



Risk Transfer and Allocation in PFI/PPP Projects

Seminar 119 held at Freshfields Bruckhaus Deringer, London
24th May 2005

Summary

Key Points

- A National Audit Office (NAO) report shows that transferring much of the risk to the private sector under PFI has led to a marked decrease in project cost and time overruns
- Public sector risk transfer has tended towards optimum rather than maximum risk transfer, and towards investment grade projects
- In risk transfer it is necessary to have a uniform understanding of the definition, scope and reach of the risks
- Beware of trying to be too precise at the business case stage
- In quantifying financial risk, distinguish probable loss and maximum potential loss and beware of 'double counting'
- Identify and quantify the effect of 'optimism/pessimism' bias
- Performance and availability incentive payments minimise the risk of budget and time overruns
- Remember trust and relationships count a great deal when discussing risk transfer

Introduction

All projects are subject to risk: at the planning and consultation stage, the contract stage, the implementation stage and even during maintenance of the finished product. It is important to understand how risk transfer and allocation works with Private Finance Initiatives (PFI) and Public Private Partnerships (PPP), both in the UK and internationally.

Risk determines whether a project is value for money (vfm): the 'risk adjusted whole-of-life cost of a project' determines whether it should have public or private finance or indeed whether it should proceed at all. From a financial point of view, risk must be measured in terms of cost or lost value. However, the evaluation of risk is often difficult, both in terms of the kind of risk and the detailed information required to make a judgement.

At the seminar experienced managers and advisers explained how they tackled risk by looking at examples of particular projects and particular areas of risk. The discussion identified improved policies and practices for handling risk on PFI/PPP projects in all sectors.

The meaning of 'risk'

Deciding whether or how a project can go ahead depends on its cost, which ultimately depends on events that may take place during the life of the project – and even beyond, as inherited liabilities.

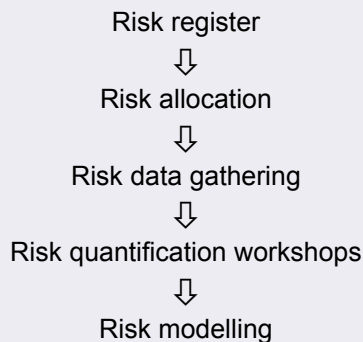
The concept of risk entails uncertainty: there are uncertainties with known consequences and there are uncertainties of which the consequences cannot be fully determined. Hence the distinction between 'known unknowns' and 'unknown unknowns.' 'Known unknowns' are probable and it is only the range of impact that has to be considered. Of these, 'inch wide, mile deep risk' is where there may be a small probability of things going wrong, but if they do the loss is large. 'Inch wide, mile deep risk' and 'unknown unknowns' can be avoided by careful planning.

Particular risk to a project may be in terms of extended process or loss of intrinsic value, but may also be in the form of 'optimum bias', 'corporate risk' or 'project agreement risk.' When contracts are drawn up, different kinds of risk may be specified along with where liability for cost may lie.

The measurement of 'risk'

The risk-adjusted 'whole-of-life' cost of a project determines whether it should proceed and if it should have public or private finance, or both. Different financial structures enable value-for-money comparisons and these in turn will depend on risk analysis. The steps in risk analysis can be set out in a linear process.

PPP and the risk meta process



First, risks are identified and a risk register created so that each risk can be allocated to the public or private sector. The process is, however, fraught with difficulty. It may be complicated by having mixed private and public sector contracts and risk data may depend on professional judgements. The process seems progressive, but the financial model that emerges often has to be modified by going through the whole sequence several times. Moreover, it is as well to be suspicious of any precise numerical answer that might emerge. It is better to identify a number of key issues that need to be addressed as the project proceeds, and formulate a range of answers.

Most financial advisers can convert time delays and, usually, quality considerations into monetary terms. However, where contingency allowances are added to core pricing and the whole cost then calculated there is a risk of double counting if allowances for risk are made in different ways. The current UK approach is now to move away from quantitative analysis towards professional judgements in a multidisciplinary environment. People should not try to be too precise at the business case stage. Decisions on whether a project goes ahead should be based on the knowledge that the cost is likely to be between X and Y rather than guess that it is going to cost X. Detailed work is always useful, but any conclusions drawn should be viewed circumspectly.

Financiers tend to assess risk using a distinction between probable loss and the maximum potential loss, with the aim of achieving low maximum potential loss combined with low probability. Lawyers consider risk in terms of precedence, within the underlying legal framework of the country in which the project is going to be implemented.

Risk transfer

Promoters of PPP projects must find a process which delivers the most cost-effective solution. The National Audit Office (NAO) has also shown that transferring much of the risk to the private sector under PFI, as opposed to traditional procurement, has led to a marked decrease in the number of projects being late and over budget.

Effectiveness of Risk Transfer

- What has been the history of delivery by PFI and by traditional procurements?
- The National Audit Office published a report that demonstrated that PFI is delivering on time and to budget better than projects traditionally procured

| | Traditional | PFI |
|----------------------|-------------|-----|
| Projects over budget | 73% | 20% |
| Projects late | 70% | 24% |

Mitigating risk

There are, however, some disadvantages for the public sector in risk transfer to the private sector. The cost of capital is higher and costs are incurred as transaction fees for monoline insurers, financial advisers and lawyers. There may also be social issues if trade unions see potential job losses in PFI.

Banks are the traditional financiers, but the financing of large projects in the UK is usually via bond issue. 'Monolines' are financial advisers who solely handle the financing of projects and upgrade the guarantees to the bond investors. Bonds are graded according to the strength of the guarantee, and a monoline will, for example, upgrade a triple-B rating to a triple-A bond. The extra cost to the project is then the sum of the premium and the bond investor return.

A monoline seeks to provide a guarantee on a 'zero-loss basis' which effectively means that risk has been passed on to various sub-contractors so that the potential loss to the promoters is minimal.

Optimism bias

Uncertainty leads to what is called 'optimism bias.' The contractor's desire to participate in a project can often lead to an underestimation of the ultimate cost of a project, particularly in terms of the time scale. To some extent this can be reduced in the planning stage by comparator studies, or requesting that the contractor 'proves' estimates against the competition or previous similar projects. Whilst optimism bias certainly adds risk to a project, its converse, 'pessimism bias', where many contingencies are built into the price, may also prevent it from going ahead.

Corporate risk

Construction contracts inevitably involve organisations who may go out of business, causing projects to be jeopardised in one way or another. This can be mitigated by seeking third party surety bonding, insurance, or a bank letter of credit, but it means that a worst case scenario has to be worked out as a maximum possible loss, which must be then factored into the cost.

Specific risk in project agreements

Project agreement risks such as un-insurability or compensation claims depend on the legal infrastructure. In the UK the law is clear about how project agreements are covered, but such risks are not defined in contracts made in other countries. Consultation is required with national or local lawyers, and lack of specific compensation arrangements in project agreements makes PPP procurement complicated and less attractive to the private sector.

Incentives

A number of remedies have been introduced to ward against projects coming in late and over-budget, or products being of poor quality. 'Performance payment' means that cash flow is regulated according to progress. In PPP projects this enables financial and technical advisers to deal with problems as they arise and ensures that the interests of funders and the public sector coincide. 'Whole life costing', where guarantees must be given for the use of a product over a specified time, provides a further incentive for good work and good materials, as does 'availability payment' in which payment is only made if the product is available for use.

MPA events are confidential, although this summary has been compiled so as not to breach confidentiality. Full proceedings and entry to MPA events are available only to members.

Participating Organisations

Arup
Atkins
Balfour Beatty
Bartlett School of Graduate
Studies
Bechtel Ltd
Cambridge Education
CMS Cameron McKenna LLP
Emcor Rail Ltd
Ernst & Young LLP
European Investment Bank
Financial Security Assurance
Freshfields Bruckhaus Deringer
Halcrow
Harris Management Services
IBM
INDECO
KBR
KPMG LLP
Laing Rail
Lend Lease Projects
Major Projects Association
Manchester Business School
Ministry of Defence, DPA
Mott MacDonald
Mouchel Parkman
Partnerships UK
PricewaterhouseCoopers
Risk Solutions
Scott Wilson
Simmons & Simmons
Sir Robert McAlpine
Strategic Rail Authority
Taylor Woodrow Construction
The Nichols Group
Transport for London