



**HM TREASURY**

Report on identifying and measuring  
the differential tax receipts from  
Private Finance Initiative schemes for  
the purpose of economic evaluation  
against a Public Sector Comparator  
Working Methodology  
2 July 2002

KPMG

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## 1 Executive Summary

KPMG has been engaged by HM Treasury to advise on the differential tax receipts from projects carried out under the Private Finance Initiative (PFI schemes) as compared to those from projects procured directly by the public sector, publicly funded, in the traditional manner.

With PFI schemes, UK corporation tax receipts are likely to arise from the profits of special purpose project vehicles (SPVs) set up to undertake PFI contracts and from the returns to private sector debt funders. With direct procurement of publicly funded projects, neither of these sources of tax receipts exists.

This report suggests a practical methodology to measure these UK corporation tax receipts for the purpose of evaluation against a direct procurement Public Sector Comparator (PSC). It is presented in the format of a draft Green Book appendix (DGBA) with a flowchart for use in calculating an adjustment for evaluation purposes.

The report starts with a commentary for HM Treasury, which describes how the work was undertaken and the flowchart created. KPMG built a theoretical model (the KPMG model) to enable the testing of financial inputs for a range of typical PFI projects with differing characteristics, including tax data. This was used to determine the key sensitivities behind the levels of corporation tax to be paid.

The flowchart is a tool for estimating UK corporation tax receipts from PFI schemes. It is designed to produce an adjustment factor to be applied to the net present value (NPV) of the PSC, rather than the PFI scheme. It takes account of:

- The nature of expenditure in a PFI scheme;
- The tax treatment of the expenditure; and
- The debt:equity ratio of the scheme.

The report then has a section on the testing performed on the KPMG model against some actual PFI models. It looks at the reasons for differences, and lists the main adjustments made to the KPMG model.

The flowchart is then presented in the DGBA with draft guidance for users and a brief description of the work done to create the flowchart and the assumptions behind it. The DGBA is marked with a dotted box and is the best starting point for those new to the subject.

Finally, there is an alternative flowchart for a different set of economic assumptions.

## 2 **Terms of engagement**

On 13 March 2002, KPMG was engaged to carry out a study to assist HM Treasury to find a practical method of measuring the differential UK tax receipts from PFI schemes for the purpose of evaluation against a PSC. KPMG understands that this study has been carried out at the same time as HM Treasury has been reviewing the Green Book with a view to releasing an updated version in summer 2002.

KPMG agreed to report on the findings of the study. KPMG agreed that the report would include a draft of an appendix in HM Treasury's prescribed format for inclusion in a revised Green Book. This material (the DGBA) is included in Section 5 of this report.

This report has been prepared by KPMG LLP in accordance with the specific terms of reference agreed between HM Treasury and KPMG LLP. The work that KPMG LLP carried out for HM Treasury was performed to meet specific terms of reference agreed with HM Treasury, and there were particular features determined for the purposes of the engagement and the needs of HM Treasury at the time. The report should not therefore be regarded as suitable for use by any other person or for any other purpose. Should such persons choose to rely on this report they do so entirely at their own risk. KPMG will accordingly accept no responsibility or liability in respect of it to persons other than HM Treasury.

### 3 **Commentary for HM Treasury on Draft Green Book Appendix**

#### 3.1 ***Primary/Hybrid/Secondary***

In this report there are three separate definitions for the tax effects:

- Primary – corporation tax paid by the SPV itself, plus additional tax paid by the SPV’s owners (on interest payments on subordinated debt). The assumption is that the owners pay tax at 30% on that interest;
- Hybrid – the primary definition plus tax paid on the margin of debt interest over the risk free rate. This report is based on an assumed risk free rate of 5% and a senior debt rate of 6%.
- Secondary – the same as the hybrid definition with the calculation on tax on interest made using both the risk free rate and the margin – i.e. the entire interest charge.

There are flowcharts for the primary and secondary bases. The choice between primary, hybrid and secondary, or indeed no effect at all, is essentially an economic judgement based on the additionality of the tax receipts. KPMG’s work has concentrated on quantifying the primary and secondary effects using theoretical and empirical modelling activities. The choice of which to use falls outside the scope of this study, and KPMG has done no further analysis in this area. The DGBA shows the primary effect. For completeness, the secondary flowchart can be found at the end of this report.

#### 3.2 ***The development of the KPMG model and the flowchart***

The main issues on designing the flowchart for use by the public sector and its advisers in evaluation of methods of procurement were: first, how detailed to make the chart; and secondly, whether it would be possible to use proxy questions about a scheme instead of specialist tax questions.

A summary of the approach used by KPMG in developing the flowchart is set out in the DGBA at 5.4.1 below. The results of modelling produced the ‘questions’ and as far as possible we avoided questions requiring specialist tax knowledge.

KPMG ran 234 sensitivities after the elimination of unnecessary criteria. This exercise indicated an accuracy for the flowchart of +/- 3 percentage points in 97% of the sensitivities run against the KPMG model. The flowchart still uses some specialist questions. While the general Green Book user may not be familiar with them, financial advisers should be familiar with the terminology and indeed need to be in order to carry out an appraisal of the tax risk to be assumed and priced by the private sector under the PFI option at the early stages of the creation of any potential deal.

In the text there is a warning that the flowchart is based on tax law and practice as of April 2002 and that this is subject to change.

#### 3.3 ***Empirical testing***

The objective of the empirical testing was to check the results from the KPMG model with the output of some actual PFI bidder models. KPMG considered ten such models.

As agreed with HMT this sample would not give a statistical level of confidence, but it did allow KPMG to examine if, where and why there were differences compared to the results expected from the KPMG model.

KPMG input key data from the PFI bidder models (for which KPMG sought and obtained permission from the owners of the data) into the KPMG model and ran the model. The team analysed the outputs of the KPMG model for primary, secondary and hybrid tax effects and compared them with those of the owner provided models. The team then examined any large differences between the two sets of results and looked for explanations.

The KPMG model reflects the actual results from owner models in most cases. Where there are differences, these can be explained as one of the following:

- 1) Timing differences from the different structure of the models. The KPMG model uses a straightforward structure for unitary charges and for senior debt. In particular with PFI schemes there may be heavily sculpted unitary charges and creatively sculpted debt repayments.
- 2) Differences can occur where PFIs are funded without an SPV or where the contractor extracts the return through subcontracts. These are common practices in the defence and IT sectors. Based on the review, the largest differences arose in these sectors.

KPMG reconsidered the theoretical work in the light of these findings. Taking the points in turn:

- 1) This is inevitable for a theoretical modelling approach. The KPMG team tested some sculpting of debt and unitary charge – and found modest differences.
- 2) Defence and I.T. are special cases and based on the team's findings will almost certainly require a special flowchart to be produced in the appraisal and evaluation process.

During the empirical testing the team also investigated the impact on tax cash flows of two features:

- The timing of when capital allowances were claimed; and
- The nature of tax losses that were set against future taxable profits.

KPMG concluded that these matters do not have a material effect on the results where the capital allowances and tax losses are utilised fully during the project term. For PFI modelling purposes, this is normally the case.

Comparing the KPMG model, as adjusted, with the owner models the remaining differences for the full secondary effect had lower and upper decile results of -0.17% to 7.36% with a median of 4.25%. The equivalent numbers for the primary effect were – 3.2%, 3.61%, and –0.65%. The factors listed above appear from the work to account for a significant part of those numbers.

The results of the testing remain confidential.

### 3.4 ***Conclusion on testing work***

Both the theoretical and empirical testing have been based on KPMG's judgement as practitioners, rather than the use of statistical samples. KPMG continued to adjust the flowchart and the KPMG model throughout to improve the fit against the modelling

results. At the early evaluation stage when the flowchart is most likely to be used, there is often considerable uncertainty about other numbers, notably costs. The comparison of public and private options also requires an assessment of risk transfer, which is also judgemental. The accuracy of the flowchart should be judged in that context.

## 4 Scope of work

### 4.1 *Work programme*

The work was carried out from March until June 2002 by a team which included specialists in modelling, PFI taxation and accounting, and corporate finance. The assumptions used were tested with a wider group of KPMG's senior PFI/PPP practitioners across a number of sectors. These practitioners also reviewed the report.

### 4.2 *The KPMG model*

The KPMG theoretical model was developed to calculate the expected cash flows for any theoretical PFI bid. This model uses general assumptions and high level inputs to calculate indicative values; it is not intended to produce the level of detail required for a real-life bid but provides a reasonable proxy. A very similar, although minutely detailed bidding model would be designed for the purpose of bidding and raising money.

The model was designed for the purposes described in the engagement terms agreed with HM Treasury.

In practice each PFI project has very different and specific payment mechanisms, investment profiles, lifecycle maintenance profiles and financing arrangements which all require detailed modelling, specific to individual bids. The KPMG model does not contain the detailed logic contained in a real-life bid model, but it does contain all the key features of such a model and therefore closely resembles the structure of a real-life bid model.

The KPMG model uses input assumptions to generate:

- Financial statements;
- Unitary charge calculations;
- Pro forma tax computations;
- Deferred tax;
- Deferred income;
- Funding calculations;
- Fixed asset schedules;
- Covenant and ratio analyses; and
- Blended shareholder return on equity and subordinated debt.

There are a number of different accounting assumptions in the KPMG model, for example:

- Finance debtor / fixed asset accounting;
- Depreciation lives; and
- Accounting for major maintenance costs.

The tax computation is quite a sophisticated module which separates income and expenditure into the different tax schedules for trading, rental and investment income. The tax computation also calculates capital allowances in order to generate taxable profit, after allowing for disallowed expenses. Loss set off calculations also take account of the current UK tax legislation.

#### 4.3 *Theoretical testing*

The team carried out a detailed review of the KPMG model to evaluate the factors that give rise to significant tax 'inefficiencies' over a variety of sectors.

After running over 200 different combinations pertaining to industry sector, tax and non-tax profile, the team collated its findings and concluded that there were, in essence, four main factors having a material effect on the tax paid by the SPV and its funders:

- The amount of expenditure that qualifies for tax relief;
- The extent to which life cycle maintenance is capitalised in the SPV's accounts;
- The amount of soft FM services provided under the project agreement; and
- The project IRR.

These four factors form the basis of the flowchart and the sensitivities were then re-run against the flowchart to test it.

#### 4.4 *Empirical testing*

The empirical testing took the inputs from some actual PFI bidder models and applied them to the KPMG model. As the KPMG model uses general assumptions and high-level inputs, the profiles of inputs and hence outputs may well be different between the KPMG model and the owner model. Some of the project lengths are also different from the three years construction followed by 25 years operation assumed by the KPMG model.

The results of the KPMG model were compared with the output from the project models. In particular the NPV results of the primary and secondary tax were compared.

The differences discussed above will produce inherent differences between the results of the project being tested and the results of the empirical testing. However, where the differences were larger than expected, the differences were investigated and explained. Graphs were used to aid this investigation and to examine the relative sizes of differences and also the effects of timing.

## 5 **Draft Green Book Appendix**

### 5.1 *Introduction*

This appendix looks at the differential tax receipts that arise from the use of the Private Finance Initiative (PFI). To date, tax receipts have been ignored in the value for money evaluation and appraisal that is carried out when determining how to fund public sector procurement. This appendix provides the recommended approach for estimating the differential tax receipts as a proportion of the Net Present Value (NPV) in order to adjust the Public Sector Comparator (PSC).

This appendix contains a short introduction and explanation and then guidance, including a flowchart and worked examples, for estimating differential tax receipts. There then follows a description of the approach used and a more detailed note on tax calculations and workings.

Many of the principles in this appendix will also be appropriate to schemes under the wider Public Private Partnerships (PPP) initiative. The flowchart has, however, been prepared for a PFI structure and should not be used for non-PFI PPP schemes. In these cases, the recommendation is that a project specific factor should be calculated. Whilst this appendix uses the term NPV, strictly the amounts will often represent Net Present Costs.

### 5.2 *Explanation*

Where a project is procured directly by the public sector and publicly funded, the costs of that project to the public sector are, broadly, the payments made to the private sector contractors. These payments generate tax revenue for the Government. The public sector does not pay direct taxes itself and the previous guidance was that differences in tax treatment should not influence the choice in favour of either public or private financing, or the choice of individual private sector bidder. However, if a project is taken forward under the PFI option, tax receipts over the lifetime of the project are likely to differ from those arising under publicly funded procurement. This is because there will be tax payable on the differential profits of the private sector to reflect the additional risks assumed under a PFI contract and further tax payable on the returns to debt providers.

It is important to draw a distinction between the comparison of PSC and PFI options in an evaluation<sup>1</sup>, and the comparison of two or more PFI bids during a bidding process. The recommendation is that potential tax receipts should now be considered in the comparison between PSC and PFI when appraising and evaluating a project where they are genuinely additional. The procuring body should make an adjustment to the PSC to reflect an estimate of additional taxation for the proposed project. This will enable a comparison with the PFI option to be made on a tax inclusive basis. The adjustment is not relevant for evaluating PFI bids between private sector bidders. The test at the bidding stage should be around the price charged to the public sector – which will be on a gross cost basis.

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<sup>1</sup> Guidance on the use of a PSC is found in the Green Book

Making the tax adjustment to the PSC ensures that it is taken into account when comparing public with private, but not private with private. This is important for three reasons:

- First, private sector bidders may exaggerate their potential tax liabilities if they know that the after tax cost will be used as the criterion for the evaluation of competing PFI bids or if it might improve their position in a value for money appraisal against the PSC.
- Secondly, making an adjustment to deduct tax from bidders' prices may suggest to private sector bidders that the adjustment is an indication of the actual tax they might expect to pay.
- Thirdly, this will allow use of the adjustment factor at early stages where there is limited or no bid information.

**The flowchart should not be used to forecast actual tax payable.** A bidder's forecast of actual tax is a more refined calculation which will take account of the bidder's own commercial solution to the PFI bid requirements and pricing of tax risk.

The adjustment factor to be used can be found from applying the flowchart. This flowchart is designed for general users who are evaluating and appraising capital projects for the procurement of accommodation, equipment or transport infrastructure services from the private sector. Each project will have its own unique aspects. However, the flowchart is designed to enable the user to reach an adjustment factor that reflects the main drivers of the NPV of differential taxation in PFI projects for the type of project being appraised.

The tax receipts dealt with in the flowchart represent exclusively corporation tax. VAT, employee taxes, and business rates should not normally lead to differences between publicly and privately financed options. There may be a stamp duty effect for certain projects but this should be adjusted for on a case by case basis.

HM Treasury should from time to time revisit the theory behind adjusting the PSC and the manner of any such adjustments to take account of market developments and changes in tax law and practice.

### 5.3 *Flowchart and notes*

#### 5.3.1 *Taxation of PFI*

The PFI is a procurement technique that involves the private sector more fully in the supply of public services, and it requires that the private sector genuinely assumes risk. Therefore, it involves the creation of new businesses that are subject to the general principles of UK tax law. It should be noted that the application of existing tax law is not yet fully established in relation to this relatively new business arrangement. When signing up to a PFI project, the private sector normally assumes the risk in relation to tax treatment and to changes in Court decisions, legislation and Inland Revenue practice for the term of the contract unless these changes are discriminatory. In fact, tax liabilities are agreed annually in arrears with the Inland Revenue. Therefore, the private sector bidder must bid a price which assumes the risk on unpredictable tax treatments and changes to tax law.

An appraisal of the likely tax profile of the project should be undertaken as part of the preliminary assessment of affordability by the procuring body. In addition, the procuring body needs to understand the tax risks presented by the project and the impact they are likely to have on the prices bidders will quote. As far as possible these should be quantified. Then an assessment is needed of how the risks can best be managed to optimise value for money.

### 5.3.2 *Using the flowchart to determine adjustment factors*

As part of the preliminary assessment of affordability, all key tax risks, including VAT and stamp duty, should be identified and quantified with a view to managing these risks in the subsequent negotiation and evaluation process.

Effective use of the flowchart requires the user to understand the key corporation tax risks in relation to the particular project. The flowchart is divided into two parts. The main part takes the user through a series of questions across four steps. The last part of the flowchart is the Accumulation Table where the user can record the results and quantify the PSC adjustment factor.

Working through the steps in the flowchart requires a judgement on certain risks and this will need some consideration.

At step one, there is a starting factor of 2%, which is equivalent to the bottom of the range of likely results. It represents a tax efficient project with relatively low capital expenditure and low risk.

At step two, the user must consider the extent to which the PFI project requires the provision of soft services, e.g. custodial services, cleaning, portering, low level maintenance. There are four boxes depending on the relationship between the cost (nominal and undiscounted) expected between the soft services and the capital value of the project. If the expected level of soft services in the project does not fit within the stated ranges in the flowchart, then there is guidance at paragraph 5.4.1

At step three, there are a series of questions which relate to the tax treatment of project expenditure.

The user must first consider the extent to which the lifecycle maintenance in the PFI scenario relates to new building and improvements rather than to repairs. The decision will lead the user down either the left hand column or the right hand column. There is no crossing between the columns in the flowchart.

The user will then need to consider whether the project is likely to be on “capital account” for tax purposes. This question is fundamental but often difficult to answer. The question being asked is will the private sector supplier have a trade of building, designing, financing and operating a facility on behalf of the procurer, or a trade of providing services in relation to a facility it is “hiring” to the procurer? The former position suggests “revenue account” treatment and the latter position suggests “capital account” treatment for tax purposes. The choice of answer given can have very different tax consequences and having identified the most robust position based on the key characteristics of the project, the procuring body should proceed to structure the detailed drafting of the project to be consistent with this position as far as possible taking account

of commercial constraints. This would minimise the tax risk arising from uncertainty that has to be priced by the private sector.

If the project is considered to be on “revenue account” for tax purposes then proceed to step four.

If the project is considered to be on “capital account” there are further questions that relate to the manner in which the private sector bidder in the PFI scenario is likely to obtain tax relief for its initial expenditure. There are further questions as to the likely eligibility of expenditure for tax relief through the Industrial Buildings Allowances and Plant and Machinery Allowances regulations. There is specific tax legislation dealing with these particular questions, but the project may not be sufficiently developed to be sure of the correct answer. However, in the evaluation the user will need to make an assessment as to how likely expenditure is to qualify for particular allowances and within particular bandings.

Depending upon the answer given to a particular question, the user either proceeds down the flowchart or direct to step four.

At step four, the user considers how risky the private sector is likely to view the particular project should the PFI route be adopted.

Having worked through the four steps, the user has made the appropriate decisions to quantify the total adjustment to the PSC.

This will give a factor with an accuracy of +/- 3 percentage points in most cases. Where appropriate, it can be adjusted it within this range to reflect project specific information. The range of results gives a basis from which to appraise and evaluate the PFI option against the PSC.

### 5.3.3 *PSC adjustment*

It is important to use the correct PSC base number for adjustment purposes.

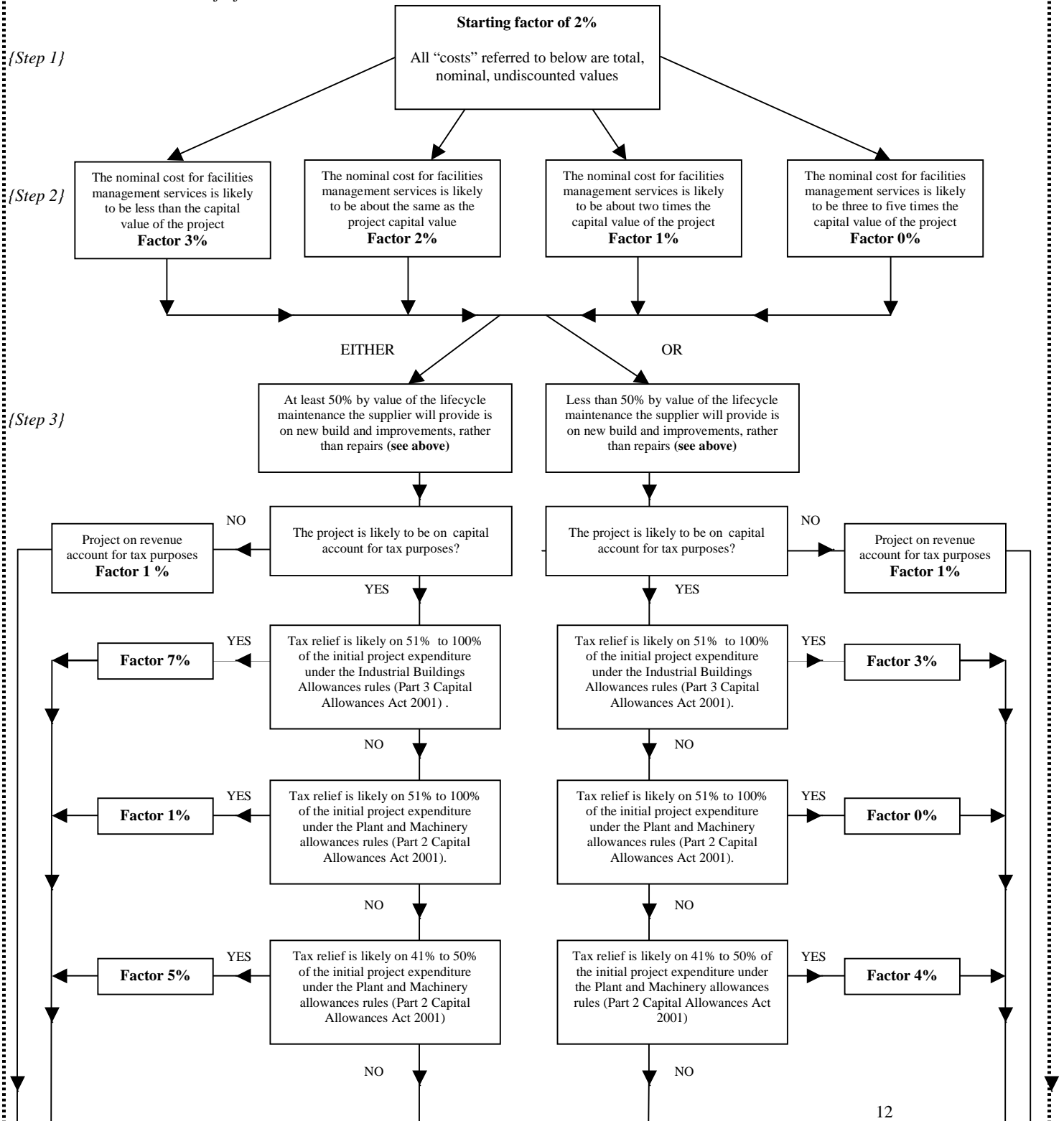
The most accurate approach would be to use the PFI option as a base. If there is no PFI option then a pragmatic approach is to use the PSC option – and assume that the choice between PFI and PSC is otherwise finely balanced in NPV terms. (Clearly if this is not the case, the adjustment for tax will be understated or overstated).

For comparison purposes, it is important that the PSC evaluation against the privately funded option is made on a like for like base position. Costs which will not be transferred to the private sector should be deducted. (This follows general PSC guidance. For example, in evaluating a new hospital project the user would need to exclude the costs of providing clinical staff from the PSC option if clinical staff do not transfer.)

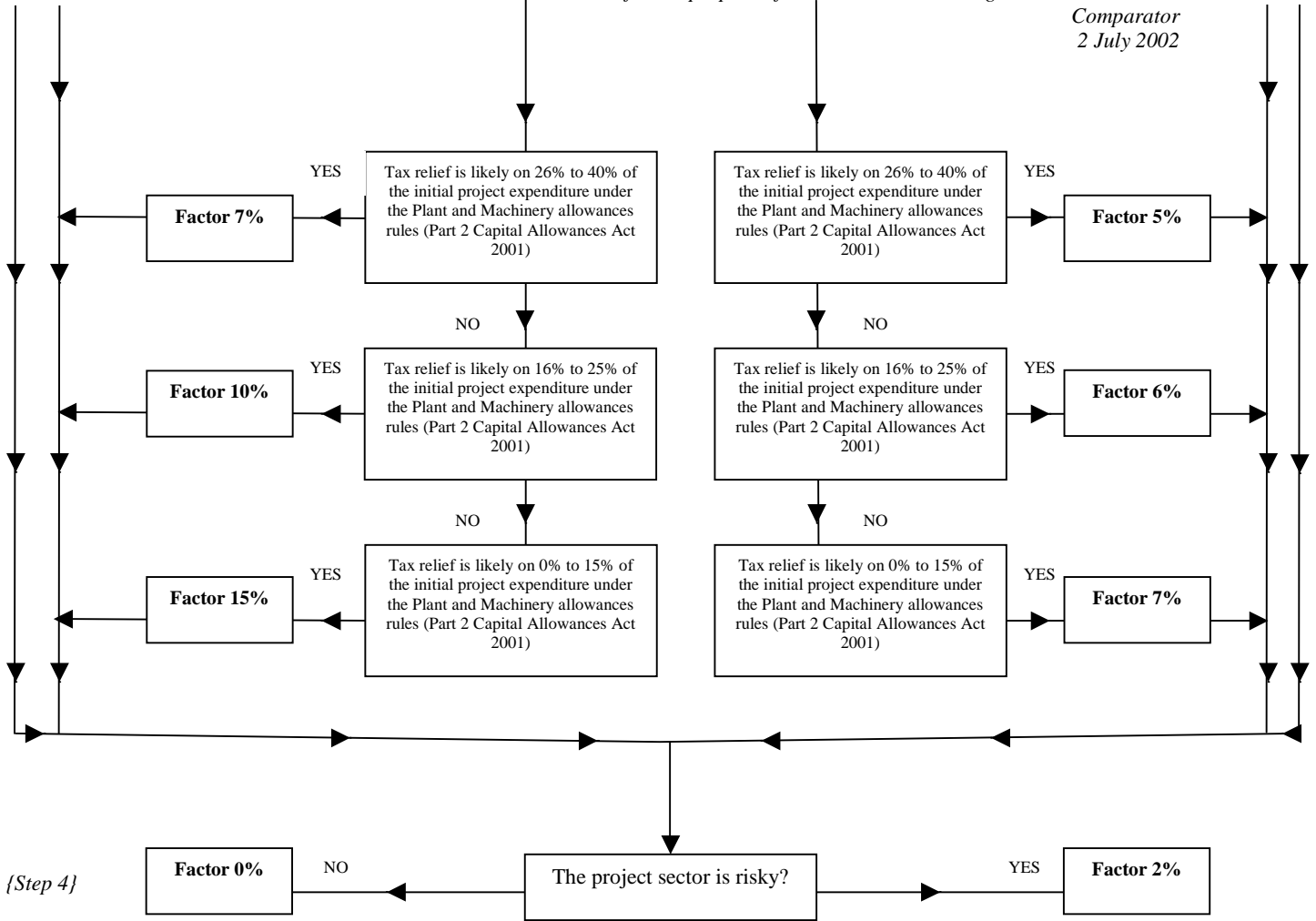
The percentage PSC adjustment factor, derived as above, multiplied by the base gives a monetary value which should be added to the PSC.

5.3.4 Public Sector Comparator Adjustment Flowchart [Primary]

Projects on 'capital account' for tax purposes are likely to include projects that are to some extent free standing financially or joint ventures between the Purchaser and the Supplier. They could also include projects where the Supplier is providing services in relation to a facility it has built and is 'hiring' to the Purchaser for its own use. Projects on 'revenue account' for tax purposes are likely to be projects where the Supplier is designing, building and operating a facility on behalf of the Purchaser.



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{Step 4}

<u>Accumulation Table</u>		
	<u>Guide</u>	<u>Factor</u>
Step 1	Always 2	2
Step 2	0 to 3	
Step 3	0 to 15	
Step 4	0 or 2	
Percentage adjustment required to		_____
Public Sector Comparator		_____

*This flowchart is based upon corporation tax law and practice at April 2002, which is subject to change. The flowchart will need periodic review to ensure it remains consistent with tax law and practice and with developments in the PFI market.*

***This flowchart should not be used to forecast actual tax payable by a private sector bidder.***

### 5.3.5 Worked example

There is a local authority currently evaluating whether to procure two new secondary schools directly, in the traditional way, with public funding or through the Private Finance Initiative. In the course of the evaluation of the options, the adviser needs to calculate the factor to adjust the PSC to ensure that the differential tax receipts form part of the appraisal and evaluation. It is known that:

- There are expected to be bids from various private sector consortia experienced in building schools under the PFI. Each would probably set up a SPV;
- The capital expenditure on the new schools is likely to be £30 million. The schools are typical schools with classroom and recreational facilities. They need IT infrastructure. Approximately 35% of the capital expenditure will be incurred on fixtures, fittings and equipment;
- The schools will need ongoing maintenance and repair work but little new build or improvement. Sufficient money needs to be spent on the schools for them to be in full working condition for at least twenty five years after they have been built. The school children will be provided with daily meals at lunchtimes. The estimate is that all these services will cost the authority £30 million over the next twenty five years;
- It is unclear at this stage, whether the schools would be built by the SPV to be made available to the local authority (i.e. on capital account for tax purposes) or whether in substance, they are being built for the local authority (i.e. on revenue account for tax purposes). Under either scenario, the schools would not necessarily be recorded as assets on the local authority's balance sheet (this would be a matter to consider separately); and
- As schools have been provided under PFI for many years, the sector is not considered to be particularly risky. The risk capital is therefore likely to attract a relatively low interest coupon and banks are likely to lend 90 percent of the funds.

Working through the flowchart would produce the following PSC adjustment factor:

#### *Step one*

Start with a factor of two.

#### *Step two*

On the basis that the nominal price of services over the project life is likely to be about the same as the cost of building and fitting out the schools, increase the factor by two.

#### *Step three*

The main works, after the initial capital expenditure, will be repairs and maintenance rather than new build or improvements. Proceed to the right hand column.

It is not clear whether the project is likely to be on revenue or capital account for tax purposes for the private sector special purpose company. Consider this fully, and obtain advice if necessary, but for now use both options for the purpose of finding a starting factor.

If the view is that the project is on revenue account increase the factor by 1 and proceed to step four.

If the view is that the project is on capital account proceed down the flowchart.

Local authority secondary schools are not regarded as industrial buildings for tax purposes and it is assumed that approximately 35% of the capital expenditure will relate to fixtures, fittings and equipment. Continue down to the box where between 26% and 40% of initial expenditure qualifies for capital allowances under the plant and machinery tax rules. Make the adjustment factor of five.

#### *Step four*

Schools are in a fairly mature PFI sector so there is unlikely to be a further adjustment unless there is a significantly risky aspect to the project.

On revenue tax treatment the accumulated factor is 5%. On capital tax treatment the factor is 9%.

Then apply the accumulated factor to the NPV of the £30 million capital spend (£27 million) and the £30m of services (£13 million), i.e. the accumulated factor times £40 million. (This treatment assumes that no PFI bid is yet available and uses PSC numbers). In the case of revenue tax treatment apply the figure of 5% to £40 million to give a total PSC NPV of £42 million. The NPV in this example is based on an annual real discount rate of 3.5% and inflation of 2.5% with the costs spread evenly over the construction and operating periods respectively.

To allow for potential rounding factors in the flowchart, the factor could be expressed as a range using +3% and -3%. Taking revenue tax treatment, on the example above the factors would be 2%, 5% and 8%. Taking capital tax treatment, on the example above the factors would be 6%, 9% and 12%.

The range of results gives a basis for inclusion in the appraisal and evaluation the PFI option against the PSC.

## 5.4 *Description of approach to developing the flow chart*

### 5.4.1 *Users of the flow chart*

This section gives more detail on the methodology behind the flowchart. The flowchart has been developed for the general user. As such it contains a limited number of questions to enable the user to find the PSC adjustment factor for their particular project. These questions have been derived from a sequence of complex testing from a variety of PFI project scenarios. They enable the general user to find an approximate PSC adjustment factor.

For a Pathfinder, innovative or particularly complex project it might be appropriate for the user to calculate a project specific factor. In particular, information technology and defence projects are special cases, and based on these findings, will almost certainly require a special flowchart to be produced in the appraisal and evaluation process. This will normally require a financial model.

To aid understanding for the general user and to help establish the adjustment factor on the more complex project, there is a summary below of the approach KPMG took in producing the flowchart.

In outline:

- KPMG was instructed to create a theoretical model to enable the testing of financial inputs for a range of typical PFI projects with differing characteristics, including tax data. The KPMG model included financial statements, payment mechanism and unitary charge data, debt financing and a tax computation;
- KPMG sensitised the KPMG model based on scenarios for projects including accommodation, equipment and transport infrastructure schemes. The sensitivity testing took account of a range of selected variables that are discussed more fully below; and
- The model outputs enabled KPMG to identify the NPV of tax expressed as a percentage of the NPV of unitary charge. The outputs enabled KPMG to examine the main drivers behind the NPV of taxation effects.

KPMG concluded that the following sensitivities in a PFI project were key to determining the adjustment factor that should be applied to the PSC for evaluation and appraisal purposes:

- The extent to which the expenditure incurred by the contractor qualified for corporation tax relief;
- The extent to which a PFI project required facilities management services as a proportion of capital value of the project;
- The extent to which lifecycle maintenance (or hard facilities maintenance) related to new build and improvement, rather than repairs; and
- The level of project return that the private sector contractor required, and the amount of shareholder funding. This depends on many factors but crucially on risk. The more mature PFI sectors can obtain a higher external debt: shareholding funding ratio. Typically PFI projects in past two years have a ratio of 85:15 or 90:10<sup>2</sup>

#### 5.4.2 *Outputs from theoretical modelling*

In a project funded with private finance under the PFI option, as compared to direct procurement, there are differences in tax liabilities as follows:

- Corporation tax on the profit the private sector contractor requires - taking account of payments by the private sector contractor for which it cannot obtain corporation tax relief;
- Corporation tax on the interest return that the shareholders have on equity they contribute to the PFI project as shareholder debt<sup>3</sup>; and
- Corporation tax on the risk free interest rate of senior debt plus the margin. The assumption here is that tax will eventually be paid elsewhere in the economy on interest receipts from lending to PFI projects.

<sup>2</sup> As well as the debt:equity ratio, funders can also reflect risk in the equity and debt returns and debt cover and retention ratios.

<sup>3</sup> The SPV's equity element of PFI projects are often now financed with subordinated, or junior, debt. This essentially substitutes for more traditional forms of shareholders' funds but typically allows more consistent recognition of returns. The model assumes that the interest payments are taxed on receipt by the providers of the subordinated debt, and counts this tax in the total.

The PSC adjustment factors in the flowchart are reached by expressing the NPV of differential corporation tax as a percentage of the NPV of the payments made to the private sector contractor.

## 5.5 *Note on tax calculations and workings*

### 5.5.1 *Introduction*

Sensitising corporation tax inputs has been an essential part of the theoretical modelling and the corporation tax effects are included in the PSC adjustment factors. A corporation tax rate of 30% was used throughout.

The effects of the following taxes are not included in the PSC adjustment factors for the reasons given:

- Stamp duty could be a significant additional tax in projects that involve a substantial disposal of property by the public sector. The appraisal process should identify this and it should be adjusted for on a case by case basis;
- The treatment of VAT should broadly be the same for both PFI and PSC options. The appraisal should either include VAT on both options or exclude it for both. In certain cases there may be a redistribution of funds within the public sector because different departments are subject to different rules for recovering VAT;
- The PSC and PFI options are subject to the same rules on employment taxes; if there is hard evidence for radically different levels of employment taxes between the two options, the difference should be estimated and included; further guidance will be required should such a case arise;
- Business rates are paid by the occupier which in both the PSC and PFI is the public sector; and
- A recent change in tax law has introduced a levy on aggregates used in construction which has added significant costs to some projects. Both the PSC and the PFI options are subject to the same rules.

### 5.5.2 *Corporation tax sensitivities*

The KPMG model contains a corporation tax computation built around various assumptions. The main objective of the computation is to calculate the corporation tax liability over the project term based on a variety of project types and sensitivities.

A tax computation was required because the recognition of profit for tax purposes differs from the recognition of cash and of accounting profit. The KPMG model was designed to highlight the following key differences:

- Permanent differences between taxable and accounting profit;
- Timing differences between taxable and accounting profit; and
- Differences between accounting profit and cash flows.

The adjustment factor is believed to be a reasonable estimate for evaluation and appraisal purposes based on the current state of the PFI market. It should not be used to forecast actual tax.

### 5.5.3 *Detailed tax calculations and workings*

The detailed calculations allowed KPMG to consider the following:

- The basis on which the PFI contractor's income would be taxed; and
- The basis on which the PFI contractor's expenditure would be allowed for corporation tax purposes.

In a typical PFI project, the PFI contractor's income under current tax law will be taxed by reference to the tax Schedules A, D Case I and D Case III as set out in Part 1 Income and Corporation Taxes Act 1988. The income may fall entirely within one of these Schedules or in a combination of some or all of them. The treatment of the income is important as it could affect the timing of tax payments and hence the NPV of tax expressed as a percentage of total income from the public sector.

The tax treatment of the PFI contractor's expenditure is dependent on various factors. The key question of whether the expenditure is revenue or capital has been raised above. The conclusion reached will determine both the quantum of taxation borne by the contractor and the time at which that tax is payable.

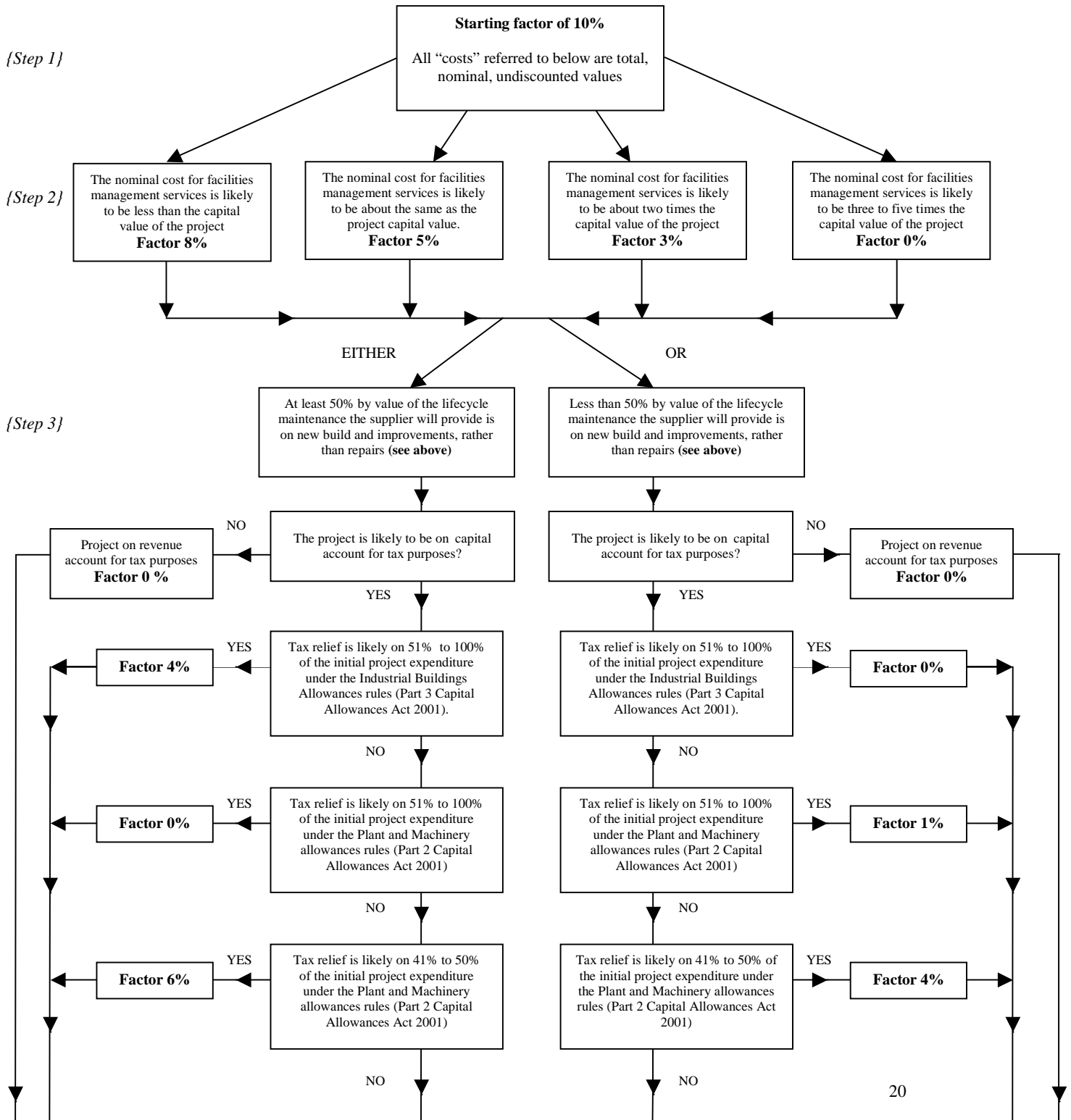
## **6 Public Sector Comparator Adjustment Factor Flowchart – Secondary**

The alternative secondary flow chart is attached here.

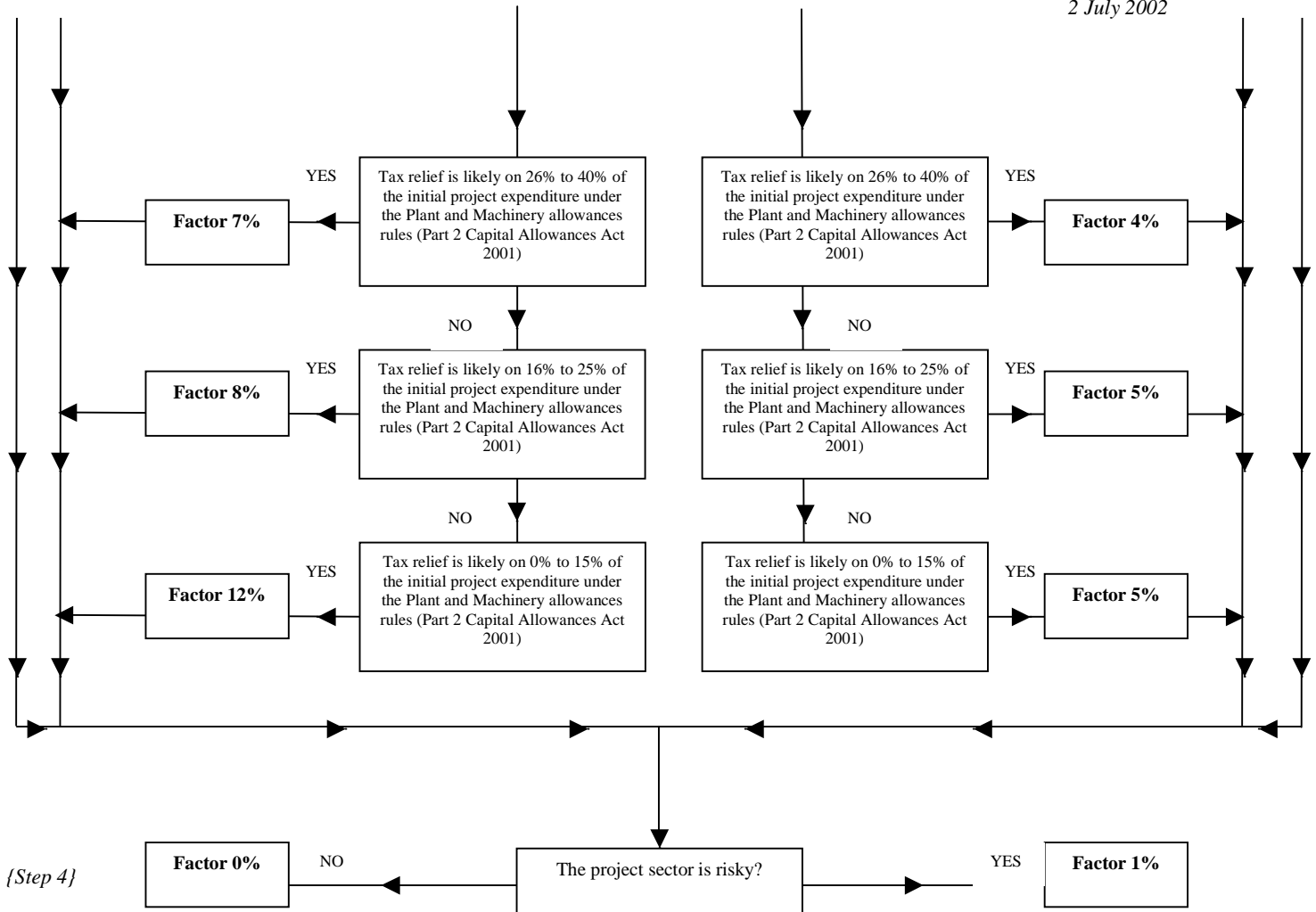
On the assumptions given earlier, the hybrid adjustment factor will be the primary result plus  $1/6^{\text{th}}$  of the difference between the primary and secondary results for that project.

6.1.1 Public Sector Comparator Adjustment Factor Flowchart – [Secondary]

Projects on ‘capital account’ for tax purposes are likely to include projects that are to some extent free standing financially or joint ventures between the Purchaser and the Supplier. They could also include projects where the Supplier is providing services in relation to a facility it has built and is ‘hiring’ to the Purchaser for its own use. Projects on ‘revenue account’ for tax purposes are likely to be projects where the Supplier is designing, building and operating a facility on behalf of the Purchaser.



Report on identifying and measuring the differential tax receipts from Private Finance Initiative schemes for the purpose of economic evaluation against a Public Sector Comparator  
2 July 2002



{Step 4}

<b>Accumulation Table</b>		
	<u>Guide</u>	<u>Factor</u>
Step 1	Always 10	10
Step 2	0 to 8	
Step 3	0 to 12	
Step 4	0 or 1	
Percentage adjustment required to		_____
Public Sector Comparator		_____

This flowchart is based upon corporation tax law and practice at April 2002, which is subject to change. The flowchart will need periodic review to ensure it remains consistent with tax law and practice and with developments in the PFI market. **This flowchart should not be used to forecast actual tax payable by a private sector bidder.**