Value for money and the valuation of public sector assets

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BACKGROUND

1.1 The Green Book is written primarily from the standpoint of assessment of new spending proposals. This note has been prompted by issues arising when considering the value of public sector assets for possible sale and is concerned with application of the basic principles enshrined in the Green Book to the valuation of existing assets. For example, the prospective sale of the existing book of student loans and the ownership of London and Continental Railways (LCR) have recently been examined from a Value for Money (VfM) perspective. This work has exposed issues relating to determination of why and in what circumstances private ownership may represent best VfM and therefore be preferable to continued public ownership.

1.2 The government has expressed a clear preference in favour of selling public assets that do not need to be publicly owned. The 2007 Budget Report[1] stated that:

> "…the 2007 CSR will adopt a more strategic approach to asset management, driving better value for money and encouraging efficient management of the Government's existing asset base. Consistent with the recommendations of the Lyons Review of Asset Management, the focus of this new approach is the development of a unique Asset Management Strategy (AMS) for each department….
>
> Departments' Asset Management Strategies will demonstrate that they have in place an effective management framework, which actively maximises the value of their existing assets and provides a strategic context for future investments. They will provide an account of the systems and procedures in place to ensure:
>
> - assets are adequately maintained and efficiently utilised to deliver high performing public services;
> - surplus assets no longer required for service delivery are disposed of; and
> - future investment decisions are based on a more complete assessment of the condition and performance of the existing asset base……
>
> - The Government will continue to work with departments and local authorities to consider the potential sale options of public corporations, trading funds and financial assets where:
> - they are no longer required to meet the Government's public service objectives;
> - the private sector can generate operational efficiencies in the ongoing management of assets and services (through a sale or Public Private Partnership structure); and
> - resources are released from a sale that can be reinvested in public services."

[1] 2007 Budget Report, Capital and Assets, page 149, paragraphs 6.34, 6.35 and 6.40.

1.3 Additionally, the 2007 budget report[2] stated that:

> "the government is also examining the financial assets it holds to identify those where private sector ownership may represent better value for money"
>
> and it announced "a programme of student loan sales".

Public asset ownership, economic efficiency and value for money

1.4 The public sector holds financial, corporate and physical assets in the pursuit of policy objectives and not for its own sake or for the creation of profit. In pursuing policy objectives, the public sector pursues Value for Money, defined as optimising net social costs and benefits. This Public sector assessment of value is based upon the interests of society as a whole and is not an assessment of value to the public sector alone. It is derived according to the methodology of the Green Book to provide a whole life[3] net present value (NPV) figure, considered alongside other significant factors that have not been possible to sensibly value. These factors then provide a clear and transparent support for decision-making. The calculation of NPV should not be regarded as a decision-making algorithm.

1.5 There is a general presumption that assets will be more efficiently utilised in the private sector where this increases competitive and/or regulatory incentives, thus driving a more economically efficient use of resources. A recent review of the likely cost of ownership and future performance of London and Continental Railways (LCR) under both public and private ownership conducted on behalf of the DfT by NERA supported this view.[4] The report noted the absence of certain driving pressures on public sector management as possible factors that may weaken relative efficiency in the public sector, including absence of the threat of bankruptcy or takeover, the inability of public organisations to offer share options or large bonuses to senior managers and potential difficulties in funding investment proposals. There may also be pressures to pursue public sector goals that conflict with or divert attention from efficient asset utilisation.

1.6 This, however, is not the complete picture. The presumption of superior private sector economic efficiency is also dependent upon the simplifying assumption of other things remaining equal (OTRE) except for the efficiency pressures created by private ownership. For example, there may be significant externalities which are material to social welfare but which are not taken into account by the market pressures that drive private sector economic efficiency. The need to meet these social welfare objectives in a private ownership scenario may require difficult or complex intervention of a regulatory nature or difficult contractual arrangements, and these factors may in some circumstances make public ownership preferable to private. There are also individual instances where public firms outperform private firms in efficiency terms. As noted in the NERA report, it is necessary to examine the specific circumstances in each case, accounting for any possible externalities (wider economic and social effects) under public and private ownership, when maximising the NPV of social welfare.

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[2] 2007 Budget Report, Financial Assets, page 151, paragraph 6.42.

[3] In the case of physical assets, this includes their residual value and any costs of disposal.

[4] Ownership and Cost and Revenue Performance, Draft report for the DfT, NERA Economic Consulting, April 2007.

1.7 The originally unintended public ownership of LCR[5] was not the result of a policy decision based on operational efficiency but resulted from public support for the financial restructuring of a nationally important infrastructure project. The effect of a return to private ownership can, therefore, in the long term be expected to improve social welfare through efficiency gains resulting from competitive pressures. In cases such as the student loan book, where the outcome in terms of both operational economic efficiency and wider social costs and benefits is the same under both private and public ownership, the issue is resolved into an assessment of the social welfare in NPV terms of either selling the asset now or retaining the asset and valuing the associated net benefit stream which results from it.

Valuing assets

1.8 In the private sector, the cost of capital is generally higher than in the public sector, where it is regarded as virtually risk-free, and also higher than the social time preference rate as set out in the Green Book. This is mainly because the equity risk premium, which is an essential component of most private financing, has no real equivalent within public discounting.

1.9 At first sight, it may therefore be concluded that the social net present value of a stream of future net income from an asset (which uses the Green Book discount rate of 3.5%) will, other things – including efficiency – remaining equal between the public and private sector, always be higher than the private sector value which will be based on a higher private sector discount rate. And from this, it may be deduced that OTRE, this will always favour retention of the asset in public ownership. This is a mistake which overlooks two things:

- Firstly, the inclusion of public sector project risk as a component of the costs which form part of the net income calculation, which means they are included in the numerator of the social NPV calculation and excluded from the discount which is in the denominator (see Box 1). So, given perfect information, the costs of risks included in the calculations would equate to the risk factor embodied in the market rate.

- Secondly, even where all social costs and benefits are equal and where economic efficiency is equal in both public and private ownership, the private sector places a value on diversification of risk profiles within an asset portfolio and this affects the market value of the asset. If an asset's returns are not closely correlated with the wider market, its inclusion within a private sector asset portfolio will spread the overall portfolio risk. The market value of the asset will depend, in large part, upon the nature of the risk with which it is associated. The systematic variability of risk is often valued by the capital asset pricing model (see Box 2). The public sector does not generally value risk diversification in this way.

[5] LCR was selected by the Government in 1996 to build and operate the high-speed channel tunnel rail link and to own and operate the UK arm of the Eurostar. The company was reclassified by ONS in 2006 as a public sector asset following financial restructuring requiring government backed debt in 1999 and 2002 and government guarantees of Eurostar track access payments. The actual operation of the rail link upon its completion will be undertaken under contract to LCR by Network rail and the operation of Eurostar is carried out under contract. In considering the sale of LCR, it became clear that, given these factors and the almost complete nature of the major infrastructure and the fact that project risks were known and would not vary with ownership, that there would be no identifiable difference in immediate social outcomes under either public or private ownership. Consideration of VfM would therefore be concerned with assessing the value of the asset should it be sold or if it were retained in the public sector. In the longer term, private ownership would be likely to stimulate superior efficiency.

Box 1. Public Sector Treatment of Endogenous Project Risk in Costs and Discounting

The Green Book requires that endogenous project risk and optimism bias should be transparently identified and managed as part of a proposal's (programme's or project's) explicit costs. The approach is to build in an allowance for "optimism bias" which is based upon the systematic tendency for projects' outturn costs and delivery times to be higher than originally estimated. Specific risks internal to the project are then identified and, as far as possible, quantified in money terms. Plans are made for the risk to be transferred to where it is best managed and the project-specific costs of managing and mitigating risk are built into the overall project costs. The optimism bias allowance is reduced to take this into account.

To compensate for this, the Social Time Preference (STP) rate used for discounting makes no allowance for endogenous "project risk" and optimism bias. A large element of risk, which would be included in a private sector market discount rate, is therefore necessarily removed from the STP discount rate. An allowance for exogenous risk is however included as an element of STP at a 1% rate (see Green Book Annex 6 on Catastrophe risk).

Box 2. The Capital Asset Pricing Model

The Capital Asset Pricing Model methodology values an asset through a required return on assets equal to the risk-free rate (the return on government securities) plus a risk premium, which reflects the covariance of the asset's expected returns with the wider market. This is usually expressed as the product of the market risk premium and the "asset beta", which reflects the particular risk and correlation characteristics of the asset. [Beta is calculated as follows: Beta(i)= Rho (im) x sd(i) / sd(m), where Rho (im) is the correlation coefficient between returns on the asset and on the market, and sd(i) and sd(m) are the standard deviations of the asset and the market respectively.]

1.10 Also, in practice, other things often do not remain equal. For many reasons, such as those noted above in the context of the ownership of London and Continental Railways, private sector ownership often exposes an activity to incentives, and release it from public sector constraints, that can greatly increase the activity's contribution to social welfare.

1.11 Some public sector assets, such as student loans, can be re-packaged or structured in such a way as to attract a premium for their risk diversity (compared to the wider market), increasing their price relative to the expected financial return they will produce. This is because their risk profile is only very weakly correlated or perhaps even negatively correlated with the wider market. Where it exists, the realisation of the private sector risk premium is a necessary part of gaining the most efficient market price and so must be included in the calculation of the opportunity cost so as to conform to the existing Green Book guidance.

1.12 The appraisal of an asset sale requires comparison of an estimate of the sale value of the asset to the private sector,[6] plus any associated efficiency effects resulting from disposal with the total social value of the asset when it is retained in the public sector.

[6] Green Book (section 5, paragraph 5.11 page 19) "costs and benefits should normally be based on market prices as they usually reflect the best alternative uses that the goods or services could be put to (the opportunity cost)". This refers to an efficient competitive market price adjusted, if necessary, to allow for any distortion due to taxation.

2 GUIDANCE

VALUE FOR MONEY WHEN ASSESSING ASSETS FOR DISPOSAL

2.1 Public bodies should compare the current market value of the asset plus the net present value (NPV) of any other cost-benefit effects due to disposal (e.g. efficiency gains) with the NPV of retaining it in the public sector, including social cost-benefits of retention.

2.2 If there are any social costs and benefits that would remain unaffected by retention or disposal, these should be excluded from both sides of the calculation.

2.3 Determine the social value of asset retention by:

- assessing the stream of income and costs over a reasonable period, including any residual asset value or costs of disposal at the end. These costs should fully reflect all endogenous risks and, where these are not known, should take account of potential optimism bias.
- assessing possible efficiency gains or losses that may be expected from retention.
- assessing other social cost and benefits that might be expected from retention, including externalities.
- calculating the NPV of the above.

2.4 Determine the social value of asset disposal by:

- assessing the asset's current market value, including any premium arising from risk diversity, and net off the transaction costs associated with a sale. To do this, it is necessary to ensure - before invitations to potential bidders – that:
  - an efficient market exists for this kind of asset and that the market is functioning efficiently and is of a sufficient size to absorb a sale without distortion.
  - the asset sale will be executed in such a way as to capture best pricing.
  - the transaction costs are proportionate.
  - the asset sale (including any structuring of the asset) takes account of a market-consistent assessment of risk and is structured and designed in such a way as to promote the best possible efficient pricing, avoiding information asymmetry or other factors which may disadvantage buyers.
  - possible efficiency gains or losses that may be expected to arise from disposal to the private sector are taken into account.

- assessing possible efficiency gains or losses that may be expected from disposal, including the effectiveness of any competitive or regulatory regime that is likely to follow from asset disposal.
- assessing any other social cost and benefits that may arise due to disposal.

2.5 Compare the NPV of retention and disposal options. Where financial or corporate assets are involved, see Guidance Annex A on the treatment of risk and valuation.

A

GUIDANCE ANNEX A

VALUATION OF CORPORATE AND FINANCIAL ASSETS AND THE TREATMENT OF RISK

A.1 When considering financial or corporate assets, such as ownership or a share in ownership of a company, it may be impractical for the public sector to make a reliable assessment of the endogenous risks of continued public ownership. This makes it impossible to include robust and reliable evidence-based estimates of the costs of the endogenous risks in the net income calculation of present value.

A.2 Where corporate or financial assets are involved, in order to avoid introducing bias into the outcome due to errors in the risk assessment, it is reasonable to obtain qualified advice on the value the market would place on the overall risk associated with the asset in question (stated in terms of a risk discount). This may need to be determined through reference to similar asset markets. The overall market-based risk discount can then be used in calculation of both the asset retention and the asset disposal scenarios.

A.3 To accomplish this in the asset retention case, the endogenous risk costs need to be excluded from the cost-benefit calculations, the market-based risk premium should be added to the green book discount rate after a 1% reduction to remove the exogenous risk allowance already built in to the Green Book social discount rate.

A.4 The resulting risk-adjusted social discount rate can then be used to discount the net cost-benefit retention values and be fed into the calculation of the estimate market value on disposal using the capital asset pricing model. When carrying this out, advice may be required to determine appropriate market data to be used as the basis for calculation of the asset beta value.

A.5 The initial assessment of market value produced for appraisal is for initial comparison with the retention value - it is not the last word in estimation of market value. Knowledge of the best achievable market price should improve based on advice and information gained during preparations for a prospective sale.

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