
| Pre Invitation to Negotiate (ITN). | Provide “ initial view ” on accounting treatment based on draft ITN/and Outline Business Case documentation. Since only limited risk analysis will be available at this stage, this can only be a high level view based on the expected structure of the contract. This initial view should cover the qualitative indicators noted in paragraph 4.11 and an initial assessment of those risks retained by the purchaser. | Comment on whether the purchaser’s initial view on the proposed accounting treatment is reasonable. |
| Pre Best And Final offer (BAFO). | Update initial view if terms on Invitation to Tender (ITT) are significantly different from ITN. | Comment on whether any changes to the purchaser’s initial view on the proposed accounting treatment is reasonable. |
| Post BAFO | Update initial view to provide a “ provisional judgment ” on the accounting treatment based on the design solution/financial models of the preferred bidder. | Comment on whether the purchaser’s provisional judgement on the proposed accounting treatment is reasonable. |
| Pre contract Signature | Provide a “ final judgment ” on the accounting treatment (by weighing up all the relevant indicators of which party has as asset of the property as per paragraphs 4.3 to 4.5) subject only to any late changes in the contract terms. | Comment on whether the purchaser’s final judgment on the accounting treatment, subject only to any late changes in the contract terms, is reasonable. |

2.2 The accounting treatment of PFI transactions, as determined immediately prior to contract signature, will normally apply throughout the life of the contract and should not be revisited each year as the risks crystallise after contract

signature. The accounting treatment, however, would need to be reviewed if there was a substantive change to the contract (ie a renegotiation), a change in the accounting standards covering the transaction or other grounds for questioning the accuracy of the original accounting treatment (eg a fundamental error in the original analysis.)

3. SEPARATION OF THE CONTRACT

3.1 The first stage of the accounting analysis is to determine if the PFI contract is separable (ie the commercial effect is that individual elements of the PFI payments operate independently from each other). 'Operate independently' means that the elements behave differently and can therefore be separately identified. Any such separable elements that relate solely to services should be excluded when determining which party has an asset of the property.

3.2 Paragraph F10 of the AN provides that a contract may be separable in a variety of circumstances, including but not limited to the following three situations, (1, 2 & 3). This section of the Note provides additional comments on each situation to clarify the position on this important issue. The Treasury should be consulted if the purchaser/financial advisers or auditors consider that a contract may be separable for any other reasons.

Situation 1 - The contract identifies an element of a payment stream that varies according to the availability of the property itself and another element that varies according to usage or performance of certain services. (AN, F10(a))

3.3 The underlying intention of PFI transactions (ie the specification of outputs and services) is that individual elements of the payment stream should not relate to the delivery of any specific inputs (eg achievement of stages of construction, cost of materials etc) and therefore would not be expected to contain a fixed element designed to cover the operator's debt service obligation irrespective of performance. The more common payment mechanisms used in PFI transactions to date can be categorised into the following three broad models:

3.4 **Model A (Non-separable)**; the unitary payment is based on the number of available places (for example, prisoner places). For a "place" to be available, not only the physical space but the associated core services such as heating within specified temperature range, mail delivery and food are also considered. Minimum requirements in relation to all of these services must be satisfied for a "place" to be available and no payment is made for unavailable places. There are no separate payment streams for any of the non-core services (ie not associated with the definition of available place) but deductions from the unitary payment can be made for substandard performance of these services. Substandard performance leads initially to "performance points" accruing and only to actual deductions once a certain level of points has accrued. The following is an example of a Model A payment mechanism which will normally be non separable:

Example 1

$$P = (F + I) - Z$$

P = unitary payment per place

F = Fixed amount per available place per day

I = Indexed amount per available place per day
(eg base amount increased by RPI)

Z = Performance deductions

3.5 Model B (Non-separable); the unitary payment is based on the full provision of an overall accommodation requirement which is divided into different units. Availability is defined in terms of being usable and accessible and, like model A, will include some associated core services such as heating within a specified temperature range. For each failure to provide an available unit there is a payment deduction equal to a proportion of the unitary charge which depends on the importance of each unit. There are no separate payment streams for any of the non-core services but, as with model A, substandard performance leads initially to performance points and to payment deductions once a certain level of points has accrued. The key difference between models A and B is that the unitary payment for model A is based on available places whilst model B divides the total accommodation requirement into different units. The following is an example of a Model B payment mechanism which will normally be non separable:

Example 2

$$P = (F \times I) - (D + E)$$

P = unitary payment per day

F = price per day for overall accommodation requirement

I = Indexation factor (eg RPI x 0.7)

D = deductions for unavailability

E = performance deductions

3.6 Model C (separable); the unitary payment is a combination of an availability payment stream and a separate performance related facilities management payment stream (unlike models A and B which do not have separate payment streams). For availability, areas are divided into units and attributed a different deduction percentage for unavailability according to their importance. Availability is defined in terms of being usable and accessible and may include some associated core services. The performance payment stream is made up of the combination of a performance payment for each required service, with deductions against the performance payment stream for failure to meet the required performance levels. The following is an example of a Model C payment mechanism which will normally be separable:

Example 3

$$A + Q - D - E$$

P = unitary payment per unit

A = availability payment

D = deductions for unavailability

Q = indexed facilities management payments

E = performance deductions

Situation 2 - Different parts of the contract run for different periods or can be terminated separately. For example an individual service element can be terminated without affecting the continuation of the rest of the contract. (AN, F10(b))

3.7 For example a 25-year accommodation project may include a requirement to provide IT services for 10 years, which may or may not be renegotiated at the end of the 10-year period. Alternatively, the contract may allow the purchaser to terminate the IT service for persistent poor performance, at any time, without affecting the continuation of the rest of the contract. In both these circumstances, the IT service is separable and should be accounted for separately.

Situation 3 - Different parts of the contract can be renegotiated separately. For example, a service element is market tested and some or all of the cost increases or reductions are passed onto the purchaser in such a way that the part of the payment by the purchaser that relates specifically to that service can be identified. (AN, F10(c))

3.8 One of the key issues that requires clarification in respect of Situation 3 is whether or not it matters which party undertakes the market testing (or benchmarking) exercise. For the avoidance of doubt, if a service element is market tested and some or all of the cost increases or reductions are passed onto the purchaser, this will give rise to a separate renegotiation of part of the contract regardless of whether the market testing is undertaken by either the purchaser or the operator (see Figure 1).

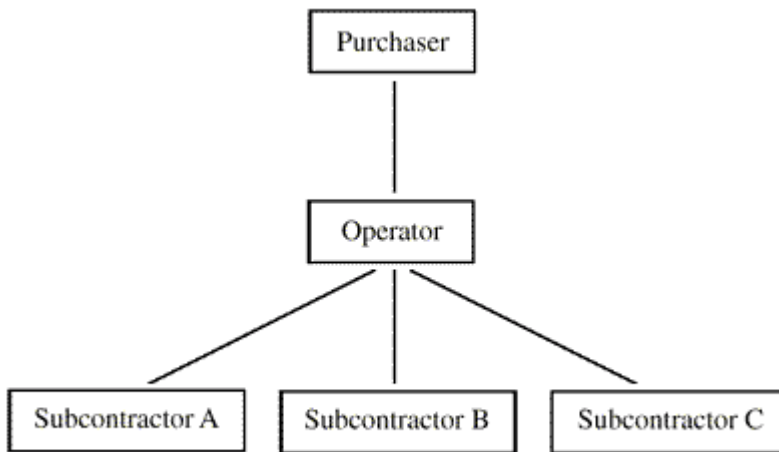


Figure 1: Market Testing

3.9 If the purchaser market tests what they pay for an element of an individual service, there will inevitably be a separately identifiable payment stream for that service and, as noted in AN F10(c), the contract will be separable.

3.10 Where the operator periodically market tests what it pays for an element of an individual service and passes on some or all of the cost increases or reductions to the purchaser, any tariff adjustments are usually made to the unitary payment stream rather than a separately identifiable payment stream. In these circumstances, although the part of the payment by the purchaser for that service element may not be separately identified from the contract itself, the substance of the market testing exercise is that the purchaser has effectively renegotiated what they are paying for an individual service element and therefore the contract is separable.

3.11 It should be recognised, however, that no conditions or terms in the contract can preclude both parties renegotiating the contract at some time during its duration. That this may happen voluntarily without specific dispensation in the contract does not, of itself, render the contract separable. For example:

- ⌘ an operator, of its own volition, market tests some of the aspects of the service it sub-contracts and seeks to pass on cost increases to the purchaser through a renegotiation of the unitary payment it receives under the contract; or
- ⌘ the purchaser sees that certain costs have fallen in the market and seeks to negotiate an overall reduction in the unitary payment it makes under the contract.

Next stage of the accounting analysis

3.12 Once any separable service elements have been excluded paragraph F7 of the AN states that PFI contracts can be classed into:

- a. those where the only remaining elements are payments for the property. These will be akin to a lease and SSAP 21 'Accounting for leases and hire purchase contracts' (interpreted in the light of the FRS) should be applied.

- b. other contracts (ie where the remaining elements include some services).
These contracts will fall directly within the FRS rather than SSAP 21.

3.13 Those contracts that fall within the scope of SSAP 21 should be accounted for as explained in the AN. All other contracts should be assessed under FRS5 which, in accordance with Section 4 of this Technical Note, focuses on the extent to which each party bears the potential variations in property profits.

3.14 The fact that some service elements may be separated at this stage of the accounting analysis will not have any impact on the FRS 5 analysis if they do not give rise to any potential variations in property profits. For example, if an individual element of the catering service, such as food costs, was separable, this would have no bearing on the accounting treatment because, even if it was not separable at this stage, this element of the catering service would not have given rise to any potential variations in property profits in the FRS5 analysis.

3.15 It is worth noting, however, that if all service elements are excluded such that the only remaining elements are payments for the property, as noted above, a SSAP21 rather than a FRS5 analysis will be required.

4. HOW TO APPLY FRS 5

4.1 The purpose of this section of the Note, which should be read in conjunction with the AN, is to:

- ## elaborate on some of the **key principles** set out in the AN;
- ## summarise the **qualitative indicators** to be considered when forming an opinion on the accounting treatment;
- ## provide a methodology for undertaking the **quantitative risk** analysis for evaluating the potential variations in property profits;
- ## provide further guidance on the **principal factors** which may give rise to potential variations in property profits;

Key principles

4.2 Paragraphs F19 - F21 of the AN sets out the key principles that must be followed to determine which party has an asset of the property:

F19 For those contracts that fall directly within FRS5, whether a party has an asset of the property will depend on whether it has access to the benefits of the property and exposure to the associated risks. This will be reflected in the extent to which each party bears the potential variations in property profits (or losses). The principle here is to distinguish potential variations in costs and revenues that flow from features of the property - which are relevant to determining who has an asset of the property [see paragraphs F22-50] - from those that do not - and which are therefore not relevant to determining who has an asset of the property. [See paragraph F20]

F20 There may be features that could lead directly to profit variations for reasons that relate purely to a service. Such variations may take the form of potential penalties for underperformance or potential variations in revenues or in operating costs. These should

be ignored when assessing who has an asset of the property, irrespective of their size. For example, a penalty may arise in a PFI contract for a prison because the security staff have not been trained satisfactorily, or in a PFI contract involving a catering facility because the food purchased is not up to standard. Similarly, potential variations in operating costs may relate purely to a service, for example the cost of raw materials and consumables in a catering facility. Such potential variations are irrelevant to determining which party has an asset of the property.

F21 There may be a significant number of property factors (for example, those listed in paragraph F22). It will be important to assess the effect of all relevant factors and the interaction between them, giving greater weight to those that are more likely to have a commercial effect in practice. It will not be appropriate to focus on one feature in isolation. It will be necessary to consider both the probability of any future profit variation arising from a property factor and its likely financial effect. Additional costs may be incurred to correct a problem rather than risking the imposition of a much greater penalty, in which case the relevant variation to consider is the likely increase in costs rather than the possible penalty. Similarly, a possible increase in future costs may be avoided by altering some feature of the property at a lower net cost, in which case the variation to consider is the cost of altering the property.

4.3 Determining the substance of transactions is a matter of professional judgement, which involves weighing up all the relevant indicators (both qualitative and quantitative) of which party has an asset of the property. In some cases, however, following an initial assessment of the risks of the transaction, some risks may be found to be of such overwhelming significance that it will not be necessary to perform further detailed work because it will be obvious which party has an asset of the property. Conversely, where the accounting treatment is not immediately obvious, further detailed work will be required as set out below.

4.4 Paragraph F19 of the AN requires an assessment of the extent to which each party bears the potential variations in property profits (costs and revenues that flow from features of the property). To the extent that such potential variations in profits and losses are capable of meaningful quantification, a quantitative risk analysis which evaluates the potential variations in property profits for the operator and the purchaser should be undertaken. If one party is shown to have the greatest proportion of the combined variations as a result of this analysis, this will provide a quantitative indicator of which party has an asset of the property.

4.5 An important point to consider when undertaking a quantitative risk analysis in a PFI context is the danger of spurious accuracy, ie that the results could be misinterpreted as implying a degree of accuracy that is not warranted because of the limitations of the inputs into the model. Given the inherent assumptions and judgements underlying such a quantitative risk analysis, it is important not to apply a model in a mechanistic way. The validity of the results of the quantitative risk analysis will depend on the accuracy, certainty and completeness of the inputs and the assumptions made in relation to those inputs. Therefore, when forming an overall judgement on the accounting treatment, the results of the quantitative risk analysis should always be assessed together with:

- ⌘ those risks that are not quantifiable, ie the qualitative indicators discussed in paragraph 4.11; and
- ⌘ those risks which, depending on the circumstances of a particular case, may not be capable of meaningful quantification for inclusion in the quantitative risk analysis due to the level of uncertainty surrounding them. The potential impact of these risks on the overall judgement will therefore need to be carefully considered and properly justified. For example, whilst it may be foreseeable at the start of some PFI contracts that future changes in technology or public policy would affect various factors in the risk analysis, it may not be possible to foresee what those changes might be, when they might occur and what their commercial effect might be in absolute terms. In such circumstances, the commercial effect of these changes cannot be modelled in the quantitative risk analysis due to uncertainty. Conversely, in other PFI contracts the impact of such changes in technology or public policy may be quantifiable.

4.6 When undertaking a quantitative risk analysis for a public sector body, the private sector should be regarded as a single entity and therefore, when evaluating the potential variations in property profits for the operator, it does not matter if the operator has laid off any of their risks, for example by subcontracting elements to third parties or taking out insurance. It should be noted that if the purchaser takes an equity stake in the operator, this has no impact on the quantitative risk analysis for determining the balance of risks between the purchaser and the operator. The potential variations in property profits (in current prices) must be evaluated in Net Present Value (NPV) terms using the real discount rate used by the Treasury for the evaluation of public sector projects (currently 6%).

4.7 Paragraph F20 of the AN reinforces the underlying principle that profit variations that relate purely to a service, including penalty points relating purely to service failures, should be ignored when assessing who has an asset of the property. Further guidance on the principal factors which may give rise to potential variations in property profits is given later in this Section.

4.8 It is clear from paragraph F21 of the AN that the potential variations in property profits for each party must be based on the chosen design solution to the output specification and must also reflect the fact that if either party can avoid a significant penalty or increase in costs by adopting an alternative approach with a lower cost, the lower cost alternative should be used when assessing who has an asset of the property. Also, since the emphasis is on the commercial effects of the chosen design solution, it is possible that the design solutions proposed by different bidders may give rise to different accounting treatments. It is essential therefore that the selection of preferred bidder is made on value for money grounds and not to achieve an off balance sheet accounting treatment.

4.9 Paragraph F21 also provides that all relevant factors should be considered and it will not be appropriate to focus on one feature in isolation. It will be necessary to consider both the probability of any profit variation arising from a property factor and its likely financial effect and greater weight should be given to those factors that are more likely to have a commercial effect in practice. An integral feature of the quantitative risk analysis in paragraphs 4.3 to 4.5 above (and

the Methodology in Annex A) is that greater weight is given to those factors which are likely to have the greatest commercial effect in practice.

4.10 The AN also provides that: where demand risk is significant, it will normally give the **clearest** evidence of who should record an asset of the property, and where it is significant, residual value risk will normally give **clear** evidence. However, it will not always be the case that demand and residual value risks are significant and therefore, where they are not significant, these risks will not necessarily give the clearest (or clear) evidence of who should record an asset of the property.

Qualitative indicators

4.11 The qualitative indicators that should be considered when forming a view on the accounting treatment are set out in the following table.

| Feature | Indications that the property is an asset of the purchaser | Indications that the property is an asset of the operator |
|--|--|---|
| Termination for operator default (AN, F50) | The AN states that: <i>“a financing arrangement would be indicated where, in the event that the contract is terminated early, the bank financing will be fully paid out by the purchaser under all events of default, including operator default.”</i> | There is no guarantee that the bank financing will be fully paid out by the purchaser. |
| Nature of operator’s financing (AN, F50) | The AN states that: <i>“An assessment of the operator’s financing arrangements (all aspects should be taken into account, eg the use of senior or subordinated debt and the presence of any guarantees) may indicate a level of debt funding that could be credible only if another party stood behind the operator.”</i> This means that very high levels of gearing are an indicator that insufficient risk has been transferred and that the property is an asset of the purchaser. | The level of equity funding should not be used as an indicator that the property is an asset of the operator, because the operator may require that level of equity to match the service risk it has accepted under the contract. This is therefore a one-sided test. |
| Who determines the nature of the property (AN, F35 & 36) | The AN states that: <i>“The purchaser determines the key features of the property and how it is to be operated, bearing the cost implications of any changes to the method of operation. The purchaser may determine the key features of the property explicitly by agreeing them</i> | The AN provides that: <i>“The operator has significant and ongoing discretion over how to fulfil the PFI contract and makes the key decisions on what property is built and how it is operated, bearing the consequent costs and risks. For example, this would be</i> |

| | | |
|--|--|---|
| | <p><i>as terms of the PFI contract or, for example, through a contractual acceptance provision at the end of the construction phase. Alternatively, the purchaser may implicitly determine the key features of the property. For example, a contract for a road may specify that the road will revert to the purchaser in a predefined state after a relatively short period: this may have the effect that the operator has little discretion over the standard of road to build in the first instance or how it is maintained subsequently.”</i></p> <p>For the avoidance of doubt:</p> <p>The fact that the key features of the property are recorded in the PFI contract, which is agreed by the purchaser, does not necessarily mean that the purchaser has determined those key features.</p> <p>In practice, prior to service commencement, the operator may be required to demonstrate to the purchaser that the arrangements put in place will meet the output specification. Acceptance of the service by the purchaser (based as far as possible on service commencement based tests), without any “approval” of the means of delivery of the service will not, in most cases, mean that the purchaser determines the key features of the property.</p> | <p><i>the case if the operator is free to redesign the property extensively during the term of the contract (perhaps even to scrap the original property and build a replacement), in the hope of reducing its costs. Similarly, in a PFI contract to design, build and operate a road, the operator may have complete discretion over the balance between the quality of the original road build and the consequent level of maintenance costs.”</i></p> <p>As noted in paragraph 4.40 the operator may have the freedom to make design changes during the construction period that, whilst not being necessary to meet the contract requirements, are made in the expectation of reducing (or avoiding an increase in) expected operating and life cycle costs.</p> |
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Quantitative risk analysis

4.12 The quantitative risk analysis referred to in paragraphs 4.3 to 4.5 can be broken down into the following stages, and two simplified examples are provided at Annex A to illustrate how this approach should work in practice. These examples, however, are not based on real data and the results should not be taken as representative of other PFI contracts, even those with a similar allocation of risks.

| Stage | Task |
|-------|--|
| 1 | Identify the key commercial risks borne by each party. In some cases, following an |

| | |
|---|---|
| | initial assessment of the risks of the transaction, the accounting treatment may be clear at this stage. If so, the detailed calculations of the potential variations in property profits (stages 2-4) will not be necessary. |
| 2 | Evaluate the Net Present Value (NPV) of the potential variations in property profits for the operator. |
| 3 | Evaluate the NPV of the potential variations in property profits for the purchaser. |
| 4 | Compare the potential variations in property profits for both the operator and the purchaser to provide a quantitative indicator of which party has an asset of the property. |

4.13 Paragraph 1.6 of this note provides that the road, hospital, prison etc that is the subject of the PFI contract is referred to as the property. Whilst it is important that all items which relate to a single property should be grouped together, it should be noted that in some contracts there may be two or more distinct properties which need to be assessed separately. In particular, for contracts involving buildings, the boundary between which items of plant, machinery and equipment form part of the building is not always clearly definable. The RICS Appraisal and Valuation Manual is the authoritative source of guidance on which items of plant and machinery are normally included/excluded in valuations of land and buildings. Although this guidance is primarily used for valuation purposes it can also be used as a useful source of reference for classifying items for the purpose of the accounting analysis. Extracts of the RICS Manual are provided at Annex B which provides a list of those items of plant and machinery which are usually included in the valuation of land and buildings.

4.14 It is important to note, however, that given the specialist nature of many PFI projects, some individual items will need to be considered on a case by case basis. In particular, some items which are included within the valuation of land and buildings as per Annex B may be classed as plant and machinery for the purpose of the accounting analysis. Conversely, some items may be classified as land and buildings for the accounting analysis, even though they are not mentioned in Annex B as being included within land and buildings for valuation purposes.

4.15 For contracts which do not involve buildings, analogous rules apply and the property under scrutiny will only include those items which are integral to its provision.

Principal factors

4.16 Paragraph F22 of the AN states that:

As noted in paragraph F19, in applying the FRS the key test is to establish who will bear any variations in property profits (or losses). Depending on the particular circumstances, a range of factors may be relevant to this assessment of profit variation. The principal factors that, depending on the particular circumstances, may be relevant are:

- ## demand risk
- ## the presence, if any, of third party revenues

- ⌘ who determines the nature of the property
- ⌘ penalties for under performance or non-availability
- ⌘ potential changes in relevant costs
- ⌘ obsolescence, including the effects of changes in technology
- ⌘ the arrangements at the end of the contract and residual value risk

Demand risk

4.17 Paragraph F24 of the AN defines demand risk as:

Demand risk is the risk that the demand for the property will be greater or less than predicted or expected.

4.18 Evaluating the effects of demand risk: the relevant paragraphs of the AN are reproduced below.

F25 The first step is to identify whether demand is a significant risk. There may be instances where there is little genuine uncertainty about the level of future demand for the services provided by the property. For example, in a short-term IT contract there may be very little likelihood of demand varying greatly from the levels predicted under the contract. In such a case, demand risk is not significant and little weight should be given to this test. In other cases there may be much genuine uncertainty over the extent to which a property will be used - for example, a new road to be built in a newly developed area. In these cases demand risk will be significant and who bears it will be highly relevant to determining the appropriate accounting treatment.

F26 The length of the contract may influence the significance of demand risk. In general, demand risk will be greater the longer the term of the contract, since it is usually more difficult to forecast for later periods.

F27 It is also important to distinguish where demand risk is insignificant from where the terms of the contract are such that it is passed to one or other party. For example, there may be much uncertainty over the demand for a certain type of property in the long term. However, the terms of a long term PFI contract for such a property may be such that the purchaser would fill the PFI property in preference to properties not subject to PFI, with the effect that it is very unlikely that the PFI property will not be full. In such a case, the purchaser has retained demand risk.

4.19 F27 confirms that if the purchaser has the flexibility to fill the PFI property in preference to properties not subject to PFI, with the effect that it is very unlikely that the PFI property will not be full, the purchaser still retains demand risk. In such cases where the purchaser has the flexibility to manage demand across a portfolio of properties in a particular “sector” (eg, primary schools within a Local Authority catchment area) it will be necessary to evaluate the total exposure to demand risk across the portfolio of properties in that particular “sector” of the market (ie total expected demand less total expected supply) and to allocate the total exposure

across those properties providing the total expected supply. The factors that need to be considered include the following:

- # the area within which demand is managed, eg on a national, regional or local basis;
- # historical information on usage levels against “supply” eg available places; existing plans to rationalise the property portfolio and/or to change the service specifications;
- # geographical and demographic factors; and
- # the effects of government policy (current or future) on the future delivery of services.

4.20 Example: A purchaser has 5 properties servicing a certain sector of the market with the PFI property (E) having a capacity of 300 places out of a total capacity of 1000 places.

| Property | A | B | C | D | E |
|----------|-----|-----|-----|-----|-----|
| Capacity | 200 | 300 | 100 | 100 | 300 |

4.21 If total expected demand could fall to 800 places the total exposure to demand risk across the whole portfolio would be 200 places. However, as noted above, since the purchaser still retains demand risk even if it is very unlikely that the PFI property will not be full, one should not assume that there is no demand risk for the PFI property. Conversely one should not take the other extreme view that the demand risk for the PFI property is the total exposure of 200 places. A reasonable assumption for the purpose of the quantitative risk analysis is to allocate the total exposure to demand risk (ie 200 places) across the properties in the portfolio. On a weighted average basis this would give rise to a demand risk of 60 places being allocated to the PFI property.

4.22 The potential variations in costs associated with this risk of a fall in demand, prior to considering any possible options to mitigate this risk, would therefore be 60 places multiplied by the unitary charge per place. By not providing these 60 places it may also be possible for the operator to reduce their variable cost base, provided this would not have any impact on them receiving their availability payments.

4.23 However, as noted in paragraph 4.8, if the purchaser can avoid an increase in costs (ie paying for the 60 places that it does not need) by adopting an alternative approach with a lower net cost, it is the lower net cost to the public sector that should be included in the quantitative risk analysis. The effects of demand risk may therefore be mitigated depending on the options available to the purchaser to manage the risk. For example: if there was more than one property, the lowest cost option may be to reduce the occupancy at another property, or in the extreme to close another property. Alternatively the purchaser may have the ability to exploit third party income (eg private patients income) or to adapt certain aspects of the property so that it can be used for different purposes within that sector of the market. Whatever approach is adopted a fair assessment of the net cost of demand risk to the purchaser will need to be made.

4.24 Identifying the bearer of demand risk: As noted in paragraph F28 of the AN this will depend on the answers to two interrelated questions:

- a. Will the payments between the operator and the purchaser reflect the usage of the property or does the purchaser have to pay the operator regardless of the level of usage (paragraphs F29 and F30)?
- b. Who will gain if demand is greater than expected?

4.25 If the purchaser is obliged to pay for the output or capacity of the property (eg available places) whether or not it is needed it will have retained demand risk. Conversely, where PFI payments vary proportionately over all reasonably likely levels of demand, the operator will bear demand risk.

4.26 A summary of the potential variations in cost and revenues for each party, prior to considering any possible options to mitigate the effects of demand risk, are as follows:

| Scenario | Demand risk is with purchaser | Demand risk is with operator |
|--|--|---|
| Demand less than expected | <p>Purchaser: loss of making future payments for the output or capacity of the property (the unitary payment) to the extent that it is not needed.</p> <p>Operator: possible reduction in variable costs (property and service).</p> | <p>Purchaser: None. Although the payments made by the purchaser will vary depending upon the extent that they need the output or capacity of the property, there is no profit or loss effect since the purchaser is only paying for the output it requires.</p> <p>Operator: reduction in expected revenues together with an associated reduction in variable costs (property and service).</p> |
| Demand is greater than expected | <p>Purchaser: benefit of extra usage (the unitary payment) at marginal or no extra cost.</p> <p>Operator: possible increase in variable costs (property and service).</p> | <p>Purchaser: None. As above.</p> <p>Operator: increase in revenues (the unitary payment) together with a possible increase in variable costs (property and service).</p> |

4.27 Third party revenues: Third party revenue risk is the risk that revenues arising from third party demand for the property will be greater or less than predicted or expected. Information on expected third party revenues should be available from the operator's financial model. As with demand risk, when evaluating the potential variations in third party revenues it will be necessary to consider any associated changes in variable costs if demand is different from expected.

4.28 Who Determines the nature of the property: (AN F35-F37) This section of the AN includes comments on design risk and construction risk.

Design risk

4.29 Paragraph F37 of the AN defines design risk as:

The risk that the design of the property is such that, even if it is constructed satisfactorily, it will not fully meet the requirements of the contract.

4.30 One of the key features of a PFI transaction is that the operator can make investment decisions concerning the design and build of the property (before, during and after construction) that affect operational efficiency during the life of the contract. As part of this decision process the operator will need to consider the interaction between a more expensive design solution and lower operating and life cycle costs and vice versa. The chosen design solution of the operator will therefore give rise to an expected cost profile for those property related costs which flow from that particular design solution. Any potential variations in these expected property related costs are relevant to the accounting analysis.

4.31 **Example 1** - In a PFI contract to design, build, finance and operate a road, the operator may choose to build a high quality road in the expectation of a low level of maintenance costs during the life of the contract. If the design solution does not achieve the expected outcome the operator may need to spend more or less than anticipated on maintenance to meet the contract requirements.

4.32 **Example 2** - An operator may choose to use more expensive insulating materials and triple glazing to improve the energy efficiency of a building during the operating phase. If the design solution is not as energy efficient as expected the operator may need to spend more on heating costs to maintain the property at the required temperature range or accept reductions in revenue for failing to meet availability or performance criteria.

4.33 This section of the Technical Note also includes the risk that expenditure on the property itself will be greater or less than expected at the outset due to factors other than problems with the specific design solution of the operator (see above).

4.34 **Example 3** - The cost of repairing a leaking roof caused by storm damage or replacing an item of fixed plant outside the planned replacement cycle.

4.35 **Example 4** - Changes in legislation which require additional expenditure on the property to satisfy health and safety requirements.

4.36 The impact of changes in price on any additional capital and/or revenue costs associated with design risks are considered in the later section on "potential changes in relevant costs" (see paragraph 4.43). It is also important to note that those property related events that give rise to design failures may also give rise to penalties for underperformance or non-availability. Whilst both the cost of remedy of failures and any penalties incurred until a remedy is achieved should be taken into account, care should be taken to ensure that the same risk is not effectively double counted.

Construction risk

4.37 Paragraph F37 of the AN defines construction risk as:

The financial implications of cost and time overruns during the construction period (and related warranty repairs caused by poor building work after the asset has been completed). Construction risk is not generally relevant to determining which party has an asset of the property once construction is completed, because such risk normally has no impact during the property's operational life.

4.38 Notwithstanding the exclusion of construction risk, the risk of the operator incurring additional costs as a result of events occurring during the construction phase must be analysed carefully. The rationale for excluding construction risks is that they have no impact during the property's operational life and are therefore "before the event" (ie before the property becomes operational). Construction risk therefore includes the financial implications of cost overruns during the construction phase due to any changes to the original design that are necessary (ie have to be made) in order to meet the requirements of the contract. These risks are therefore irrelevant for the purpose of determining which party has an asset of the property once it is operational.

4.39 **Example 1** - the original design may need to be changed during the construction phase in order to overcome unforeseen events such as planning obligations or ground risks.

4.40 However, some risks during the construction phase will relate to design risks rather than construction risks. In particular, the operator may have the freedom to make design changes during the construction period that, whilst not being necessary to meet the contract requirements, are made in the expectation of reducing (or avoiding an increase in) expected operating and life cycle costs. To the extent that the financial implications of such changes cannot be quantified, this should be considered as one of the qualitative factors in paragraph 4.11.

Penalties for under performance or non-availability

4.41 Paragraph F38 (part) of the AN provides that:

Many PFI contracts provide for penalties if the property is below a specified standard or is unavailable because of operator fault. (Penalties relating purely to services, however, are not relevant and should not be brought into the assessment). These penalties may take the form of either cash payments or reductions in revenue. It will be important to assess both the likelihood of the penalty occurring in practice and whether the likely payments are significant.

4.42 Underperformance and non-availability risk is the risk that deductions relating to the property will be greater or less than expected. For example, in a PFI contract involving a catering service, deductions caused by a leaking kitchen roof are relevant but deductions due to meals being too small are not. Where individual availability and performance criterion cover a mixture of property related and

service related events it will be necessary to identify all significant property related events (and the probability of them occurring) for each individual criteria in order to evaluate the potential deductions relating to the property. It will not be necessary to identify individual service related events since these are not relevant to the accounting analysis. As noted in paragraph 4.8, if either party can avoid a significant penalty by adopting an alternative approach with a lower cost, the lower cost alternative should be used in the accounting analysis.

Potential Changes in relevant costs

4.43 Paragraphs F40 & F41 of the AN state that:

F40 Potential changes in relevant costs may be dealt with in different ways under a PFI contract. (Only changes in property costs are relevant; changes in service costs are not relevant and should not be brought into the assessment.) The contract may have the effect that any significant future cost increases can be passed on to the purchaser, which would be evidence that the property is an asset of the purchaser. For example, this would be the case where the PFI payments will vary with specific indices so as to reflect the operator's costs.

F41 Conversely, where the operator's costs are both significant and highly uncertain, and there is no provision for cost variations to be passed on to the purchaser, this is evidence that the property is an asset of the operator. For example, this would be the case where the payments are fixed or vary in relation to a general inflation index such as the Retail Prices Index. Similar considerations apply to any cost savings and how they are shared between the parties.

4.44 This section of the AN therefore addresses the risk that expenditure on relevant costs will be greater or less than what was expected at the outset due only to changes in price.

4.45 Relevant costs includes any planned expenditure on the property itself, such as:

- ## replacement of parts of the fabric of the building (eg windows);
- ## replacement of certain items of plant, machinery and equipment (see paragraphs 4.13 to 4.15); and
- ## property maintenance (including the cost of maintenance staff).

4.46 Details of the expected expenditure and indexation provisions for each relevant cost should be available from the operator's financial models. For example, the operator may assume in the financial model that nominal maintenance costs will increase by 2% per annum, actual expenditure, however, could vary by a different factor.

4.47 Relevant costs will also include any unplanned expenditure arising from design risks. (See above section on design risk, 4.29-4.36).

4.48 Who bears this risk will depend upon whether or not the price variations can be passed onto the purchaser. If the unitary payment is fixed or varies in relation to

a general inflation index the risk is borne by the operator. If the unitary payment varies with specific indices to reflect actual costs of the operator then the pricing risk is borne by the purchaser.

Obsolescence, including the effects of changes in Technology

4.49 Paragraph 42 of the AN states that:

F42 Whether obsolescence or changes in technology are relevant will depend on the nature of the contract. In contracts for the introduction of information technology systems, it will be of great significance who bears the future costs and any benefits associated with obsolescence or changes in technology: in other cases (eg a roads contract) it is likely to be of much less significance.

4.50 **Example** - a PFI contract for the provision of IT services may require the operator to upgrade the service provided during the life of the contract, at no extra cost to the purchaser, to ensure they keep up to date with changes in technology. In particular, the contract may require the operator to provide IT services consistent with those used by a 'basket' of leading organisations in the UK. Recent upgrades could have included the provision of electronic mail and internet access; future developments may include desk top video conferencing.

Residual value risk

4.51 Residual value risk is the risk that at the end of the contract the property will be worth more or less than expected at the outset.

4.52 Identifying the bearer of residual value risk: Which party bears residual value risk will depend on the arrangements at the end of the contract and a range of different scenarios are covered in paragraphs F45-F48 of the AN. In summary:

| Scenario | RV risk with purchaser | RV risk with operator |
|---|------------------------|-----------------------|
| 1. Property transfers to purchaser for fixed or nominal sum (including zero). | ✓ | |
| 2. Property transfers to new operator, selected by the purchaser, for a fixed or nominal sum. | ✓ | |
| 3. Property transfers to the purchaser, or another operator, at the prevailing market price. | | ✓ |
| 4. Property is retained by the operator. | | ✓ |
| 5. Purchaser has an option to purchase or walk away and: | | |
| a) there is no genuine possibility that the purchase option will be exercised. (*) | | ✓ |
| b) there is no genuine possibility that the walk option will be exercised. (*) | ✓ | |

| | | |
|---|---|---|
| <p>c) at the outset there is a genuine possibility that either the purchase or walk away option may be exercised at the end of the contract.</p> <p>(*) The practical effect of the options needs to be carefully considered. Further details are provided in FRS 5 (paragraphs 59-62).</p> | ✓ | ✓ |
|---|---|---|

4.53 The contract may require the property to be in a pre-defined state of repair at the end of the contract (for example, provisions may require that all life cycle replacement and maintenance has been carried out such that the property can be used for a further period of say 5 to 10 years, with only minimal maintenance). These are commonly known as 'handback provisions'. The effect of these provisions is to bring forward, for the account of the operator, maintenance and life cycle risks that might otherwise arise beyond the end of the contract. These are directly relevant to the property and should therefore be included in the accounting analysis.

4.54 Evaluating residual value risk: When evaluating residual value risk a distinction needs to be made between:

- ⌘ specialised properties - for which there is no practical alternative use (for example, schools, hospitals, prisons and office accommodation that, due to its location or nature, is mainly of value to the purchaser); and
- ⌘ alternative use properties - for which there is an alternative use, whether or not such use involves the provision of the same service (for example office accommodation in areas where there is demand from other users).

4.55 Information on the measurement and valuation of tangible fixed assets is covered in paragraphs 3.2.10 - 3.2.23 of the Resource Accounting Manual and relevant extracts are reproduced at Annex C. Extracts from the RICS Manual in respect of specialised properties (to the extent that they include land and buildings) are reproduced at Annex D.

4.56 Specialised properties: In most cases it is unlikely that the operator will accept residual value risk at an acceptable price and therefore this risk is usually borne by the purchaser. Where residual value risk is borne by the purchaser the expected residual value, calculated on the basis of depreciated replacement cost, may be worth more or less at the end of the contract if:

- ⌘ the property is no longer needed since the purpose for which the property was acquired is no longer carried out - this will be related to the evaluation of demand risk;
- ⌘ the property is in a poor condition at the end of the contract which reduces its remaining useful life - this could be covered by the terms of the contract which may require condition surveys to be undertaken prior to the property reverting to the purchaser to ensure that the property is handed back in a good state; or
- ⌘ prices change in real terms over the life of the contract - this can be estimated from historical data.

4.57 **Example** - A specialised property costing £100m has a design life of 60 years and reverts to the purchaser for nil consideration at the end of the 30 year PFI contract. For the purpose of this example let us assume that the property depreciates on a straight line basis (in practice other methods may be more appropriate) and the purchaser will still need the property at the end of the 30 year period. Also, prior to the end of the contract, there is a major survey to ensure that the property is in a good condition with an expected remaining life of 30 years on reversion.

Net Present Value of the
Expected Residual Value = $\frac{£100m \times 30}{60} \times \frac{1}{(1.06)^{30}} \times \frac{(1+p)^{30}}{(1+i)^{30}}$

Where:

- p = expected annual price index for this particular property
- i = expected inflation rate
- $(1+p)^{30}$ = real price changes over contract term
- $(1+i)^{30}$
- $\frac{1}{(1.06)}$ = real discount rate currently used by the Treasury

If p = i the Expected Residual Value (NPV) = £8.7m
If real prices were to increase by 10% over the 30 year period this would give a potential variation in property profits of £870k.

4.58 Alternative use properties: Where there is potential for alternative use there may be scope for the purchaser to transfer residual value risk to the operator. For properties with an alternative use the expected residual value will be the estimated open market value at the end of the contract. Given the uncertainties surrounding future market values, however, it is recommended that independent professional valuations are used to determine residual value risk for alternative use properties.

5. REQUIRED ACCOUNTING

Purchaser has an asset of the property

5.1 The required accounting is set out in paragraphs F51 and F52 of the AN which provides that:

F51 Where it is concluded that the purchaser has an asset of the property and a liability to pay for it, these should be recorded in its balance sheet. The initial amount recorded for each should be the fair value of the property. Subsequently, the asset should be depreciated over its useful economic life and the liability should be reduced as payments for the property are made. In addition, an imputed finance charge on the liability should be recorded in subsequent years using a property-specific rate (paragraph F16 discusses how to determine such a rate). The remainder of the PFI payments (ie the full payments, less the capital repayment and the imputed financing charge) should be recorded as an operating cost. If the purchaser has any other obligations in relation to the PFI contract, these should be accounted for in accordance with FRS 12 'Provisions, Contingent Liabilities and

Contingent Assets'.

F52 Generally, the purchaser should recognise each property when it comes into use. An exception is where the purchaser bears significant construction risk, in which case it should recognise the property as it is constructed.

Operator has an asset of the property

5.2 The required accounting is set out in paragraph F53 of the AN which provides that:

F53 Where it is concluded that the purchaser does not have an asset of the property, there may nevertheless be other assets or liabilities that require recognition. These can arise in respect of contributions, acquisition of the residual and other obligations of the purchaser.

5.3 The purpose of this Section of the Technical Note is to provide some further examples and illustrations on **Residual Interests, Contribution of Existing Assets** and also to set out the **Disclosure Requirements** for those transactions where the operator has an asset of the property.

Residual Interests

5.4 For ease of reference Paragraphs F55, 56 and 57 of the AN are repeated below:

F55 - In some PFI transactions, all or part of the property (eg the land element) will pass to the purchaser at the end of the contract. Where the contract specifies that this transaction should take place at market value at the date of transfer, no accounting is required until the date of transfer, as this represents future capital expenditure for the purchaser.

F56 - Where the contract specifies the amount (including zero) at which the property will be transferred to the purchaser at the end of the contract, the specified amount will not necessarily correspond with the expected fair value of the residual estimated at the start of the contract. Any difference must be built up over the life of the contract in order to ensure a proper allocation of payments made between the cost of services under the contract and the acquisition of the residual. At the end of the contract the accumulated balance (whether positive or negative), together with any final payment, should exactly match the originally estimated fair value of the residual. For example, if the expected residual value at the end of a 30-year contract is £20 million, but the contract specifies that £30 million should be paid by the purchaser for that residual at that date, then a credit balance of £10 million should be accrued over the life of the contract, with the corresponding charge each year being included in the service expense. The payment of £30 million at the end of the contract will extinguish the balance of £10 million and establish an asset of £20 million, representing the value of the residual.

F57 - If, during the life of the contract, expectations change so that the expected value of the residual falls (but there are no changes to the payments scheduled under the contract)

then consideration should be given to whether there has been an impairment. Ultimately, a positive difference may become negative, in which case a provision is required. Using the example in paragraph F56, if the expected residual value fell to zero after five years, then an expense and liability of £20 million would be recorded immediately. The remaining £10 million is still accrued over the life of the contract, giving a final liability of £30 million which is paid at the end of the contract.

5.5 The following additional examples are provided to illustrate the accounting treatment of residual interests. It is important, however, that due regard is given to materiality when determining whether or not to record residual interests or any subsequent changes in their value.

5.6 **Example 1** - The property in a PFI contract is deemed to be an asset of the operator but will revert to the purchaser at the end of year 30 with an expected residual value for the property (estimated at the start of the contract) of £2m. The contract provides for the purchaser to pay the following amounts to acquire the residual property at the end of the contract:

- a. £1m b. £2m c. £3m

5.7 The following accounting would be required:

- a. Capitalise £1m of the PFI service payments over the life of the contract as an asset, representing the residual interest. At the end of the contract the cash payment of £1m will be added to the residual interest asset to give an amount for the repurchased property of £2m.
- b. There is no residual interest since the expected residual value of the property at the end of the contract is the same as the amount specified in the contract to be paid for it at that date. The purchase of the property in year 30 merely constitutes intended capital expenditure.
- c. Record an additional expense of £1m over the life of the contract together with a corresponding liability, representing the residual interest. At the end of the contract the cash payment of £3m will clear the liability of £1m to give an amount for the repurchased property of £2m.

5.8 The expected residual value of the property at the end of the contract should also be regularly assessed throughout the contract since this value may vary significantly due to some specific event or if the expected value was estimated incorrectly at the outset.

5.9 **Example 2** - As for example one but after five years, the expected residual value of the property in year 30 falls to zero. In the three cases noted above (a, b & c) the purchaser is now going to pay more for the residual property than it is expected to be worth, without any compensation under the terms of the contract, ie the residual interest is impaired. The following accounting would apply:

- a. Record an expense immediately to write off the residual asset built up so far of £166,000 ($5/30 \times £1m$). Record as an expense (and as a liability), the NPV of £1834,000 (the remaining "payments" to be made of £834,000

($25/30 \times £1\text{m}$) plus the £1m year 30 payment) representing the obligation to pay for something that is expected to be worth nothing at the end of the contract. When the “payments” are actually made they will be charged against the liability thus reducing its value to nil at the end of the contract.

- b. Record an expense and a liability immediately for the NPV of £2m which represents an obligation to pay £2m for something that is expected to be worth nothing at the end of the contract.
- c. Record an expense and a liability immediately for the NPV of £2m. The remaining amount of £1m is still built up over the life of the contract to give a final liability of £3m. At the end of the contract the cash payment of £3m will clear the liability.

5.10 **Example 3** - As for example one but after five years, the expected residual value of the property in year 30 increases to £5m. In the three cases noted above (a, b & c) the purchaser should record an asset and a revaluation reserve movement, based on the NPV of the increase in value of £3m.

Contribution of Existing Assets

5.11 Paragraph F54 of the Application Note states that:

Contributions to a PFI contract by the purchaser may take a number of forms, including an upfront cash payment or the contribution of existing assets for development by the operator. The accounting treatment of such contributions depends on whether they give rise to future benefits for the purchaser. For example:

- a. If the contribution of an existing property results in lower service payments, the carrying amount of the property should be reclassified as a prepayment (current asset) and subsequently charged as an operating cost over the period of reduced PFI payments. If there is in effect a sale of part of the contributed asset (for example, a parcel of surplus land that is not used in the PFI contract), any profit should be recognised in accordance with paragraphs 23 and 24 (as explained in paragraphs 70- 74).
- b. If the contribution does not give rise to a future benefit for the purchaser, it should be charged as an expense when the contribution is made. For example, a capital grant might be given for which the operator would have qualified even if the transaction had not been part of the PFI, or short life assets might be donated to the contract for no value.

5.12 In practice, existing assets can be allocated to one of the following three categories:

- ## surplus assets (which are sold to the operator who subsequently bears the
- ## risks and rewards of ownership);
- ## short life assets; (asset life less than contract term); and
- ## long life assets (asset life greater than contract term).

5.13 Surplus Assets: in return for selling the surplus asset to the operator the purchaser may receive an upfront cash payment or pay reduced service payments

for a defined period of time. If the sale is satisfied by a reduction in future service payments, the sales value (the cash amount that the surplus asset could have been sold for at the date the contract was entered into) is set up as a debtor and is subsequently charged as an operating cost over the period of the service payment reductions. The difference between the sales value and the carrying value is accounted for as a profit/loss arising on the sale of the surplus asset and should be recognised immediately in the profit and loss account. The difference between the total reduction in service payments and the sales value represents interest receivable by the purchaser on the outstanding debtor balance and should be apportioned over the period of the service payment reductions.

5.14 **Example 1** - An asset with a carrying value of £100 is sold for £150, satisfied by a reduction in service payments of £18 per annum for 10 years. For the purpose of this example it is assumed that the finance charge is allocated on a straight line basis.

The required accounting is as follows:

- # Record a profit of £50 being the sales value of £150 less the carrying value of £100;
- # Set up a debtor (prepayment) of £150;
- # Reduction in service payments comprise a repayment element of £15 pa and a finance charge (interest receivable) of £3 pa; and
- # Reducing debtor balance will be subject to a capital charge of 6% real each year.

5.15 For surplus assets it is possible that sales values could be inflated to allow profits to be front loaded. Any significant profits will therefore need to be justified, for example an operator may place a much higher value on a piece of surplus land which adjoins existing land they already own.

5.16 Short Life assets: The purchaser may contribute short life assets to the transaction which may or may not transfer the benefits and risks of the assets to the operator. If the benefits and risks of the asset remain with the purchaser (ie the asset has not been sold) the asset should continue to be recognised by the purchaser and should be written off as normal. If the benefits and risks of the asset are transferred to the operator the accounting treatment may be summarised as follows:

| | Asset assigned a value under the contract | Asset not assigned a value under the contract. |
|--|--|--|
| Asset still used to provide the contracted service | Treat in accordance with paragraph 5.17 below. | Write off the carrying value of the asset immediately. |
| Asset not used to provide the contracted service | Treat as above for “surplus assets”. | Write off the carrying value of the asset immediately. |

5.17 If the asset is sold for its market value (ie a market exists and the value can be verified objectively); the purchaser may recognise a profit provided the contract quantifies how the value will be recovered eg through specific reductions in service

payments for a defined period of time. If the value assigned to the asset under the contract differs from market value then the difference must be spread over the relevant period eg the period of reductions in future service payments.

5.18 Long Life Assets: Assets in this category are usually transferred to the operator for the duration of the contract and either will or may be reacquired by the purchaser at the end of the contract. The question of whether or not the purchaser has in effect disposed of these assets should be assessed in accordance with paragraphs 23-24 and paragraphs 70-74 of FRS5.

Disclosure Requirements

5.19 The disclosure requirements for a lessee under a PFI contract are set out in SSAP21: Leases and the Purchase Contracts. However to take account of the long term nature of most PFI contracts, the following additional disclosures are required for off balance sheet transactions and the “services” element of any on balance sheet transactions:

- ⌘ The total amount charged as an expense in the Operating Cost Statement in respect of PFI transactions;
- ⌘ The payments which it is committed to make during the next year, analysed between those in which the commitment expires:
 - within one year
 - in the 2nd to 5th year inclusive
 - in the 6th to 10th year inclusive
 - and so on in five year bandings

5.20 Since the annual payments under PFI contracts are likely to vary from year to year, beyond an adjustment due to indexation, the payments in later years might differ from those which the purchaser is committed to make during the next year. If the estimated annual payments in future years are expected to be materially different from those which the purchaser is committed to make during the next year, the likely financial effect also needs to be disclosed in the financial statements.

5.21 The following information is also required for those schemes assessed as off balance sheet:

- ⌘ description of scheme;
- ⌘ estimated capital value; and
- ⌘ contract start and end dates.

5.22 The disclosure requirements of paragraph 30 of FRS 5: Reporting the substance of transactions are also relevant to PFI transactions. This requires that:

- ⌘ the disclosure of a transaction in the financial statements; whether or not it has resulted in assets or liabilities being recognised or ceasing to be recognised,

- €# should be sufficient to enable the user of the financial statements to understand its commercial effect; and
- €# where a transaction has resulted in the recognition of assets or liabilities whose nature differs from that of items usually included in the relevant balance sheet heading, the differences should be explained.

5.23 Therefore, even where the transaction does not result in any items being recognised in the balance sheet, the transaction may give rise to guarantees, commitments or other rights and obligations which, although not sufficient to require recognition of an asset or liability, require disclosure in order that the financial statements give a true and fair view.

ANNEX A

METHODOLOGY FOR QUANTITATIVE RISK ANALYSIS

The following two simplified examples are provided to illustrate an appropriate methodology for undertaking the quantitative risk analysis in practice. These examples, however, are not based on real data and the results should not be taken as representative of other PFI contracts, even those with a similar allocation of risks.

In some cases, following an initial assessment of the risks of the transaction, the accounting treatment may be clear at Stage 1. If so, the detailed calculations of the potential variations in property profits (Stages 2-4) will not be necessary.

EXAMPLE 1

Stage 1 - Identify the key commercial risks borne by each party

For illustration purposes assume that the key risks in the PFI contract can be allocated as follows:

| Risk/principal factor | Borne by purchaser | Borne by operator |
|-------------------------------------|--------------------|-------------------|
| Demand risk | ✓ | |
| Third party revenues | | ✓ |
| Design risk | | ✓ |
| Penalties for under performance | | ✓ |
| Penalties for non-availability | | ✓ |
| Potential changes in relevant costs | | ✓ |
| Obsolescence | | ✓ |
| Residual value | ✓ | |

Stage 2 - Evaluate the NPV of the potential variations in property profits/losses for the operator

A range of modelling techniques can be used to perform the risk analysis depending on the size and complexity of the project. These techniques include sensitivity analyses, scenario analyses or a Monte Carlo simulation. For this example a Monte Carlo simulation has been performed which automatically gives greatest weight to those factors which are likely to have the greatest commercial effect in practice. One of the key features which needs to be borne in mind when assigning probability distributions to the different risks/principal factors, is the requirement to identify whether there are any interdependencies between the probability distributions or whether the risks are independent of others.

| Risk/principal factor | Min(cost)/Revenue NPV £m | Most probable (cost)/revenue NPV £m | Max(cost)/revenue NPV £m | Probability Distribution |
|---------------------------------|--------------------------|-------------------------------------|--------------------------|--|
| Third party revenues | 0 | 20 | 40 | Normal: SD = 10, mean = 20 |
| Design risk | (30) | (25) | (10) | Triangular: most likely = (25), min = (30), max = (10) |
| Penalties for under-performance | (30) | (10) | 0 | Triangular: most likely = (10), min = (30), max = 0 |
| Penalties for non-availability | (60) | (40) | 0 | Triangular: most likely = (40), min = (60), max = 0 |
| Relevant costs: | (30) | (20) | (10) | Normal: SD = 5, mean = (20) |
| Obsolescence | (30) | (25) | (20) | Triangular: most likely = (25), min = (30), max = (20) |

The Monte Carlo simulation gives the following results, where the lower and upper limits are at the 5%/95% ends of the distribution.

Lower limit £(123)m

Mean £(93)m

Upper limit £(62)m

Stage 3 - Evaluate the NPV of the potential variations in property profits/losses for the purchaser

| Risk/principal factor | Min(cost)/Revenue NPV £m | Most probable (cost)/revenue NPV £m | Max(cost) /revenue NPV £m | Probability Distribution |
|-----------------------|--------------------------|-------------------------------------|---------------------------|---|
| Demand risk | (20) | (10) | 0 | Normal: SD=5, mean = (10) |
| Residual value | 0 | 10 | 20 | Triangular: most likely = 10, min = 0, max = 20 |

The Monte Carlo simulation gives the following results:

Lower limit £(10)m

Mean £nil

Upper limit £11m

Stage 4 - Compare the potential variations in property profits/losses for both the operator and the purchaser to determine which party has an asset of the property
The end product of the detailed risk analysis can be summarised as follows:

Operator - Expected NPV of property profits/losses £(93)m

- 95% lower limit £(123)m
- 95% upper limit £(63)m
- Range (95% confidence interval) £61m

Purchaser - Expected NPV of property profits/losses £nil

- 95% lower limit £(10)m
- 95% upper limit £11m
- Range (95% confidence interval) £21m

The total potential variation in property profits/losses is therefore £82m, of which the purchaser bears £21m (26%) and the operator £61m (74%). The results of the quantitative risk analysis would therefore indicate that the operator has an asset of the property. However, as noted in paragraphs 4.3 to 4.5, the results of the quantitative risk analysis should always be assessed in the context of the qualitative indicators and those risks which may not be capable of meaningful quantification for inclusion in the quantitative risk analysis.

EXAMPLE 2

Stage 1 - Identify the key commercial risks borne by each party

For illustration purposes assume that the key risks in the PFI contract can be allocated as follows:

| Risk/principal factor | Borne by purchaser | Borne by operator |
|-------------------------------------|--------------------|-------------------|
| Demand risk | ✓ | |
| Third party revenues | | ✓ |
| Design risk | ✓ | ✓ |
| Penalties for underperformance | | ✓ |
| Penalties for non-availability | | ✓ |
| Potential changes in relevant costs | | ✓ |
| Obsolescence | ✓ | ✓ |
| Residual value | ✓ | |

Stage 2 - Evaluate the NPV of the potential variations in property profit/losses for the operator

| Risk/principal factor | Min(cost)/revenue NPV £m | Most probable (cost)/revenue NPV £m | Max(cost) / revenue NPV £m | Probability Distribution |
|---------------------------------|---------------------------------|--|-----------------------------------|---|
| Third party revenues | 10 | 20 | 30 | Normal: SD=5, mean = 20 |
| Design risk | (15) | (10) | (5) | Triangular: most likely= (10), min = (15), max = (5) |
| Penalties for under-performance | (30) | (10) | 0 | Triangular: most likely = (10), min = (30), max = 0 |
| Penalties for non-availability | (30) | (20) | (5) | Triangular: most likely = (20), min = (30), max = (5) |
| Relevant costs | (30) | (20) | (10) | Normal: SD=5, mean = 20 |
| Obsolescence | 0 | 0 | 0 | |

The Monte Carlo simulation gives the following results, where the lower and upper limits are at the 5%/95% ends of the distribution:

Lower limit £(59)m

Mean £(42)m

Upper limit £(24)m

Stage 3 - Evaluate the NPV of the potential variations in property profits/losses for the purchaser

| Risk/principal factor | Min(cost)/Revenue NPV £m | Most probable (cost)/revenue NPV £m | Max(cost)/ revenue NPV £m | Probability Distribution |
|------------------------------|---------------------------------|--|----------------------------------|---|
| Demand Risk | (60) | (30) | 0 | Normal: SD=15, mean = (30) |
| Design risk | (15) | (10) | (5) | Triangular: most likely = (10), min = (15), max = (5) |
| Residual value | 0 | 20 | 40 | Triangular: most likely = 20, min = (0), max = 40 |
| Obsolescence | 0 | 0 | 0 | |

The Monte Carlo simulation gives the following results:

Lower limit £(47)m

Mean £(20)m

Upper limit £8m

Stage 4 - Compare the potential variations in property profits/losses for both the operator and the purchaser to determine which party has an asset of the property. The end product of the detailed risk analysis can be summarised as follows:

Operator - Expected NPV of property profits/losses £(42)m

- 95% lower limit £(59)m
- 95% upper limit £(24)m
- Range (95% confidence interval) £35m

Purchaser - Expected NPV of property profits/losses £(20)m

- 95% lower limit £(47)m
- 95% upper limit £8m
- Range (95% confidence interval) £55m

The total potential variation in property profits/losses is therefore £90m, of which the purchaser bears £55m (61%) and the operator £35m (39%). The results of the quantitative risk analysis would therefore indicate that the purchaser has an asset of the property. However, as noted in paragraphs 4.3 to 4.5, the results of the quantitative risk analysis should always be assessed in the context of the qualitative indicators and those risks which may not be capable of meaningful quantification for inclusion in the quantitative risk analysis.

ANNEX B

PLANT AND MACHINERY NORMALLY INCLUDED IN VALUATIONS OF LAND AND BUILDINGS

The following extracts have been taken from the Royal Institution of Chartered Surveyors (RICS) -Appraisal and Valuation Manual:

PSA 1.1 Plant and machinery may be broadly divided into two categories:

- a. that forming part of the building services installations which are normally included in valuations of land and buildings; and*
- b. process plant, machinery and equipment which may have been installed wholly in connection with the occupiers' industrial or commercial processes, together with furniture and furnishings, tenants' fixtures and fittings, vehicles, moulds and loose tools. These items may have to be valued separately for balance sheet and other purposes.*

The boundary between these two categories is not always clearly definable and the criteria may vary according to the purpose of the valuation. Where there is doubt as to the correct classification, the general rule is that assets installed primarily to provide services to the buildings should be valued with the land and buildings and assets primarily serving the commercial or industrial process should be included in the plant and machinery valuation.

PSA 1.2 The following list, though not comprehensive, indicates those items of plant and machinery usually included in valuations of land and buildings, on the basis that they form part of the building services installations.

- a. Electricity*
Main supply cables, transformers, switchgear, standby generating plant and wiring installed for non-process purposes. Electrical equipment primarily installed in connection with the industrial or commercial process should be valued with the plant and machinery.
- b. Gas*
Gas mains up to and within meter houses and distribution piping within the premises installed for non-process purposes.
- c. Water*
Reservoirs, wells and boreholes together with pumps, water treatment plants, storage tanks and distribution piping within the premises that have been installed for non-process purposes.
- d. Space Heating and Hot Water*
Boilers and associated plant, fuel tanks and distribution piping where primarily installed for space heating and other non-process purposes, together with radiators, radiant panels, unit fan heaters and similar environmental heating appliances.

Independent space heating units, domestic water boilers, and similar items in the nature of 'landlord's fittings'.

- e Air Conditioning and Ventilation*

Air conditioning plant, trunking, fans and ventilators, except where primarily serving industrial or commercial processes.

f. Fire and Security

Hydrants, pumps and mains, sprinkler systems, smoke detectors, fire alarm and burglar alarm systems.

g. Drainage

Surface water and foul water drains and sewers. Sewage disposal plants not primarily concerned with treating process water and trade effluent.

h. Lifts and Gantries

Passenger and goods lifts, escalators and travelators installed to benefit the general occupation of the building.

Gantries and supports for overhead travelling cranes where forming an integral part of the structure of a building.

(Note: Overhead travelling cranes would normally be included in the plant and machinery valuations.)

i. Structures

The decision upon how structures should be classified will depend upon the practice adopted by individual industries and the circumstances of each case.

Among the relevant criteria will be the degree of attachment, permanence and size. Structures which are necessary for the provision of a building service, or have been installed other than for industrial or commercial processes, will normally be included in the valuation of land and buildings. Such items might include the following:

- # chimneys;*
- # plant housings;*
- # pits;*
- # stagings and mezzanine floors;*
- # internal buildings;*
- # permanent partitions;*
- # railway track;*
- # bridges and housings for conveyors; and*
- # fences.*

Structures which are ancillary to, or form part of an item of process plant and machinery, will normally be valued separately as plant and machinery.

ANNEX C

VALUATION OF FIXED ASSETS

The following extracts from the Resource Accounting Manual are relevant to the valuation of Residual Value Risk:

3.2.10 Tangible fixed assets should be valued at the lower of replacement cost and recoverable amount. Recoverable amount is defined as the higher of net realisable value and value in use. This can be expressed diagrammatically as shown in Figure 3.1. The replacement cost for different classes of assets is described in the following paragraphs. An impairment occurs where the recoverable amount falls below replacement cost. (3.2.18-23).

3.2.11 The replacement cost for operational land and buildings is existing use value. In the case of specialised properties or properties not normally traded on the open market, valuation on this basis may be inappropriate and/or impractical and such property should be valued on the basis of depreciated replacement cost.

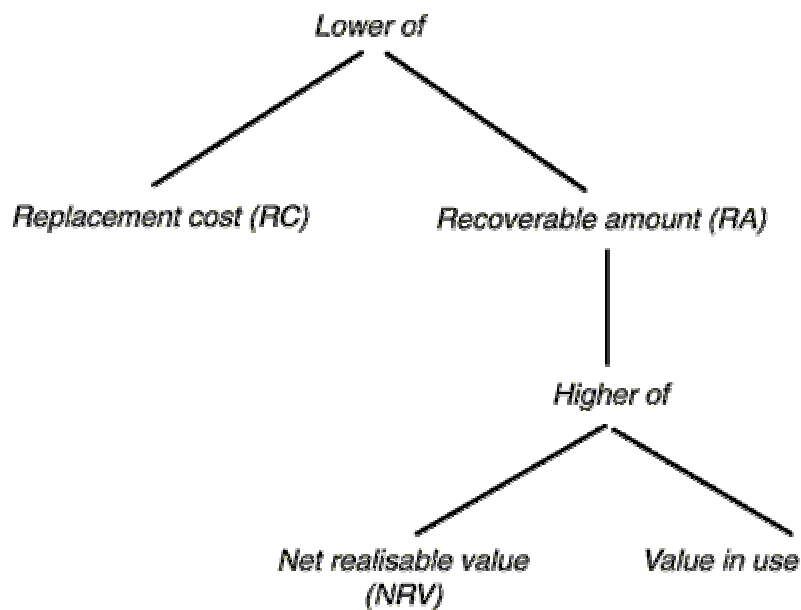


Figure 3.1 Valuation of tangible fixed assets.

3.2.12 Other (non-property) operational assets should be valued on the basis of depreciated replacement cost.

3.2.13 The normal basis of valuation may not be appropriate if a modern substitute is markedly different in its cost, life or output, or where technological advances have resulted in likely replacements having significantly improved quality or quantity of outputs. Under such circumstances it will be necessary to undertake a “modern equivalent asset”

calculation to arrive at a replacement cost for the asset.

3.2.18 An impairment occurs where the recoverable amount of an asset is lower than its replacement cost (3.2.10).

3.2.19 The not-for-profit nature of the vast majority of central government activities means that value in use is not measurable in terms of income. In these cases, value in use will be assumed to be at least equal to the cost of replacing the service potential provided by the asset, unless there has been a reduction in that service potential. Such a reduction can arise for various reasons, including:

- a. the purpose for which the asset was acquired is no longer carried out and there is no alternative use for the asset;*
- b. the asset is to be sold;*
- c. the asset cannot be used;*
- d. the asset is otherwise surplus and has no alternative use;*
- e. the asset is overspecified for its current use (eg a hardened aircraft hanger used as a store).*

In the case of a-d above, the recoverable amount will be the asset's net realisable value - ie the amount at which the asset could be disposed of, less any disposal costs. In the case of the example in e, it will be the value of a store - ie without the higher specification. Any write-down to the recoverable amount in these circumstances will be charged to the operating cost statement.

ANNEX D

SPECIALISED PROPERTIES

The following extracts have been taken from the Royal Institution of Chartered Surveyors (RICS) -Appraisal and Valuation Manual:

Specialised Properties are those which, due to their specialised nature, are rarely, if ever, sold on the open market for single occupation for a continuation of their existing use, except as part of a sale of the business in occupation. Their specialised nature may arise from the construction, arrangement, size or location of the property, or a combination of these factors, or may be due to the nature of the plant and machinery and items of equipment which the buildings are designed to house, or the function, or the purpose for which the buildings are provided. Examples of specialised properties, which are usually valued on the Depreciated Replacement Cost (DRC) basis, are:

- a. oil refineries and chemical works where, usually, the buildings are no more than housings or cladding for highly specialised plant;*
- b. power stations and dock installations where the buildings and site engineering works are related directly to the business of the owner, it being highly unlikely that they would have a value to anyone other than a company acquiring the undertaking;*
- c. properties of such construction, arrangement, size or specification that there would be no market (for a sale to a single owner occupier for the continuation of existing use) for those buildings;*
- d. standard properties in particular geographical areas and remote from main business centres, located there for operational or business reasons, which are of such an abnormal size for that district, that there would be no market for such buildings there;*
- e. schools, colleges, universities and research establishments where there is no competing market demand from other organisations using these types of property in the locality;*
- f. hospitals, other specialised health care premises and leisure centres where there is no competing market demand from other organisations wishing to use these types of property in the locality; and*
- g. museums, libraries, and other similar premises provided by the public sector.*

***Non-Specialised Properties** are all properties except those coming within the definition of specialised properties. Hence they are those for which there is a general demand, with or without adaptation, and which are commonly bought, sold or leased on the open market for their existing or similar uses, either with vacant possession for single occupation, or (whether tenanted or vacant) as investments or for development. Residential properties, shops, offices, standard industrial and warehouse buildings, public houses, petrol filling stations, and many others, are usually non-specialised properties.*

Acknowledgements

This Technical Note includes a number of extracts from “Amendment to FRS5 - Reporting the substance of transactions: Private Finance Initiative and Similar Contracts”, and the “Royal Institution of Chartered Surveyors (RICS) - Appraisal and Valuation Manual”. These extracts have been reproduced with the kind permission of the Accounting Standards Board and the Royal Institution of Chartered Surveyors, who own the copyrights.