

**The leasing of rolling stock for
franchised passenger services**

**ORR's reasons for making a market
investigation reference to the
competition commission**

26 April 2007



OFFICE OF RAIL REGULATION



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Executive summary

1. We, the Office of Rail Regulation (ORR), have decided to make a reference to the Competition Commission (CC) under section 131 of the Enterprise Act 2002 (EA02) for an investigation into the leasing of rolling stock for franchised passenger services and related maintenance services in Great Britain¹.
2. This confirms our 'minded to refer' decision, which was published on 29 November 2006, and on which we publicly consulted.
3. In deciding to make a reference, we have taken into account the views expressed by stakeholders, in relation to the evidence and analysis set out in our minded to refer decision. The consultation ended on 28 February 2007 and we received responses² from all parties likely to be affected by this decision, including the Rolling Stock Leasing Companies (ROSCOs) and the Department for Transport (DfT). A full list of respondents is attached at Annex E.
4. Our decision to refer the markets³ in which these services fall has been based on evidence of features that we have reasonable grounds for suspecting are preventing, restricting or distorting competition. A lack of competition in these markets introduces the risk of Train Operating Companies (TOCs) paying higher prices and/or receiving a poorer quality of service than would be the case in a situation where those features did not exist. Franchised TOCs currently buy services priced at around £1bn per year from lessors of rolling stock, meaning that the consequences of any such problems are potentially significant for the travelling public and the taxpayer.

¹ Full terms of reference for the investigation are attached at Annex A.

² <http://www.rail-reg.gov.uk/server/show/ConWebDoc.8639>

³ We refer to 'markets' in the plural throughout this report, because, as outlined in Chapter 3, we think that there are good reasons to think that there may be distinct product markets for different types of rolling stock. We do not, however, formally conclude on the boundaries of the relevant economic markets. For convenience in this report we frequently refer collectively to the market(s) in which the reference services fall as 'these markets'.

5. We consider that the reference test has been met and that, in the balance of our statutory duties⁴, a reference to the CC is a proportionate exercise of our discretion to refer, given the size and importance of these markets and the powers available to the CC.

Competition in these markets

Market definition

6. We remain of the view expressed in our minded to refer decision, namely that the leasing of rolling stock for franchised passenger services is likely to be characterised by distinct product markets differentiated by different types of rolling stock.
7. One of the arguments made by the ROSCOs⁵ in their responses to our minded to refer decision was that any market definition should encompass all of the means by which rolling stock is procured by TOCs, rather than just leasing. On this basis, it was argued that we should therefore refer the 'supply', rather than 'leasing' of rolling stock, in order to reflect the potential for the ownership of rolling stock by TOCs.
8. We agree that, where feasible, self-supply will be in direct competition with the services supplied by the ROSCOs and hence may be a demand-side substitute for leasing services. However, the incidence of self-supply is currently very small. We think that the use of the term 'supply' of stock would risk confusion with other parts of the industry, notably the sale of stock by rolling stock manufacturers to the ROSCOs, in which we do not have grounds to suspect competition problems.

⁴ Our statutory duties as laid out in section 4 of the Railways Act 1993 (RA93).

⁵ Angel (paragraph 112 of its response of 28 February 2007) and Porterbrook (paragraph 4.10 of its response of 28 February 2007).

Features of these markets that prevent, restrict or distort competition

9. Our view is that the evidence received during the course of our market study gives us reasonable grounds to suspect that a number of features (listed below) prevent, restrict, or distort competition.

- The technical and operational characteristics of rolling stock within Great Britain and its specificity for certain routes and services result in limited interchangeability between different types of stock.
- The limited availability of a pool of surplus stock of viable, alternative vehicles restricts the choices available to TOCs.
- Different franchise offer/award dates limit the amount of liquidity during the bidding phase for a franchise.
- The costs of transferring stock between franchises act as a barrier to TOCs switching between ROSCOs.
- The restrictions within some Invitations to Tender (ITTs) for franchises can limit the choices available to TOCs.
- The commercial case for introducing new build stock is limited by its high cash costs.
- The time limited nature of railway franchises relative to new build lead times disincentivises new build.
- The DfT's deliverability criteria in the franchise process encourage TOCs to lease stock for the entire duration of franchises.
- The higher rental cost of short-term leases, and uncertainty over the value of call options and the precise circumstances in which they can be exercised, tends to favour retention of incumbent stock.
- New build activity is limited in the absence of Government support.

- Buyers (TOCs) have limited incentives to negotiate over lease terms given that rolling stock costs are passed through into subsidy or premium payments.
10. Another relevant factor is the growth in passenger demand since privatisation, which has limited the volume of surplus stock available.
 11. The evidence that we have gathered during the course of our study suggests to us that, in many instances, a TOC has limited choices when it comes to selecting passenger rolling stock for franchised passenger services.
 12. The DfT and TOCs are broadly in agreement with this view. However, the ROSCOs, in their responses to our minded to refer decision, maintained that a TOC is not as constrained in its choice of rolling stock as portrayed, or at least not constrained to the extent that reasonably competitive market outcomes are not obtained.
 13. Angel's response, in discussing the competitive pressures that it faced, highlighted the importance of residual value risk, which, it argued, meant that *"even the risk of a small proportion of a fleet going off-lease can be sufficient to put pressure on the whole of the fleet..."*⁶.
 14. We acknowledge that this factor might alter the balance of bargaining strengths in favour of TOCs, but consider it unlikely that it is sufficient in most cases to ensure competitive outcomes given the lack of choice that is frequently available. We think that this is illustrated by some aspects of Angel's own response.
 15. HSBC emphasised the importance of the fact that *"the option of a new build fleet is always available"*⁷, and argued that this option ensures that the pricing of incumbent fleets remains at a competitive level.

⁶ Paragraph 26 of Angel's response of 28 February 2007.

⁷ Page 7 of HSBC's response of 28 February 2007 (HSBC's response to question 3 of our minded to refer decision).

16. We agree that new build and incumbent stock are in direct competition in some cases. We remain of the view, however, that there are many instances in which such competition is dampened by a range of factors that make the introduction of new build unattractive to TOCs.
17. Porterbrook acknowledged that, "*direct competition between providers is somewhat muted*"⁸, but argued that other factors such as buyer power ensure competitive outcomes. Porterbrook also argued that our minded to refer decision had understated the potential for rolling stock cascades to impose a competitive discipline on it, citing, for example, a series of potential future rolling stock cascades.
18. Our view is that the potential future cascades identified by Porterbrook do not have a material bearing on our conclusions. The advantage of basing our assessment on historical data is that such information is verifiable. Furthermore it is not possible for us to ascertain with any certainty how many of the future cascades identified by Porterbrook will transpire or how many will result in the creation of a surplus of attractive stock.
19. During the course of our consultation the ROSCOs also submitted their views as to the relative bargaining power of the TOCs and the DfT. Angel⁹ and Porterbrook¹⁰, for example, pointed to the fact that TOCs are owned by major transport groups who are significant players in the franchised passenger rail sector, who might in future wish to secure financing for new stock. Porterbrook referred to the DfT as a well-informed monopsonist with full knowledge of rolling stock prices across the industry and a 'proven' ability to sponsor new purchase. All of the ROSCOs maintained that, in any given transaction, they are constrained in their behaviour (irrespective of any market power that might be relevant to the circumstances of that transaction) by the risk of damaging future commercial relationships.

⁸ Paragraph 7.7 of Porterbrook's response of 28 February 2007. Porterbrook attributed this position to "*various regulatory constraints*".

⁹ Paragraphs 6-8 of Angel's response of 28 February 2007.

¹⁰ Paragraphs 5.5-5.7 of Porterbrook's response of 28 February 2007.

20. We do not consider that these arguments are supported by our dialogue with other stakeholders. TOCs have told us that the incentives for them to obtain favourable terms from the ROSCOs are generally weak. The lack of choice that is often available to a TOC, in our view, limits the extent to which any potential buyer power might be exercised.
21. It is evident that a number of these features arise from Government policies. The DfT's response to our minded to refer decision argued that it, "...*does not agree that the way Government procures franchised passenger services restricts or distorts competition in the way described by the ORR*"¹¹. The DfT argued that it considers the key factor limiting a TOC's choice of rolling stock is simply that supply is meeting demand and that there is no economic case to invest in surplus. Further, it provided a number of reasons why certain features of its franchise policy (such as specifications in the ITT as to the number of services on each route, journey times and stopping patterns) are critical to sensible management of capacity and/or would lead to no material increase in competition if changed.
22. We recognise that the way in which the DfT discharges its responsibilities for the procurement of passenger railway services is a matter for Government, and that franchising policy is driven by a number of considerations of which the terms on which rolling stock is leased is only one.
23. We acknowledged in our minded to refer decision that certain features may not be amenable to change if the Government does not see net benefits in funding and/or performance terms in doing so. We also believe that the DfT has made a number of good arguments in support of retention of certain parts of its franchising framework and timetable. It does not follow, however, that decisions made in order to achieve well-founded public interest benefits, necessarily have a benign impact on competition. We consider, therefore, that it remains appropriate to refer to these features within our report to the CC.

¹¹ Paragraph 5 of the DfT response dated 28 February 2007.

Indicators of markets not working effectively

Profitability

24. We have considered a range of profitability estimates provided to us by the DfT and the ROSCOs. Of the number of approaches that have been suggested, not all of them suggest excess profits. It is significant, however, that plausible approaches that we have considered are consistent with excess profits being earned. This means that the signals from our profitability analysis, whilst not conclusive in themselves, nevertheless support the conclusion that there are grounds to suspect an inadequate degree of competition.
25. The ROSCOs have made a number of valid criticisms of the estimates presented in our minded to refer decision. But we do not consider that the alternative approaches suggested by the ROSCOs can be accepted without further work in this area, and plausible excess profit findings remain, notwithstanding these criticisms. The CC, during the course of its investigation, might wish to consider these, and any other alternatives, in more detail.

Switching rates

26. Switching rates are low in these markets. For example, the DfT told us that a weighted average of around 90% of incumbent stock had been retained on long-term leases in recent rounds of franchise replacement. Whilst these figures have not been disputed by the ROSCOs, they have (correctly) argued that, taken on their own, low switching rates do not necessarily demonstrate a lack of competition, since in some cases the threat of switching may have been sufficient to ensure competitive outcomes.
27. Whilst we accept that such threats have existed in some cases, the evidence and views available to us (including the case studies submitted to us by the DfT and the ROSCOs) are such that we suspect that they have not imposed an effective constraint in respect of the majority of incumbent fleets. We therefore consider that our data on switching is significant given that it is consistent with the other types of evidence that we have gathered and the opinions that have

been put to us by stakeholders, namely that TOCs are frequently in a position of limited choice when sourcing rolling stock.

Maintenance and service provision

28. The TOCs have advised us of a number of concerns relating to the non-capital elements of their lease arrangements with the ROSCOs. For example, they have expressed concern about maintenance provision and the extent to which they can negotiate service level agreements above the minimum in terms of performance requirements, even as a costed option.
29. We have also been advised of a lack of transparency in the maintenance reserve¹² where a TOC is unable to validate the opening and closing balance and is, therefore, unable to challenge any call on it for extra funding during the course of the lease.
30. The ROSCOs do not agree that there are problems associated with their provision of maintenance terms.
31. We consider that the concerns expressed by the TOCs cannot be discounted, and that this is an area which would benefit from more detailed scrutiny by the CC. In this we concur with ATOC which stated¹³, "*We think that, if there is a referral, this would be a major opportunity to achieve much greater transparency for operators on heavy maintenance costs and spending on refurbishment and modification*".

The costs and benefits of a reference

32. We recognise that a reference to the CC would have considerable resource implications for all the parties, including the CC. This factor should be set against the fact that the rail industry currently buys services worth over £1bn per year from the ROSCOs, this representing a significant cost to the travelling

¹² An account, into which the TOCs pay, to cover future maintenance expenses.

¹³ Page 4 of the ATOC response dated 28 February 2007.

public and the taxpayer. Competition problems within markets of this size have the potential to create substantial consumer detriment¹⁴.

33. The DfT's estimates of the annual consumer detriment¹⁵ (in 2005) caused by the ROSCOs pricing based on a whole-fleet analysis ranged from £34m per year to £177m per year. The DfT's estimates suggested that these figures correspond to total detriment figures of £375m and £1.9bn respectively in present value terms. We consider that some, at least, of these estimates fall within a reasonable range, and that the magnitudes of these values are such that these markets merit further investigation by the CC.

Availability of remedies

34. Our view is that there is a reasonable likelihood that appropriate remedies will be available to the CC in relation to the concerns that we have identified.
35. A number of respondents to our minded to refer decision expressed concern about whether those market features that relate to the DfT's franchising process are capable of remedy by the CC. The DfT argued that changes to franchise policy would not be effective in improving competition in these markets and moreover told us that remedies of this sort would not be proportionate given that the, *"Government has set the framework of passenger franchising in which competition for the supply of rolling stock needs to take place and upsetting that framework in order to drive competition into a malfunctioning part of the rail sector is not an option which merits serious consideration"*¹⁶.
36. Angel argued that ORR as the specialist railway industry regulatory body would be *"...best placed to make recommendations to Government as to how the franchising system may be reformed"* and points out that there is *"...no difference between ORR and the CC in respect of the power to make such*

¹⁴ See OFT, *Payment protection insurance, The OFT's reasons for making a market investigation reference to the Competition Commission*, February 2007 (OFT899, paragraph 5.71).

¹⁵ The DfT's submission included detailed profitability analysis.

¹⁶ Page 22 of the DfT's response of 28 February 2007.

*recommendations*¹⁷, since neither authority has the power to legislate or force the DfT to change its procurement practices. HSBC and Porterbrook made similar points.

37. A more detailed examination of the relevant issues would, in our view, be necessary in order to give robust recommendations on changes to the franchise system to introduce more competition into the leasing of rolling stock. The CC is a specialist second stage investigatory body and so is best placed to carry out a detailed investigation of this sort. Moreover, our sectoral expertise will be available to the CC during the course of its investigation.
38. Further, whilst the CC has powers to impose behavioural remedies, we can only take undertakings that have been offered voluntarily. The CC has powers to accept requisite undertakings from appropriate persons and moreover has the power under section 161 of EA02 to make an Order to remedy any adverse effects that it finds. Should the CC consider that appropriate remedies exist within the operation of the franchise, it is to have regard to the relevant statutory functions of the Secretary of State, which are at subsections (1) to (3) of section 4 of the Railways Act 1993 (RA93). It is also possible that the CC may address the concerns regarding the franchise process by way of recommendations to Government.

Undertakings in lieu

39. We have the power under section 154 of EA02, in lieu of a reference, to take voluntary undertakings from the ROSCOs.
40. We do not think that voluntary undertakings would be appropriate in this case.
41. We have encountered a number of complex issues that would require a significant amount of further scrutiny to enable us to arrive at a definitive view on a set of undertakings which would provide the comprehensive solution which is required of us under section 154 of EA02. We additionally note that undertakings would be dependent on the co-operation of all parties and

¹⁷ Paragraph 14 of the Angel response of 28 February 2007.

moreover would not bring about changes to the underlying market features that we have identified.

42. During the course of our consultation we have had a number of discussions with the DfT and the ROSCOs regarding the possibility of an industry-led solution as an alternative means of addressing the various stakeholder concerns that we have identified. This dialogue suggested to us that voluntary undertakings would not be a realistic means by which to arrive at a solution that was acceptable to all parties.

Scope of the reference

43. Our reference asks the CC to undertake an investigation into the leasing of rolling stock for franchised passenger services and related maintenance services in Great Britain. This is notwithstanding the fact that the concerns that we have identified within our study relate principally to the *re-leasing* of stock (either Master Operating Lease Agreements (MOLA)¹⁸ or non-MOLA) by the ROSCOs and not necessarily to the initial leasing of new build. This does not depart from our minded to refer decision.
44. This has led to a concern expressed by Porterbrook¹⁹ that the inclusion of non-MOLA stock within the reference will give rise to significant unnecessary uncertainty given the lack of evidence to support a view that new stock is leased in anything other than competitive conditions.
45. The DfT, on the other hand, has pointed out²⁰ that we have not analysed the extent of competition between ROSCOs to lease new build stock in sufficient depth to give the leasing of new build stock a clean bill of health. We are only in a position to observe that all three ROSCOs should, at least in theory, be in a position to compete with each other, and to comment that forecast returns appear to be relatively modest.

¹⁸ As explained in, for example, Chapter 3 of this report, we use this term to refer to ex-British Rail (BR) rolling stock.

¹⁹ Paragraph 4.26 of Porterbrook's response of 28 February 2007.

46. On balance we have decided not to narrow the scope of our reference but to provide the CC with sufficient latitude to explore all facets of rolling stock leasing to the extent that it considers necessary during the course of its investigation.

Conclusions

47. It would be inappropriate for us to give these markets a clean bill of health, given the range of features that give us a reasonable suspicion that competition in these markets is restricted. We additionally consider that it is appropriate, in the balance of our statutory duties, for us to refer these markets to the CC.
48. Given the size of these markets and the available evidence on profitability, we think that the benefits of a reference are potentially significant. A reference may create short-term uncertainty, with implications for the willingness of firms to supply new stock and/or on the terms on which they are prepared to invest. Our dialogue with the DfT suggests, however, that, in its view as the funder of the industry, such risks are at an acceptably low level.
49. We additionally consider that a thorough review of the issues by the CC is likely to result in more certainty and stability for all parties in the future, allowing them to plan their businesses with a greater degree of assurance than currently. It is important, going forwards, that the relationship between all stakeholders is built on a foundation of confidence that each party to the arrangements is securing value out of that relationship. It is clear to us that that confidence is lacking currently.

²⁰ Paragraph 13 of the DfT's response dated 28 February 2007.

1. Introduction

- 1.1 On 29 November 2006, we announced our decision that we were minded to make a reference to the CC for a market investigation. Our reasoning was set out in *The leasing of rolling stock for franchised passenger services: Consultation on the findings of ORR's market study and on a draft reference to the Competition Commission*, 29 November 2006. (The 'minded to refer decision').
- 1.2 Our consideration of these markets followed a detailed submission from the DfT, dated 28 June 2006, requesting that we make a reference to the CC under section 131 of the Enterprise Act 2002 (EA02). The submission set out a number of structural and behavioural features that, it argued were capable of preventing, restricting or distorting competition. A submission relating to a significant sector of the railways by a prominent stakeholder and funder inevitably led to serious consideration by us. After conducting a short initial review of the submission we decided to undertake a market study with a view to deciding whether or not to make a market reference. The *Scope of our market study and provisional timetable* was published in July 2006.
- 1.3 Taking into account all the evidence gathered during the course of our market study (gathered by way of written exchanges, including responses to questionnaires, and by way of meetings with all the key industry parties), we took the view that the section 131 test for a market investigation reference to the CC was satisfied. Under section 169 of the EA02, where we propose to make a market reference to the CC, we must first consult, so far as is practicable, any person on whose interests the reference is likely to have a substantial impact. Due to the significance of these markets to the provision of passenger services, we chose to consult widely by publishing our minded to refer decision on our website, and inviting comments. We also held a number of meetings during the consultation period with all of the key parties and had further written exchanges with them on points of detail.

- 1.4 Our twelve-week consultation period ended on 28 February 2007. As well as detailed responses from all three ROSCOs²¹ and the DfT, we received responses from fifteen other interested parties including the Association of Train Operating Companies (ATOC), train operators and industry associations. A full list of respondents is at Annex E.
- 1.5 This document (the 'report') sets out our reasons for deciding to confirm our minded to refer decision.
- 1.6 We have indicated the areas where respondents commented on particular elements of the analysis in the minded to refer decision, and, as appropriate, provided our views on these comments.

Legal framework

- 1.7 We have a concurrent power with the Office of Fair Trading (OFT) under section 131 of the EA02 to make a reference to the CC, where we have:

“reasonable grounds for suspecting that any feature, or combination of features, of a market in the United Kingdom for goods or services prevents, restricts or distorts competition in connection with the supply or acquisition of any goods or services in the United Kingdom or a part of the United Kingdom”.

- 1.8 The EA02 defines a feature of a market as:
- the structure of the market concerned or any aspect of that structure;
 - any conduct (whether or not in the market concerned) of one or more than one person who supplies or acquires goods or services; or
 - any conduct relating to the market concerned of customers of any person who supplies or acquires goods or services.

²¹ The three ROSCOs are currently known as Angel Trains Ltd.; HSBC Rail; and Porterbrook Leasing Company Ltd. They are respectively referred to as Angel, HSBC and Porterbrook, throughout the rest of this report.

- Conduct is described in the EA02 as including: “*any failure to act (whether or not intentional) and any other unintentional conduct*”.

- 1.9 Concurrent jurisdiction under the EA02 goes beyond the definition of “*railway services*” in section 82 of the Railways Act 1993 (RA93), and includes services such as the leasing or maintenance of rolling stock as provided by the ROSCOs.
- 1.10 In cases where the section 131 test to make a market investigation reference to the CC has been met, we have discretion on whether to make the reference. In exercising this discretion we must consider our duties under section 4 of RA93.

Background and previous reviews

- 1.11 When the ROSCOs were privatised in 1996, it was envisaged that the three rolling stock leasing companies would compete with one another, and that displacement of useable rolling stock by new build would create an excess of supply over demand. There has been no large-scale market entry since privatisation and the shares of each rolling stock leasing company have remained relatively stable over the last ten years.
- 1.12 These markets have been scrutinised to a greater or lesser extent on a number of previous occasions: by the Office of the Rail Regulator (the Regulator) in 1998, following a request from the Deputy Prime Minister; by the Strategic Rail Authority²² (SRA) as part of its rolling stock strategy in 2003; and by the Secretary of State as part of his review, *The Future of Rail* (published in July 2004).
- 1.13 The Regulator’s review concluded that new entry was expected to occur and that this would create a more liquid and competitive market. In the meantime, however, there was a need for a framework of behavioural standards. It was decided that these standards would be best achieved by each of the ROSCOs

²² As of 2005, the SRA’s franchising powers passed on to DfT Rail.

publishing a 'code of practice'. The codes were developed through negotiation between the Regulator and the three ROSCOs.

- 1.14 The SRA review proposed a way forward intended to increase the choice available to TOCs at the time of lease renewals. It advocated a number of principles including the avoidance of highly bespoke stock, facilitating cascades, and extending the timescales available to TOCs and franchise bidders when making and implementing their rolling stock decisions. The SRA also recommended strengthening the measures to prevent potential exploitation of market power by increasing awareness of the codes; increasing transparency about the breakdown of charges, including capital and non-capital elements; and benchmarking of lease prices and terms in order to better inform TOCs of what constitutes value for money.
- 1.15 The DfT's white paper found that a number of the predictions made at the time of privatisation concerning the development of competition, had not been realised.
- 1.16 In the period following the publication of its white paper, the DfT has embarked on a series of negotiations with the three ROSCOs, which focused mainly on lease prices for the ex-British Rail (BR) passenger rolling stock, (referred to in the remainder of this report as Master Operating Lease Agreement (MOLA) stock), but also on other areas such as information provision and maintenance packages. The negotiations were ultimately unsuccessful, leading the DfT to ask us to undertake a market study with a view to making a reference to the CC.

Why we conducted a market study

- 1.17 We considered that the following factors supported our decision to undertake a study:
- evidence supplied by the DfT suggesting a possible lack of effective competition;
 - the importance of rolling stock as an input into passenger rail markets; and

- the need to establish certainty for investors in this sector.

1.18 Passenger rolling stock lease payments account for a significant proportion of the total costs incurred by the rail industry. We understand that the rail industry currently buys services priced at over £1bn per year from the ROSCOs. Any widespread market failure in this sector would therefore lead to significant consumer detriment, and ultimately prevent or limit the Government achieving its aim of best value for money for the taxpayer.

1.19 There has been a significant modernisation of the GB fleet since privatisation, with the ROSCOs investing £4.2bn since 1996 and bringing 4,500 new vehicles into service. This has undoubtedly brought significant benefit to the travelling public. It is important, going forwards, that the relationship between the rolling stock leasing companies, franchisees, and the Government is built on a foundation of confidence that each party to the arrangements is securing value out of that relationship.

Structure of this report

1.20 The remainder of this report sets out the results of our findings.

- Chapter 2 provides the context for passenger rolling stock leasing within GB including a brief summary of the contractual relationship between the DfT, the ROSCOs, and the TOCs.
- Chapter 3 sets out our views on market definition.
- Chapter 4 provides our views on the level of competition faced by the ROSCOs.
- Chapter 5 summarises our conclusions and an assessment of the costs and benefits of a referral.

1.21 The subsequent annexes set out:

- the terms of our market investigation reference (Annex A);

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- a discussion of a set of re-franchising case studies supplied to us by the DfT (Annex B);
- further details of our assessment of profitability (Annex C) and benchmark rates of return (Annex D);
- a list of the stakeholders that responded to our pre-consultation questions and consultation (Annex E); and
- views of stakeholders on product market segmentation (Annex F).

2. Passenger rolling stock leasing in Great Britain and the franchising process

Introduction

- 2.1 Passenger train services in GB are, in the main, structured on the basis of regional franchises awarded by the DfT. The principal exceptions to this are a number of local or specialised rail services operated on an 'open access' basis, including Heathrow Express and Hull Trains. This study focuses predominantly on the leasing of passenger rolling stock for the operation of franchised services. We are not aware of any significant competition concerns relating to the procurement of stock outside the franchising system. A short guide to the DfT's railway franchise procurement process is available on the DfT's website²³.
- 2.2 The three incumbent ROSCOs were created as part of the railway privatisation process in April 1994. In this process all passenger rolling stock used for scheduled passenger services was transferred from the British Railways Board (BRB) to the three ROSCOs.
- 2.3 Since the economic life of passenger rolling stock, at around 30 years or more, is longer than the length of the franchises (7-20 years; with the great majority being for 10 years and less), the ROSCOs have the vital function of acting as long-term owners of rolling stock and carrying the risk (residual value risk) that stock will not find a use for its whole economic life.
- 2.4 Following privatisation, the ROSCOs were sold into the private sector, with their initial MOLA rolling stock leases in place. Porterbrook was bought by Stagecoach in August 1996 and then subsequently by Abbey National Treasury Services plc (ANTS) in April 2000. In February 1997 Forward Trust

²³ http://www.DfT.gov.uk/stellent/groups/DfT_railways/documents/page/DfT_railways_611464.hcsp.

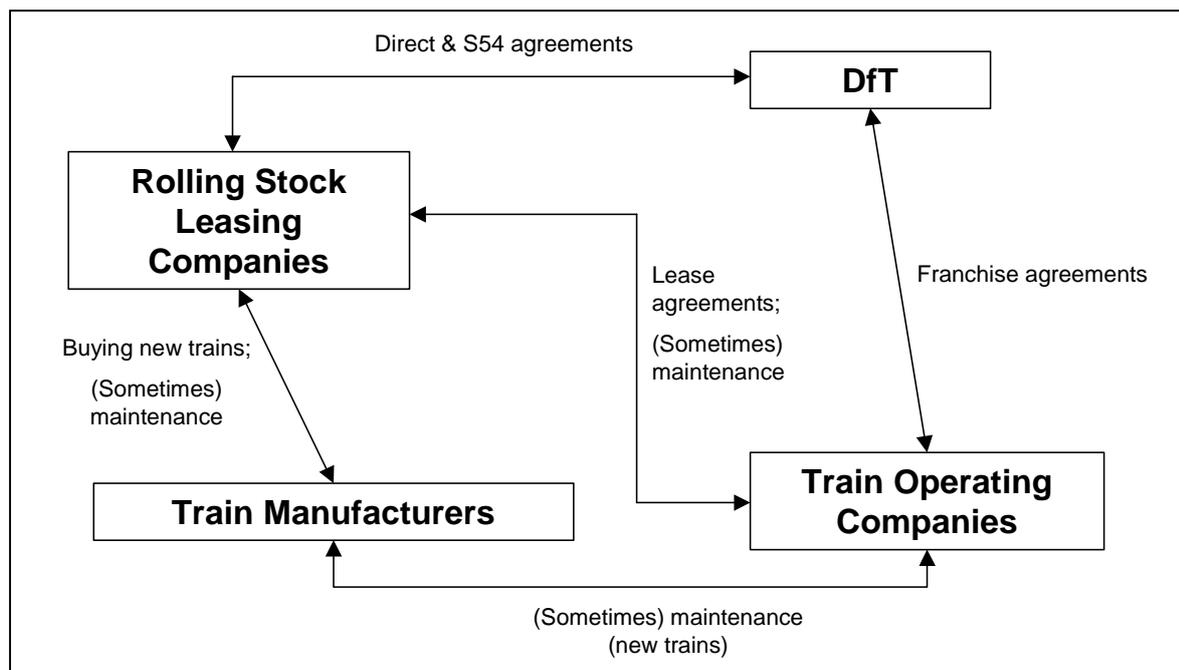
Group (owned by HSBC) bought Eversholt, and in December 1997 Royal Bank of Scotland Group bought Angel. The three ROSCOs are currently known as Angel Trains Ltd.; HSBC Rail; and Porterbrook Leasing Company Ltd. They are respectively referred to as Angel, HSBC and Porterbrook, throughout the rest of this report.

2.5 The ROSCOs are not subject to the regulatory controls placed on the operators of railway assets under sector specific powers provided by RA93, such as the issue and enforcement of licences or regulatory control over contracts, beyond the codes mentioned at paragraph 1.13 of Chapter 1. Each ROSCO has a similar code of practice, as negotiated during the 1998 review. The impact of the Codes of Practice is further discussed in Chapter 4 of this report.

Key transactions and agreements

2.6 The key transactions and relationships that are relevant to the leasing of rolling stock for franchised passenger services are summarised in Figure 1 below, and described in the paragraphs that follow.

Figure 1 – ROSCO, the DfT, and TOC leasing relationships



Agreements between the DfT and TOCs

2.7 Section 23 of RA93 requires the Secretary of State to designate services for the carriage of passengers by railway as franchised services; and defines franchise agreements as agreements between the franchise operator and the DfT to provide these services over a specified geographic area (the franchise area) for a specific period of time (franchise period). The franchisee either receives subsidy payments from Government in return for operating a franchise or, in the case of the most profitable franchises, pays a premium to Government.

Agreements between ROSCOs and TOCs

2.8 Almost all of the rolling stock used in franchised passenger services is owned by the ROSCOs and leased out to the TOCs, typically for the length of the franchise. The key areas of responsibility on either side of the agreements between ROSCOs and TOCs are:

- ROSCO obligations:
 - delivery of rolling stock to the lessee in an agreed condition, hence allowing the lessee quiet enjoyment of rolling stock;
 - procurement from contractors of heavy maintenance and heavy repair and ensuring rolling stock meets prescribed performance criteria following maintenance activities;
 - rectification of major faults and design or endemic faults, and paying those costs not met by the lessee;
 - procuring and paying for any mandatory modifications required to rolling stock, for instance by the safety regulatory authorities; and
 - procurement of property damage insurance.
- TOC obligations:

- payment of rent to the lessor;
- performance or contracting of running maintenance and repairs;
- use of rolling stock in accordance with the criteria specified in the lease supplement;
- paying for major faults and design endemic faults (up to a specified amount and on a shared basis thereafter);
- insurance of rolling stock against third party liabilities and repayment to the lessor of premiums for property damage insurance;
- indemnification of the lessor against losses relating to the leasing, use, and operation of rolling stock in certain circumstances; and
- return of rolling stock to the lessor at the end of the lease period in the condition specified in the lease supplement.

2.9 All of the ROSCOs' leases are classified for accounting purposes as operating leases. This means that the leased asset appears only on the balance sheet of the ROSCO, and not elsewhere. Operating leases normally carry a premium to reflect the risk that the lessor (ROSCO) will be unable to re-lease the stock at the end of the current lease.

2.10 At privatisation, a feature of rolling stock leases was that the ROSCOs were generally responsible for procuring heavy maintenance. This has since changed to some extent, with ROSCOs now offering a number of maintenance options ranging from agreements whereby TOCs arrange their own heavy maintenance (more commonly known as dry leases) to bundled capital and heavy maintenance packages (also known as wet leases).

Agreements between the DfT and the ROSCOs

2.11 Section 30 of RA93 gives the DfT a duty to ensure continuity of services in the absence of a franchise (also known as an 'operator of last resort' duty). In

order to ensure that it can fulfil this duty, the DfT ensures that franchise operators only enter into key contracts (which include rolling stock leases and maintenance agreements) provided that the counter party to those contracts (in this instance the ROSCO) has entered into a 'direct agreement' with the DfT.

- 2.12 Call options²⁴ within the direct agreements enable the DfT, in specific circumstances, to extend the current terms and conditions of rolling stock leases for a further three years into the new franchise period. The use of call options is discussed further in Chapter 4.
- 2.13 The DfT may also give undertakings under section 54 of RA93 to encourage investment in rolling stock. These undertakings may specifically commit the DfT to ensure that subsequent operators of the franchise use that rolling stock.

The franchising process

- 2.14 The description that follows is based on information supplied to us by the DfT.
- 2.15 The DfT runs a seven-stage franchise tendering process (see Figure 2 below for a brief description of each stage) over a period of up to 74 weeks for each franchise. The issue of an ITT by the DfT to short listed bidders (Stage 3 in Figure 2) starts the process for acquiring rolling stock. At this stage TOCs look to secure firm rolling stock agreements when finalising their bids for rail passenger franchises. This is partly due to the deliverability criteria against which bids are assessed, which leads bidders to strive to make sure that they are able to demonstrate to the DfT that sufficient rolling stock has been secured for the entire period of the franchise.

²⁴ The three-year call option introduced by OPRAF in the direct agreements for all new rolling stock leases, enabled the Franchise Director to require the ROSCOs to provide a short (three-year) lease to an incoming franchisee on the same terms as the initial lease. As noted in Chapter 4, the call option was also inserted into the original OPRAF/ROSCO direct agreements after ORR's 1998 review, and as such also applies to MOLA stock.

- 2.16 The DfT has advised that the ITT for the franchise will in many cases specify the number of services on each route together with the minimum capacity, journey times and stopping patterns. It may also include restrictions on the types of alternative rolling stock and in some instances it may specify individual rolling stock to be used (the specificity of the DfT's franchise requirements is discussed further in Chapter 4).
- 2.17 The DfT has also advised that, upon receipt of the ITT, short-listed bidders will seek to acquire rolling stock fleets that:
- are optimised to the requirements of the franchise; and
 - have leases lasting for the length of the franchise to enable them to achieve a level of cost certainty during the bidding stage and to fulfil the operational requirements of running a particular franchise.
- 2.18 Short-listed bidders approach the ROSCOs with a view to obtaining rolling stock (unless the ITT specifies new build). At this stage, short listed bidders will aim to have signed 'heads of terms' rolling stock agreements for inclusion within their business case submission to the DfT.
- 2.19 The DfT's evaluation team scrutinises each bidder's business case to assess deliverability and value for money. The DfT selects a preferred bidder within a 10-week period and then finalises contractual terms and conditions of the franchise agreement prior to commencement of the franchised services. Once selected as a preferred bidder, the new franchisee will revert to the ROSCOs to finalise the rolling stock lease terms and conditions ahead of franchise commencement.
- 2.20 Figure 2 sets out an overview of the DfT's 7-stage franchise replacement process.

Figure 2 - Franchise replacement process

Stage	Typical duration	Comments
Stage 1 - Completion of pre-qualification questionnaires (PQQs)	4-5 weeks	Bidders provided with high-level information about the franchise including standard set of questions.
Stage 2 – The DfT's evaluation of PQQs	7-8 weeks	The DfT receives approximately 10 bids, and aims to short-list 3-5 bidders at the end of this process.
Stage 3 – The DfT issues ITT	10 weeks	Each short-listed bidder receives an ITT. Issuing of ITTs marks the beginning of the main bidding phase. ITTs contain details of the franchise specification including constraints on rolling stock which can be used on the franchise.
Stage 4 – Bidders develop and submit bids	13 –16 weeks	Each bidder develops its proposed base case solution within the constraints of the franchise specification. Bidders negotiate with ROSCOs and obtain firm prices for the desired rolling stock.
Stage 5 – The DfT's bid evaluation	8-10 weeks	DfT bid evaluation – focuses on the base case bid submission. The DfT announces preferred bidder.
Stage 6 – DfT negotiation with preferred bidder	4-6 weeks	The DfT finalises negotiations with preferred bidder. Preferred bidder finalises lease terms with ROSCOs.
Stage 7 - Mobilisation	8-16 weeks	Commencement of franchise services by new franchisee.

2.21 There are currently 21 rail passenger franchises in GB, although the DfT has publicly stated its aim to reduce this number in the next round of franchise awards (for example, the DfT has already announced that the Gatwick Express franchise will be merged into the new Southern franchise that will commence in December 2008). The DfT aims to stagger its franchise

renewals so as to renew one to three franchises per year. Because of this, it is relatively rare for franchises to be coterminous. However, there have been examples where, as part of the recent re-mapping of passenger franchises, the DfT has extended some franchises, with the effect of making more of them coterminous. For example, the DfT extended the Silverlink franchise, which will now terminate at the same time as the Midland Mainline and Central franchises.

- 2.22 Franchises typically run for seven years with an option to extend for another two to three years depending on the franchisee meeting performance targets. However, there are exceptions to this general '7+3' rule; for example the Chiltern franchise was awarded on a 20-year basis from 2002.

Franchising and rolling stock leases

- 2.23 This section sets out a very high level description of the key desired outcomes of the DfT, TOCs and ROSCOs in the transactions described in the early part of this chapter.

The DfT

- 2.24 The DfT's objectives at the commencement of the franchising process include an aim to award franchises to bidders who will deliver (for the duration of the franchise) a combination of:
- high-quality, reliable services that conform to the DfT's specifications on frequency and other aspects of service levels; and
 - value for money (in other words low subsidy or high premium bids) in order to help the DfT to minimise Government subsidy of the railways. Other things being equal, higher charges levied by ROSCOs to TOCs mean that TOCs' bids will ask for larger subsidies/offer smaller premia. This means that the DfT has a strong interest, provided that this does not conflict with its other objectives, in rolling stock leasing charges being as low as possible, subject to allowing the ROSCOs to earn a fair return in order to ensure security of supply.

The ROSCOs

2.25 The ROSCOs' key objective is to maximise the present value of the (expected) future cash flows that they earn from rolling stock leasing, which involves them trading off rental rates, maintenance costs, and the risk of stock going off-lease.

TOCs

2.26 The key objectives of TOCs include aiming to:

- win franchise competitions by submitting bids that are attuned to the DfT objectives briefly described above; and
- in doing so, maximise their forecast profits by means of maximising the difference between their expected future cash outflows (including payments to the ROSCOs and any franchise premium payment) and their expected cash inflows (including ticket revenue and any subsidy that they receive).

2.27 The extent to which TOCs have an incentive to obtain favourable terms from the ROSCOs is discussed in more detail in Chapter 4 of this report.

3. Market definition

The focus of this report

- 3.1 The focus of this report is on the rolling stock used by TOCs to offer franchised passenger services. None of our analysis or data relates to the stock used to supply other rail services such as London Underground or the various other metropolitan rail networks. We think that this focus is appropriate for two reasons.
- Our view is that the fundamentally different way in which stock is procured outside of the franchise system means that the supply of such stock is free of many of the factors that limit competition in the leasing of stock supplied for franchised passenger services. The low incidence of operating leases outside of the franchise system appears to be an obvious symptom of these differences.
 - It has not been suggested to us that the owners of stock built for use outside the franchise system impose any significant constraints on the conduct of the ROSCOs. The data on concentration that we present in Chapter 4 relates only to these categories of stock.
- 3.2 Our competition concerns relate to the *leasing* of rolling stock, as opposed to any other means of provision such as ownership by train operators. We discuss the small number of instances of alternative procurement models such as self-supply by TOCs in Chapter 4.
- 3.3 Our report covers both the pure financing activities and maintenance services carried out by the ROSCOs. As described in Chapter 4 of this report, it is fairly common for these services to be supplied either separately priced or as part of a leasing package (referred to as 'dry' or 'wet' leases).
- 3.4 As in the earlier parts of this report, we frequently refer to Angel, HSBC, and Porterbrook collectively as simply 'the ROSCOs' reflecting:

- the scale of their operations relative to that of new entrants (such as HBOS/RBS²⁵); and
- the fact that we are not aware of:
 - any widespread competition problems affecting the leasing of stock by new entrants; or
 - any significant competitive constraints that new entrants impose on the ROSCOs when agreeing terms for their incumbent stock beyond the types of constraint already imposed by the three incumbent ROSCOs.

3.5 Later in this chapter we group types of stock together into a number of categories, according to various functional characteristics. These categories include both MOLA and post-privatisation stock types. In the remainder of the main body of this report we use the following terms:

- 'incumbent' stock – we use this term (when assessing the choices available to TOCs when agreeing terms with lessors of rolling stock) to refer to the stock previously in use in the franchise;
- 'existing' stock - we use this term to refer to all stock that is currently available for use on the network, which encompasses both stock that is already surplus or is due to come off-lease (either because the franchises are coterminous or because alternative stock will be available during the course of the franchises);
- new (build) stock - stock that has not yet been built and/or accepted for use on the network.

3.6 We also use the following terms:

- MOLA stock (ex-BR rolling stock that was in operation at privatisation and remains operative); and

²⁵ Halifax Bank of Scotland/Royal Bank of Scotland joint venture.

- Non-MOLA stock (all subsequently purchased stock).

3.7 Note that both 'incumbent' and 'existing' stock, as discussed in Chapters 3 and 4 of this report, could be either MOLA or non-MOLA stock. Many of the initial leases on non-MOLA stock, however, have yet to be renewed. This means that current prices were set based on a different competitive dynamic to those prevailing under the MOLA leases, as discussed in Chapter 4.

Our approach to market definition

3.8 This study concerns a sector within which we think there are likely to be a series of individual economic markets, based on various product and temporal aspects of stock requirements. As a result, it would not be feasible for our market definition to begin by considering the constraints facing a unique focal point in order to define a single relevant market (as is often done in investigations carried out under the Competition Act 1998). Instead, we use market definition principles to provide an understanding of the extent of substitutability between classes of rolling stock so as to inform our competition analysis set out in Chapter 4.

3.9 We agree with the view set out by the DfT in its submission, namely that the extent to which suppliers of rolling stock face competition from rival firms can vary significantly from transaction to transaction (i.e. at the point in time at which the need for rolling stock arises)²⁶. This has been borne out by our dialogue with stakeholders and our analysis of the case studies provided by the DfT and the ROSCOs. These variations in the balance between supply and demand are caused by, in particular, the fact that franchises are renewed at different times and often have very different stock requirements.

3.10 We consider that the most appropriate means of assessing this varying level of competition is a direct assessment of the competitive conditions faced by the ROSCOs as set out in Chapter 4 of this report.

²⁶ See, for example, paragraphs 3.19 and 5.4.2 of the DfT's submission.

3.11 We do, nonetheless, discuss a number of functional characteristics that restrict the interchangeability of different types of rolling stock. We discuss these restrictions as a market definition issue because of the consistency with which they are relevant to all lease renewals.

Product market issues

Introduction

3.12 The DfT's submission described three broad categories of factors that limit the interchangeability of different types of rolling stock. These factors are listed below.

- Route compatibility considerations:
 - power type; and
 - route clearance.
- Operational considerations such as maximum speed, door positions and size and seating configuration.
- Economic considerations, such as revenue earning expectations, total annual costs, and the up-front costs of switching.

3.13 We briefly discuss each of these in the text below.

Route compatibility considerations – power type

3.14 Whether a piece of stock is suitable for use on a particular route or not depends crucially on the nature of the underlying rail infrastructure of the route, which in GB is almost always one of²⁷:

- non-electrified;
- 750V DC third rail system; and

²⁷ For example, see Figure 11.4 of Network Rail's 2004 Technical Plan, http://www.networkrail.co.uk/documents/3150_2004BusinessPlanNetworkCapability.pdf, for a map dividing GB's rail network into areas served by these three types of power.

- 25kV AC overhead system.
- 3.15 Some franchises (such as Thameslink/First Capital Connect) include routes that require the use of dual-voltage electric stock, since both types of electrification are used on different parts of the route.
- 3.16 The three types of routes listed above are most often served by diesel, DC electric and AC electric stock respectively. This applies to both multiple units and locomotives²⁸. Whilst diesel powered rolling stock is technically capable of operation on all three types of route, its widespread use on electrified routes is often considered unattractive²⁹ because of factors including:
- differences in the power/weight ratio and hence acceleration rates of electric and diesel stock; and
 - issues with diesel fumes, including environmental concerns.

Operational considerations – maximum speed

- 3.17 Types of stock with different maximum speeds are often not substitutable.
- TOCs require stock that will perform in a way that meets the requirements of the services that they operate.
 - It is often not possible for stock with a maximum speed that is significantly in excess of the speed required for a route to be considered an attractive option, because of operational factors such as door configuration and capacity per vehicle. We are, though, aware of instances of 100mph electrical multiple units (EMU)/diesel multiple units (DMU) stock being used on routes where only a 75mph maximum speed is required.

²⁸ Some classes of coaching stock can be hauled by either diesel or electric locomotives.

²⁹ There remain a number of examples of diesel stock being used on electrified lines, for example, intercity services on the InterCity East Coast (ICEC) franchises provided over the AC electric powered East Coast Main Line are run using a mix of electric and diesel stock, the latter being used primarily on services that extend beyond the electrified area.

Economic considerations

3.18 These factors include:

- differences in operating costs and revenue earning potential of different types of rolling stock; and
- switching costs such as staff training or a requirement for different spares.

Product market segmentation – our view

3.19 We are broadly in agreement with the product market segmentation supplied by the DfT in its submission, which is set out in the first three tables in Annex F. These tables show the DfT's segmentation of rolling stock into a number of distinct categories, based on the factors set out in the preceding paragraphs.

3.20 During the course of our consultation and pre-consultation dialogue, both ROSCOs and TOCs have made a number of suggestions on the question of how to make the DfT's product segmentation table more accurate. We include a summary of these suggestions at Annex F.

3.21 If we had considered it appropriate for us to arrive at a definitive view on market definition, it is likely that we would have made a small number of changes to the DfT's tables based on (some of) these stakeholder responses and our own views. Examples of the latter include our view that:

- the use of Class 376 stock is limited to 75mph; and
- Class 150 stock can be used on suburban services (as it is, for example, in Birmingham, Cardiff, and Bristol).

3.22 Our view is that the leasing of passenger rolling stock is likely to be characterised by distinct product markets split by type of stock. We do not, however, consider it necessary for us to arrive at a precise market definition based on these factors, since in order to do so we would need to, for example, calculate market shares at a granular level. Even a firm that has a

relatively small share of the total combined volume of a particular type of stock may find itself able to exercise market power in a situation where most or all stock of this type is committed to other uses at the time of re-franchising. This is the same view that we expressed in our minded to refer decision.

3.23 The ROSCOs' responses to our minded to refer decision raised three broad areas of disagreement with our approach.

- They argued that any market definition should encompass all of the means by which rolling stock is supplied to TOCs (as opposed to leasing only), because of the potential for self-supply by TOCs³⁰.
- They questioned the extent to which different types of stock fall within distinct product markets. Whilst they were largely in agreement with the fundamental proposition that the technical and operational characteristics of trains can restrict the interchangeability of stock, they argued that the minded to refer decision overstated the extent of such restrictions. For example, both Porterbrook³¹ and HSBC³² emphasised the scope for the use of DMUs on electrified lines (citing situations where constraints on the power supplied by electrified lines might make the use of diesel stock attractive).
- They criticised the failure of our minded to refer decision to discuss explicitly the scope for supply-side substitution³³.

3.24 We agree that, where feasible, self-supply will be in direct competition with the services supplied by the ROSCOs and hence may be a demand-side

³⁰ See, for example, paragraph 4.10 of Porterbrook's response of 28 February 2007.

³¹ At paragraph 4.12 of Porterbrook's response of 28 February 2007.

³² HSBC's response to question 1 of our minded to refer decision (page 6 of its response dated 28 February 2007).

³³ Angel, for example, in response to question 1 of our minded to refer decision cited its earlier response of 1 September 2006, in which it stated "*Demand-side substitutability is only one aspect of market definition... To ignore this point, as the DfT does entirely in its submission, is akin to arguing that there are separate markets for each individual size of shoes; a proposition which is plainly absurd.*" (Page 18 of its response of 28 February 2007).

substitute for leasing services (and therefore potentially in the same market). However, as discussed in Chapter 4, the incidence of self-supply (and therefore, in our view, the potential for self-supply to impose constraints) is currently very small. Further, we think that the use of the term 'supply' of stock would risk confusion with other parts of the industry, notably the sale of stock by rolling stock manufacturers to the ROSCOs, in which we do not have grounds to suspect competition problems. Therefore, we do not agree that our market definition and terms of reference should refer to the 'supply' of rolling stock, rather than 'leasing', albeit the potential constraint from self-supply needs to be taken into account, as we have done in our competition assessment in Chapter 4.

- 3.25 On the second of these issues, we note that despite arguing that our minded to refer decision overstates the extent of factors that limit the substitutability of different types of stock (and hence the number of distinct economic markets that there are), none of the ROSCOs have disagreed with our view that the leasing of rolling stock is characterised by a number of distinct markets. We agree, though, that the DfT's product market segmentation is not correct in all instances. For example, as acknowledged above and in our minded to refer decision (page 29, footnote 10), we are aware of diesel stock being used on electrified lines in some instances³⁴.
- 3.26 On the third issue, we do not agree that not having carried out a formal assessment of supply-side substitution should be viewed as a failing of our approach. None of the ROSCOs have argued that our failure to explicitly discuss supply-side issues with regard to market definition has led to us omitting any important potential sources of competitive constraint from our competition assessment (although they all disagreed with our interpretation of the strength of the constraints imposed by the potential sources that we had identified).

³⁴ With the reverse obviously not being feasible.

Market definition – conclusion

- 3.27 It is important to recognise that for the purposes of this report we have considered it sufficient to provide only an overview of the possible relevant economic markets in which the reference goods and services are supplied. We have defined them with no more precision than seemed sensible given the evidence provided to us by stakeholders and to the extent necessary for us to carry out our competition assessment and assess whether we have reasonable grounds to suspect competition problems in respect of the reference goods and services. The CC, in its more detailed investigation, may wish to come to its own view of the appropriate market definitions.
- 3.28 Based on the information provided to us during the course of our study, we believe that the leasing of rolling stock for franchised passenger services is likely to be characterised by distinct product markets, delineated with reference to constraints on the interchangeability of stock broadly along the lines suggested by the DfT. We have not reached definitive views on the precise segmentation, but we consider that the factors discussed in this chapter have been taken into account adequately in our competition analysis.
- 3.29 A definitive view on market definition would also require, amongst other things, an assessment of geographic and temporal dimensions.
- 3.30 We do not consider it necessary for us to assess the geographic scope of these market(s). None of the relevant parties have argued that this approach introduces a risk of failing to capture any of the constraints faced by the ROSCOs.
- 3.31 A full assessment of the other issues identified above would require an assessment of the further constraints on stock availability imposed by the point in time at which the need for rolling stock arises. For the purposes of this report, we consider that these issues are best considered as an aspect of the competition analysis set out in Chapter 4.
- 3.32 Whilst we have not concluded on the exact boundaries of the relevant markets, for convenience (as explained in our executive summary) in this report we frequently refer collectively to the 'markets' in which the reference services fall as 'these markets'.

4. Competition assessment

Introduction

- 4.1 This chapter sets out our assessment of the level of competition faced by the ROSCOs. For the reasons set out in earlier chapters, our focus is on the rolling stock required by TOCs to offer franchised passenger services.
- 4.2 This chapter discusses:
- the distribution of ownership of rolling stock between firms;
 - factors relating to new entry;
 - the constraints imposed on the ROSCOs by competition from both existing and new stock;
 - buyer incentives and the extent of buyer power;
 - other indicators of competition (profitability and switching rates); and
 - issues relating to the provision of maintenance.
- 4.3 In a number of cases we refer to the evidence submitted to us by the DfT and the ROSCOs by means of a series of case studies that they used to support their views on the extent of competition in these markets. We summarise this evidence in Annex B.

Concentration

4.4 This section provides a commentary on the level of concentration amongst owners of rolling stock. We present data at the level of the supply³⁵ of all rolling stock for franchised passenger services.

4.5 Figure 3 below compares volumes of stock and high-level shares of the ROSCOs as at 2006 with the corresponding figures at privatisation.

Figure 3 - GB rolling stock, shares of all stock over time (total number of vehicles)

ROSCO	1996	2006	Change	Share in 2006
Angel	3,753	4,093	+340	33%
HSBC ³⁶	4,050	3,925	-125	32%
Porterbrook	3,455	3,868	+413	31%
Others ³⁷	0	517	+517	4%
Total	11,258	12,403	+1,145	100%

Source: stakeholder returns and publicly available information

4.6 Figure 3 shows that:

- the three incumbent ROSCOs collectively own 96% of all stock;
- ownership is more or less evenly distributed between them, as it was at privatisation; and

³⁵ Here we use the term 'supply' to refer to both leasing and TOC ownership. Note also that for completeness this table includes the rolling stock leased to Grand Central, which is not a franchised operator.

³⁶ Named Eversholt in 1994.

³⁷ This total is comprised of the stock owned by HBOS/RBS and First Group, together with small quantities owned by Welsh authorities, Arriva Trains Wales (ATW), Chiltern, and South West Trains (SWT). The relatively small magnitude of this figure demonstrates the extent to which leasing, rather than other forms of supply, dominates the rolling stock supplied for franchised passenger services.

- the proportionate increase in the number of passenger vehicles on the network since privatisation (less than 9%) is much smaller than the increase in passenger kilometers (now over 35%) since 1996/1997.
- 4.7 Whilst analysing the information supplied to us by the ROSCOs we carried out a detailed examination of volume data at a more granular level but did not find any variations that suggested to us that concentration within any particular product market or segment was sufficiently different from the average to be viewed as a key factor in our analysis.
- 4.8 Our view is that the overall level of concentration and absence of new entry are useful preliminary indicators that these markets may not be effectively competitive.

Market Entry

- 4.9 New entry since privatisation has to date been on a very small scale, with some stock currently being held by HBOS/RBS and smaller quantities held by other parties.
- 4.10 The paragraphs below briefly describe the two main models by which firms other than the three incumbent ROSCOs have had the opportunity to enter into competition with the ROSCOs, namely buying second-hand stock and financing new build stock. This discussion is followed by an assessment of factors that might have restricted entry into rolling stock leasing.
- 4.11 Although entering into a lease agreement with one of the ROSCOs represents by some way the most common method by which a franchised TOC obtains access to rolling stock, it is possible for an individual TOC to meet all or part of its requirements by owning the stock itself.
- 4.12 As far as we are aware, First Group is the only example of a franchised TOC self-supplying its own rolling stock in any material quantities³⁸. First Group owns three sets of Class 143 and five sets of High Speed Train (HST) stock.

³⁸ See the (relatively minor) exceptions listed at footnote 37.

These totals account for a small proportion of First Group's overall rolling stock requirements, which include 43 HST sets within the First Great Western franchise, and a very small proportion of all rolling stock deployed by the TOCs.

- 4.13 We are not aware of any factors to suggest that the extent of ownership by franchised TOCs is likely to increase significantly within the foreseeable future.
- 4.14 There are strong intuitive reasons to think that TOC ownership is a more attractive proposition in circumstances where operators have a degree of certainty with regard to their future rolling stock requirements. Certainty of this sort is often limited under the current system of 7-10 year franchises, and can be contrasted with non-franchised passenger services provided by, for example, Heathrow Express, British Airports Authority (BAA) and Nexus (Tyne and Wear Passenger Transport Executive) where rolling stock is owned by the TOC.
- 4.15 First Group currently holds five individual rail franchises and has been an active bidder in other recent franchise awards. This scale affords First Group a degree of certainty that it will have an ongoing requirement for certain types of rolling stock within this wider group of franchises.
- 4.16 Transport for London has awarded a contract to Bombardier recently to build a small number of EMU vehicles for operation on the North London Railway and the East London Line.

Buying second-hand rolling stock

- 4.17 Almost all of the existing rolling stock that was brought into service prior to privatisation remains in the ownership of the original purchasing ROSCOs. Our understanding is that there is a very limited amount of second-hand/surplus stock available to purchase in a way that might facilitate entry by other would-be leasing companies. The sale by Porterbrook of five HST sets

to First Group provides the only material example (of which we are aware) of second-hand stock being purchased by a franchise holder.

- 4.18 The potential for new entry to impose a material constraint on the conduct of the incumbent ROSCOs therefore seems to be largely restricted to the financing of new build stock.

Entry via the financing of new build

- 4.19 As described at the beginning of this chapter, entry into passenger rolling stock leasing since privatisation has been on a very small scale. We consulted stakeholders on the factors that might explain this pattern. We provide below a brief commentary, based on the evidence submitted by stakeholders, on the likely significance of a number of those factors on this pattern.

Access to finance

- 4.20 We consider that finance on terms comparable to those obtainable by the incumbent ROSCOs should be available to most of the likeliest candidates for entry into these markets. These include UK and foreign owned banks, as well as financiers of assets in other industries (such as aviation). As such, we consider it unlikely that access to finance gives the incumbent ROSCOs any significant advantage over most would-be new entrants.

Industry and technical expertise

- 4.21 Our dialogue with stakeholders has suggested to us that a comprehensive knowledge of the GB rail industry and its relationship with Government would be an important pre-requisite to entry into the leasing of rolling stock. Depending on the precise nature of services offered by a new entrant³⁹ with regard to maintenance, it is also likely that it would need to employ a number of staff with a high level of technical expertise.

³⁹ An entrant focusing on new build stock may have fewer requirements for technical expertise than the incumbent ROSCOs given that maintenance and other support services are more likely to be available from manufacturers.

- 4.22 Our view, based on dialogue with all stakeholders, is that such requirements are unlikely to form insurmountable obstacles to would-be new entrants. A number of stakeholders advised us that the skills required are fairly readily available on a consultancy basis, or through the recruitment of suitable staff from within the industry.

Residual value and political risks

- 4.23 All of the ROSCOs told us that they face significant levels of, firstly, residual value risk, and, secondly, political risks (an example of the latter being the risk of major changes being made to service levels or the franchising process by the DfT), and that these risks have played a significant role in limiting entry.
- 4.24 It is possible that such risks have played some role in suppressing entry into these markets. Whilst these factors might individually be thought to have an equal impact on the willingness of both the incumbent ROSCOs and any would-be new entrants to finance new build investments, the available evidence does not necessarily support this view. Notably, the ROSCOs told us that in the SRA's competition to replace slam-door Mark 1 rolling stock (which, as described later in this chapter accounts for a high proportion of the new build investment that has taken place since privatisation), all bidders outside of the three incumbent ROSCOs dropped out of bidding when the SRA asked bidders to offer prices for leases of less than 20 years.
- 4.25 In the absence of other evidence to the contrary, this observation may suggest that incumbency factors, such as the possession of an existing portfolio of stock, give the incumbent ROSCOs an advantage in competition to finance new build stock.

Conclusions on market entry

- 4.26 A set of markets such as those involving rolling stock leasing, which have been widely reported as earning high profits, might, other things being equal, have been expected to attract new entry in the period since privatisation. This has proved not to be the case.

- 4.27 Differences in the understanding of, and attitudes and exposure to, various political risks (perhaps in addition to advantages associated with having existing portfolios that include MOLA stock) may go some way towards explaining why the three incumbent ROSCOs have retained a high share of all rolling stock despite the opportunities for entry provided by the many new build vehicles that have been introduced since privatisation.
- 4.28 It is also possible (although we have not assessed this issue in any depth) that the failure of new entrants to capture a substantial share of this new build stock could stem partly from the relatively competitive nature of the leasing of new build stock (at least compared to the re-leasing of incumbent stock). This possibility was emphasised by all of the ROSCOs in their responses to our minded to refer decision⁴⁰.
- 4.29 This chapter discusses a number of features that restrict the level of competition faced by a lessor of incumbent rolling stock. We argue, based on our analysis and dialogue with all key stakeholders, that a number of factors interact to favour the retention of incumbent stock. These features are not necessarily present when ROSCOs are competing to be appointed as a lessor of a consignment of new stock, suggesting that competition between ROSCOs to lease out new stock has at least the potential to be more competitive than is the case for incumbent stock.
- 4.30 The suggestion that there may be effective competition between ROSCOs to lease new build stock (which was argued strongly by all of the ROSCOs) is supported by the returns earned by the ROSCOs on new rolling stock, which, as described in Annex C, appear to be somewhat lower than those earned on MOLA stock.
- 4.31 The DfT has correctly pointed out⁴¹ that we have not analysed the extent of competition between ROSCOs to lease new-build stock in sufficient depth to

⁴⁰ Angel (paragraph 73), HSBC (page 6 which contains its response to question 2 of our minded to refer decision), Porterbrook (paragraph 5.8) of their responses of 28 February 2007.

⁴¹ Paragraph 13 of the DfT's response dated 28 February 2007.

give the leasing of new build stock a clean bill of health. We are only in a position to observe that all three ROSCOs should at least in theory be in a position to compete with each other, and to comment that forecast returns appear to be relatively modest.

4.32 We consider that the lack of entry into these markets provides a useful preliminary indicator and starting point for the more detailed discussion that follows in the remainder of this chapter.

4.33 Before turning to our assessment of the competitive constraints faced by the ROSCOs, the next section of this chapter briefly sets out, at a high level, the choices open to franchised TOCs when attempting to procure rolling stock.

Choices faced by bidders at franchise replacement

Introduction

4.34 The focus of most of the remainder of this chapter is on 'incumbent' stock as defined in Chapter 3. It deals, in the main, with the choices faced by TOCs when considering whether or not to renew leases that have already been agreed, rather than the choices faced by TOCs when choosing between different potential lessors of new-build stock.

4.35 The options open to each bidder considering whether or not to retain a particular set of vehicles that had been used by the previous franchise holder are (each discussed in more detail in the following paragraphs)⁴²:

- using rolling stock that has already been employed on the network, either in the franchise in question or elsewhere, in other words a choice between using:
 - the same vehicles, i.e. the incumbent rolling stock; or
 - other existing stock;

- commissioning new rolling stock.
- 4.36 The central premise of the DfT's submission was that, at the time of franchise renewal, bidders are frequently compelled, because of a lack of choice, to take on the incumbent rolling stock for a particular franchise. The DfT argued that most or all of the potential alternative rolling stock that might be used by TOCs is typically already on lease elsewhere, and that commissioning new stock tends (with some exceptions) only to be an option in cases where retaining the incumbent stock is not viable because of wider considerations.
- 4.37 All three ROSCOs have consistently argued that they face effective competition when seeking to renew the leases on most or all of their incumbent fleets, from one of or sometimes both of existing and new stock.
- 4.38 TOCs have told us that they typically (although there have been a number of exceptions accounting for a modest proportion of all stock) find themselves in a position where they are faced with no alternatives to the incumbent rolling stock fleet when bidding for franchises.

Lease length

- 4.39 The remainder of this chapter assumes that rolling stock leases typically span the duration of an entire franchise. Our analysis of competition within these markets includes a discussion of the extent to which competition problems are caused by:
- the fact that typically franchises are not coterminous; and
 - lead times for new-build relative to franchise length.
- 4.40 The problems associated with both of these factors might be mitigated to a degree if it were commonplace for TOCs to obtain short leases with a view to

⁴² This chapter is concerned with the constraints faced by the ROSCOs given current price levels, rather than, for example, an assessment of the constraints that would apply at the 'competitive' level of prices (to the extent that they are not currently).

introducing an existing or new build alternative within a year or two of franchise commencement.

- 4.41 It is established practice, however, for franchisees to take leases of rolling stock fleet for the duration of the franchise. The DfT told us that this is driven by factors including its desire to ensure deliverability of required service specifications.
- 4.42 As discussed below, the ITT in many cases favours the re-leasing of incumbent stock. Both the TOCs and the DfT told us that this is due in part to the focus on deliverability and security of supply within ITTs for passenger franchises, which lead to an unwillingness on the part of TOCs to deviate from bidding on the basis of anything other than stock that is secured over full franchise lengths.
- 4.43 The case studies supplied to us by the DfT strongly suggested that short-term leases are not a common feature of rolling stock leasing (see below for a discussion of a number of exceptions to this). The DfT told us that a weighted average of around 90% of incumbent stock was retained on long-term leases in recent rounds of franchise replacement.
- 4.44 The ROSCOs, in their responses to our pre-consultation questions, on the other hand, have argued that requests or potential requests for short-term leases from franchisees play an important part in the competitive process. They told us that short-term leases mean that the problems associated with factors such as the ones listed above can be substantially mitigated. All the ROSCOs told us that short-term leases attract a price premium, but argued that these are set at a level that is reasonable to compensate them for the greater risks and costs associated with offering short-term leases.
- 4.45 The ROSCOs reiterated these views within their responses to our minded to refer decision, and argued that we have understated the prevalence of short-term leasing within these markets. Angel⁴³, for example, supplied us with a list

⁴³ At Annex 2 to Angel's response of 28 February 2007.

of the short-term leases that it had entered into since 2004, arguing that this list had important implications for our competition assessment.

- 4.46 The ROSCOs have not, however, disputed the figure outlined above on the extent to which stock has been retained on long-term leases, (and neither have they provided us with any detailed information in support of the argument that the premia charged on short-term leases are set at a reasonable level). We do not, therefore, consider that we have been provided with persuasive evidence to alter our view on the role played by short-term leases. The majority of the examples of short-term leases cited by Angel related to instances where franchises were being extended, rather than in cases where they might facilitate the introduction of new stock, meaning that, in our view, the significance of this list for our competition assessment is limited.
- 4.47 Whilst we recognise that short-term leases are sometimes entered into, they do not appear to be common (other than in instances of franchise extension). The remainder of this chapter is therefore based on the assumption that rolling stock leases will most often span entire franchise durations, since the majority of stock is supplied on this basis.
- 4.48 Both Angel and HSBC⁴⁴ have pointed to sub-leasing⁴⁵ as a factor that is relevant to the extent of competition. We do not, however, think that sub-leasing has important implications for our assessment given that:
- we are not aware of it taking place on a significant scale; and
 - an important driver of the sub-leasing of stock that has taken place is the desire by TOCs to enjoy the benefits of standardised fleets, which is consistent with our views on the role played by the size of core incumbent fleets.

⁴⁴ Paragraph 89 of Angel's response of 28 February 2007 and page 11 of HSBC's response of 28 February 2007 (in response to Q9 of our minded to refer decision).

⁴⁵ Where fleets are sub-leased from one franchise to another to, for example, cover a short-term requirement of a TOC.

Constraints on incumbent stock from existing rolling stock

Introduction

4.49 For the purposes of examining the competitive constraints faced by the ROSCOs, usable existing stock can be divided into two broad categories, namely:

- rolling stock that is currently unused (surplus); and
- rolling stock being used elsewhere on the network but which is close to or at the end of its current lease. Such stock might potentially be moved ('cascaded') between franchises.

4.50 We consider each of these types of stock in the analysis below. We conclude by confirming our minded to refer decision, namely that the competitive constraints imposed on the ROSCOs by other existing stock are weak in most cases.

Stock that is currently surplus

4.51 Given the storage and opportunity costs associated with having off-lease stock (including the possibility of impairment charges if stock remains off-lease for a sustained period), there are strong incentives on ROSCOs owning stock that is currently surplus to find alternative uses for it and quickly. A sufficiently large pool of readily transferable surplus stock would therefore be likely to impose strong competitive pressures on the incumbent ROSCOs.

4.52 The DfT told us that the availability of surplus rolling stock has historically been very limited, both in terms of the quantity of such stock available and the extent to which available surplus stock has been attractive to TOCs given their franchise requirements.

4.53 Based on publicly available data⁴⁶, we have assessed the types and volumes of rolling stock that is currently off-lease. This data is summarised in the figure below (figures correct as at January 2007).

Figure 4 - The types and volumes of rolling stock that is currently off-lease (as of January 2007)

ROSCO	Number of off-lease vehicles as at January 2007	Number of off-lease vehicles as a proportion of total vehicles in these markets
Angel	168	1.4%
HSBC	272	2.2%
Porterbrook	210	1.7%
Total	723	5.2%

4.54 As shown in the figure above, the available surplus represents a relatively small proportion of all rolling stock fleets.

4.55 The largest fleets within these totals are described below.

- Angel – 120 Class 442 vehicles that were displaced from SWT by Porterbrook Class 458 stock. On 4 April 2007 it was announced that some⁴⁷ of these vehicles will be used to provide additional capacity between Brighton and London.
- HSBC – 244 Mark 2 loco-hauled coaches that are near to life expiry.
- Porterbrook – 136 Mark 3 coaches of which, in our view, a small proportion might have the potential to go back into service.

4.56 In summary:

⁴⁶ *British railways locomotives and coaching stock 2007*, March 2007.

⁴⁷ We estimate that around half of Angel's Class 442 vehicles that were surplus as of January 2007 might be used in this way.

- the ROSCOs currently have relatively small amounts of stock off-lease; and
- of the amount that is off-lease, the majority is unlikely to be considered as a viable alternative to many of the incumbent fleets.

4.57 Our view is, therefore, that the stock that is currently surplus will only act as a constraint on the conduct of the ROSCOs in a small number of cases. The DfT's submission has indeed argued that a lack of surplus stock is the biggest factor in limiting the choice of TOCs at franchise renewal⁴⁸.

4.58 In their responses to both our pre-consultation questions and our minded to refer decision, some of the ROSCOs have argued that there is a risk that the amount of surplus stock will increase in the coming years as a result of various future new build programmes. Particular developments that they identified as being likely to lead to more stock coming off-lease in the future included:

- the forthcoming HST replacement programme to start at the beginning of the next decade;
- TfL's expressed desire to replace existing fleets with higher capacity stock on certain routes and its commitment to replace 23 Class 313s on the London Rail Concession; and
- Transport Scotland's plans to introduce a new high capacity EMU fleet.

4.59 We agree that future new build has the potential to create a larger usable surplus of stock, but note that this will only occur in cases where it:

- is used to displace vehicles rather than employed alongside existing stock, for example in order to lengthen formations or improve performance;
- is introduced to replace stock that will be attractive to TOCs running services on other routes;

- replaces stock that goes on to be stored or sold, rather than scrapped, by the ROSCOs, and that is still able to be put into use (for example it satisfies Disability Discrimination Act (DDA)/safety requirements); and
- offers a comparable capacity to the previous stock, for example does not have a reduction in seat numbers with a resulting requirement for more vehicles.

4.60 We also note that passenger numbers are forecast to increase in the coming years, limiting the scope of future service reductions and increasing the probability of future new build being used to satisfy growth requirements rather than displace incumbent stock⁴⁹.

4.61 Based on our dialogue with stakeholders and our own understanding of the industry, we are not aware of any circumstances that will lead to a substantial increase in quantities of useable off-lease stock in the next few years. The most likely exceptions to this may arise from specifications for new build by the devolved bodies.

Cascades

Introduction

4.62 Rolling stock cascades can be triggered by the introduction of new rolling stock displacing some or all of an incumbent fleet, which in turn replaces older/poorer quality stock elsewhere on the network. This process continues until some surplus stock is used either to increase capacity or is withdrawn from use. Cascades can also involve a reallocation of existing vehicles between operators on the network without the introduction of new stock. In this report we use the term 'cascade' to refer to all instances of rolling stock that is switched from use on one franchise to use on another.

⁴⁸ Page 9 of the DfT's response dated 28 February 2007.

⁴⁹ For example, Network Rail's June 2006 *Strategic Business Plan* assumes an overall traffic increase of 0.7% p.a. in train miles in the period up to the end of 2013/14.

- 4.63 All of the ROSCOs (to varying degrees) have argued at all stages of our study that the threat of stock being cascaded between franchises frequently imposes a substantial competitive constraint on the pricing of their incumbent fleets⁵⁰.
- 4.64 Our minded to refer decision concluded that we thought that cases where such constraints were imposed were relatively rare. We remain of this view, for the reasons set out in the remainder of this section.
- 4.65 Prior to privatisation of the railways, cascades occurred periodically under BR, usually following the introduction of new build rolling stock onto the network. During periods of low traffic growth, the existing stock directly displaced by the new build was used to replace older stock elsewhere on the network and, in some circumstances, this in turn displaced still older stock, eventually culminating in the oldest stock being scrapped or sometimes sold on to other operators. This was the usual means by which BR managed the replacement of life-expired stock over the whole of its network. Where cascades involve the movement of stock for operational or commercial reasons without the introduction of any new vehicles, stock may be 'swapped' between operators to enable commercial requirements to be better matched by vehicle operating characteristics (acceleration, seating layout, door configuration, and so on). Cascades can, therefore, give rise to a number of outcomes, for example vehicles being scrapped, made surplus, or swapped with vehicles from another part of the network.
- 4.66 Our assessment of the impact of cascades on competitive outcomes has focused principally on the extent to which cascading has actually taken place since privatisation. To facilitate our assessment of implications of cascading, we have classified cascades into the following broad categories:

⁵⁰ The ROSCOs highlighted that they have made a commitment in their Codes of Practice to, "*consider all reasonable requests for cascades*", and that even where the extent of actual cascading is relatively low, the threat of losing a contract to be the lessor of rolling stock to a new franchise, given the high residual value of the fleets involved, is such that it acts as a constraint on their prices.

- 'new build' - cascades that have occurred as a result of the introduction of new build rolling stock; and
- 'swaps' - cascades that involve straight swaps between franchises for other (for example operational or commercial) reasons.

4.67 The competitive constraints imposed on the ROSCOs by cascading will be strongest in those cases where cascades result in the creation of a useable surplus. This is most likely to happen in cases where cascades are caused by, for example:

- the introduction of new stock to meet commercial objectives (for example to grow passenger numbers by offering faster journeys and enhanced comfort); and
- service reductions.

Extent of cascades

4.68 The historic extent of cascades is an obvious starting point in assessing its impact on competition. We are not aware of any single definitive information source on cascading, so we have attempted to arrive at a reasonably comprehensive list of all the cascades that have occurred since privatisation based on:

- the ROSCOs' submissions to our information requests; and
- our own internal information sources including the trade press.

4.69 Our minded to refer decision identified 25 cascades in total involving 864 vehicles in the period since privatisation (see Figure 5 below). There has been considerable variation in the extent of cascading between different types of rolling stock. For example, we estimate that about 15% of all InterCity type stock was cascaded between franchises as a result of the recent introduction of new Pendolino and Voyager fleets on the West Coast Main Line (WCML) and Cross Country franchises (some was also withdrawn).

4.70 Figure 5 below disaggregates cascades into new build and swaps as described above. For each of these, we list:

- the number of cascades that have taken place;
- the number of vehicles that have moved between franchises; and
- this number of vehicles calculated as a percentage of all the vehicles used by the franchised passenger TOCs.

Figure 5 - Extent of cascading, 1996 to 2007⁵¹

Cascade type	Number of cascades	Number of vehicles	% of all vehicles
New build	12	497	4%
Swaps	13	367	3%
Total	25	864	7%

Source: ROSCO responses and ORR information

4.71 The biggest cascades within our 'new build' category came about as a result of:

- the commercially motivated replacement of Mark 2 and Mark 3 stock with new Pendolino stock by Virgin on its WCML route;
- the commercially motivated replacement of HST and Mark 2 loco-hauled coaching stock with new Voyagers by Virgin on its Cross Country routes; and
- replacement of Mark 1 rolling stock as a result of the Railway Safety Regulations 1999.

⁵¹ We compiled this table in Autumn 2006, basing our '2007' figures on forecasts. There have been a number of developments (involving modest quantities of stock) since then. For example, the anticipated cascade of SWT Class 458 vehicles did not go ahead, but it now appears likely that a quantity of Class 442 stock will be cascaded to supplement the stock currently being used to provide Gatwick Express services. We additionally anticipate a cascade of Class 319 stock, intended to increase capacity on First Capital Connect. The data in this table remains, however, broadly accurate.

- 4.72 The degree to which cascades result in a surplus of vehicles, creating a pool of alternative vehicles, is an important part of the means by which cascades might create competitive pressure.
- 4.73 Of the over 864 vehicles involved in the cascades that we have identified since 1996, just over 200 remain off-lease, largely accounted for by the rolling stock displaced by the Pendolino and Voyager fleets. The interchangeability constraints discussed in Chapter 3 clearly limit the situations in which this surplus will impose a competitive constraint on other stock. Our interpretation of the available information is that about 170 of the displaced vehicles were used to supply demand for increased volumes of rolling stock resulting from volume growth.

Stakeholder views on cascades

- 4.74 In their responses to our minded to refer decision, the ROSCOs (to varying degrees) argued that their stock faced a greater threat of displacement from existing stock than we had implied.
- 4.75 Porterbrook argued⁵² that our analysis should take account of:
- the role played by the DfT in preventing cascades; and
 - the extent to which the scope for cascading varied across different types of rolling stock.
- 4.76 Porterbrook also referred to a number of potential future cascades that, it argued, should be taken into account in our analysis.
- 4.77 Whilst providing useful contextual information, we do not consider that a detailed examination of these factors would make our assessment materially more comprehensive, since:
- both this report and our minded to refer decision fully acknowledge the central role played by the DfT in many aspects of these markets; and

⁵² Paragraphs 5.9 to 5.16 of Porterbrook's response of 28 February 2007.

- we do not consider it appropriate for the purposes of this report to separately define and investigate each and every potential product market.

4.78 Our view is that the potential future cascades identified by Porterbrook should not have a material bearing on our assessment. The advantage of basing our assessment on historical data is that such information is verifiable. It is not possible for us to ascertain with any certainty how many of the future cascades identified by Porterbrook will transpire or how many will result in the creation of a surplus of attractive stock.

4.79 In response to our pre-consultation questions, some of the TOCs commented on barriers that, in practice, limit the scope for cascading, for example:

- one TOC told us that cascades require the co-operation of all parties to reach agreement on commercial terms, and that there had been a number of examples where the redeployment of rolling stock could have occurred if all parties had acted co-operatively. It further pointed out that approval by the DfT was “*an essential ingredient*” in any cascade (which supports the observation made by Porterbrook which we note above); and
- another TOC thought that that the scope for cascading would be increased if the DfT made more frequent use of call options in order to encourage new build.

Conclusion on the extent of cascades

4.80 The incidence of cascades since privatisation has been limited. It has also not resulted in the creation of a sufficiently large pool of viable and readily transferable vehicles to act as a constraint on the pricing behaviour of the ROSCOs.

4.81 The threat of cascading is clearly more difficult to assess than the actual historic extent of cascades. Whilst we accept that such threats may have existed in some cases, the arguments put forward by the ROSCOs on this issue have not been adequate to remove our grounds to suspect that

cascades have been insufficiently widespread in the past to have provided a material competitive constraint on the ROSCOs.

Factors preventing competition from existing stock

Introduction

4.82 The previous subsection explained that the extent of stock being cascaded between franchises in a way that imposes competitive pressure on the ROSCOs has historically been very limited. The remainder of this section discusses what appear to us to be the most important factors in explaining this trend. These factors are:

- switching costs;
- the role played by the DfT's ITTs for franchises;
- franchise timetables; and
- the size of core incumbent fleets.

4.83 The role played by these factors should be considered as being additional barriers to substitutability that exacerbate the underlying stock interchangeability issues discussed in Chapter 3.

Switching costs

4.84 The CC's guidelines on market investigations state that, "*switching costs may decrease customers' incentives to search for, or switch to, alternatives that could meet their needs. Evidence that customers rarely switch suppliers, combined with evidence that significant switching costs exist, may suggest that competition is not effective*".

4.85 Our view is that switching costs have played and continue to play a role in some of these markets.

4.86 In its submission, the DfT argued that incumbent rolling stock is typically optimised in various ways to its current use, and that the costs associated

with transferring stock between routes mean that doing so is often not a cost-effective option for TOCs. The DfT identified, and arrived at quantified estimates of the value of, a number of up-front costs (in terms of both monetary expense and time taken) that have been incurred in order for rolling stock to be transferred between franchises. Some of these costs are directly incurred by TOCs (such as staff training), whilst others might be incurred by the ROSCOs. We summarised these estimates at Figure 6 of our minded to refer decision.

4.87 Our dialogue with stakeholders has made it clear that TOCs can (depending on the nature of the franchise and of the types of stock to be involved in any potential switch) incur substantial rolling-stock related expenses at the time of franchise renewal. These costs can be divided into two categories, with only the latter being properly classifiable as 'switching costs' from a competition perspective:

- unavoidable costs that will be incurred regardless of which stock will be used during the next franchise; and
- additional costs that are only incurred if the TOC switches away from the use of incumbent stock.

4.88 We do not think that it is important for us to arrive at precise quantified estimates of switching costs, especially given the extent to which such costs can vary depending on the nature of the stock that is to be used pre- and post- switching. It seems clear to us, though, that substantial switching costs arise in some instances. Examples of this include:

- the cost of converting DC EMUs to dual-voltage (at around £100,000 to £175,000 per vehicle and taking around 12 months to complete, such costs will typically be prohibitively high for DC stock to impose a constraint on incumbent 25kV or dual-voltage vehicles); and

- other, less substantial, costs which are nonetheless a relevant consideration for TOCs and may prove decisive in some instances, such as:
 - route clearance;
 - driver and depot staff training; and
 - alterations to maintenance procedures.

4.89 In our pre-consultation questions, we supplied the ROSCOs with the DfT's discussion and estimates of switching costs, and received a number of comments in response, including:

- particular quantified estimates, some being higher, and some lower than the figures suggested by the DfT (but an overall suggestion that switching costs had been overstated); and
- comments on the correct interpretation of figures, with the ROSCOs highlighting that, in some cases, expenses identified by the DfT as 'switching costs' would often be incurred between franchises regardless of whether there had been a change of ROSCO (an example being the cost of livery changes).

4.90 The ROSCOs have argued also that they, rather than TOCs, bear switching costs in some instances. Porterbrook's response to our minded to refer decision argued that both Network Rail and the DfT were in a position to improve the transferability of stock between franchises⁵³.

4.91 Our view is that the available evidence suggests that switching costs, such as the ones listed above, have an impact that, whilst modest in many cases, plays a role in suppressing competition in these markets in at least some instances. We do not consider it necessary for us to arrive at precise quantified estimates of such costs or for us to narrow our focus down to those markets in which such costs apply.

DfT's specificity of ITTs for franchises

- 4.92 Our dialogue with stakeholders and analysis of their various submissions has suggested to us that there are a number of instances in which the DfT's franchise requirements preclude the possibility of switching away from incumbent stock by TOCs. This results from ITTs which specify the service patterns required by the franchise or, in certain cases, by directly specifying the use of certain fleets.
- 4.93 Our view is that it is appropriate for us to list this factor as a feature that limits the choices available to TOCs and, therefore, restricts competition.
- 4.94 The DfT told us⁵⁴ that ITTs normally specify:
- the number of services on each route;
 - minimum capacity of services;
 - journey times; and
 - stopping patterns.
- 4.95 ITTs may also include restrictions on types of alternative rolling stock, and in some instances may specify individual rolling stock to be used. In such circumstances, potential bidders will be reluctant to deviate from the specifications in the ITT, which in some cases in effect means continuing with the incumbent fleet. More generally, our dialogue with TOCs has suggested that there is a perception amongst experienced bidders that bids based on the rolling stock that was used by previous franchise holders represent a safer option than solutions based on alternative rolling stock, given how the DfT implements its deliverability criteria.
- 4.96 Six of the eight TOC owner groups to whom we sent pre-consultation questionnaires told us that franchise specifications were highly prescriptive

⁵³ Paragraph 4.16 of Porterbrook's response of 28 February 2007.

⁵⁴ Paragraph 3.10 of the DfT's submission.

with regard to rolling stock requirements. Five of these six felt that there had been a move towards more detailed specification in recent years. In its response to our minded to refer decision, ATOC told us that the DfT's focus on deliverability (at the time of reviewing franchise bids) reduces the willingness of bidders to take risks. According to ATOC, this means that, *"once rolling stock is operating successfully on a route, there are strong arguments for keeping it there"*⁵⁵.

- 4.97 In its response to our pre-consultation questions, HSBC told us that the DfT's franchise specifications have become increasingly prescriptive in recent years: *"in our experience the DfT specification for services has become progressively more prescriptive in all areas of the franchise requirements. Whilst HSBC Rail does not receive the ITT and so does not know the extent to which the ITT is prescriptive in terms of rolling stock, the operators' requirements appear to be more focussed on cost and key delivery requirements rather than innovation. This is a change of approach from that of five years ago under the SRA"*.
- 4.98 In its response to our minded to refer decision, the DfT argued that⁵⁶, *"DfT does not agree with the ORR's view that features embedded in the way Government procures franchised passenger services are features which may prevent, restrict or distort competition in the way described by the ORR"*.
- 4.99 The DfT has advised that its approach is to *"place direct restrictions on rolling stock only where policy or financial considerations make it unavoidable"*⁵⁷, and although it states that the degree of rolling stock specification in ITTs has been mixed (in the period from the establishment of DfT Rail in 2005), it confirms that *"around two thirds of the stock currently being operated was*

⁵⁵ Page 2/3 of ATOC's response of 28 February 2007.

⁵⁶ Paragraph 9 of the DfT's response of 28 February 2007.

⁵⁷ The DfT's response to question 5 of our minded to refer decision (the DfT's response of 28 February 2007 (page 11)). The DfT also stated, in its ITT, that bidders should not propose new build as an alternative to the existing high-speed rolling stock on Greater Western, thereby restricting the options available to bidders.

*specified by DfT*⁵⁸. It disputes, however, that specificity of ITTs should be viewed as a factor restricting competition, since such restrictions either:

- are indispensable to its franchising process; or
- reflect commercial imperatives that would exist even without DfT specifications (citing examples where there has only been one realistic rolling stock option available to bidders)⁵⁹.

4.100 Having reviewed responses from all parties, we remain of the view that it is appropriate for us to list specificity within ITTs as a feature restricting competition.

4.101 We believe that the DfT has made a number of good arguments in support of retention of certain key aspects of its franchising framework and timetable. It does not follow, however, that decisions made in order to achieve well-founded public interest benefits, necessarily have a benign impact on competition. We consider, therefore, it remains appropriate to refer to these features within our report to the CC.

Non coterminous franchises

4.102 Most passenger franchises are not coterminous, since:

- the DfT currently aims to award approximately three franchises in a single calendar year;
- there are currently 21 rail passenger franchises in GB; and
- franchises typically last for periods of 7 to 10 years.

4.103 This situation restricts opportunities for substitution between incumbent fleets and other existing rolling stock. The DfT has argued that "*From a market*

⁵⁸ Ibid.

⁵⁹ The DfT did not specify the use of Class 319 stock on the Thameslink ITT, although Class 319 stock is the only available stock that meets the requirements for dual-voltage stock on the Thameslink route.

perspective the prospect of TOCs having a portfolio of franchises all of which could expire simultaneously (and all of which might be lost on franchise re-letting) is unattractive, as it would concentrate the financial risks of bid failure, potentially increasing the costs of borrowing and reflecting in bids with higher required subsidy or lower premium” and “The more competitions happen at once, the greater this problem becomes and the free choice of a limited pool of stock becomes increasingly meaningless – DfT will effectively be forced to decide which bidder uses which stock”⁶⁰.

4.104 We have not considered the likely impact of increasing the proportion of franchises that are coterminous in any detail. It might well be the case that such changes would have a limited impact on the negotiations between TOCs and ROSCOs, since (given the extent of franchise requirements and the overall volume of stock available) the overall balance between supply and demand would remain tight. Such changes might also introduce significant performance risks and/or costs.

The size of core incumbent fleets

4.105 The DfT’s case studies suggest to us that, whilst it is not uncommon for there to be some possibly substitutable off-lease or soon-to-be off-lease stock available at franchise renewal, the volume that is available is often insufficient for anything other than a partial replacement of incumbent stock to be feasible.

4.106 Our understanding of the commercial behaviour of TOCs is that such partial replacements of incumbent stock are often unattractive to TOCs (unless they were of a type already used by the TOC) since they would:

- increase the number of spares that TOCs need to hold;
- cause TOCs to incur greater staff training costs; and
- reduce fleet flexibility.

⁶⁰ The DfT’s response to question 14 of our minded to refer decision (page 23 of the DfT’s

- 4.107 The higher risk of displacement faced by smaller fleets was specifically referred to by the ROSCOs in their comments on the DfT's case studies. They maintained, however, that this risk was also considerable for most or all of their larger fleets.
- 4.108 Angel additionally argued⁶¹ that a competitive threat to a part of one of its incumbent fleets is sufficient to impose a competitive constraint on all of its stock, because of the low marginal cost of leasing to an individual customer and the opportunity and storage costs associated with having stock off-lease. It presented these arguments in the form of an illustrative 'critical loss' analysis.
- 4.109 We agree that, other things being equal, these factors tend to tilt the balance of bargaining strengths toward the TOCs to some extent. However, we consider it unlikely that these factors are sufficient to ensure competitive outcomes, given the number of other factors that work in the ROSCOs' favour, primarily relating to the lack of availability of attractive alternative stock. We also note that the ROSCOs are in some cases able to mitigate the risks associated with competitive threats to small parts of their incumbent fleets via the discount structures that they offer.

Conclusions on constraints from existing stock

- 4.110 We remain of the view expressed in our minded to refer decision that the competitive constraints imposed on the ROSCOs by the possibility of TOCs switching away from incumbent stock to other existing stock are in most cases weak.
- 4.111 All of the eight⁶² TOC owner groups that we have talked to considered that a range of factors restrict their choice of rolling stock and supplier. The factors that they mentioned as restricting their choice of rolling stock included:

response dated 28 February 2007).

⁶¹ In Angel's response to our additional questions of 24 August 2006.

⁶² Arriva Trains Wales, First Group, Great North Eastern Railway (GNER), Chiltern, Govia, National Express Group, Stagecoach and Serco.

- the need for them to have franchise length leases; and
- the fact that a significant proportion of stock that could be used to supply that franchise is committed to serving other franchises.

4.112 The TOCs were unanimous in agreeing that, in the absence of a DfT requirement to upgrade a fleet by the purchase of new stock, they typically have little option but to agree to terms to continue with the incumbent rolling stock fleet at franchise renewal. The majority of TOCs told us that they had not been able to trade off alternative bids from more than one ROSCO at franchise renewal.

4.113 In conclusion, we believe that the evidence available suggests that the constraints imposed on incumbent ROSCO stock by existing rolling stock are generally weak. This is because of:

- the very low availability of surplus stock; and
- a range of factors that act to limit the scope for substitution away from incumbent fleets and towards other existing stock.

4.114 There are occasions when fleets of incumbent rolling stock face constraints from existing rolling stock, but the evidence available suggests to us that such situations are relatively rare. As will be described at the end of this chapter, switching rates away from incumbent stock are low, which is consistent with competitive threats from all sources being limited.

Constraints on incumbent stock from new build

4.115 Throughout our dialogue with them, all three ROSCOs have maintained that their incumbent fleets frequently face a threat of displacement from new build and that this threat provides a strong constraint on their pricing of incumbent stock. In this section, we assess the frequency with which the threat of new build stock has the potential to impose such constraints. We conclude by arguing that such pressures are generally weak.

Drivers of new build

4.116 Since privatisation, over 4,000 new vehicles have been bought on behalf of the franchised passenger TOCs, at a cost of just over £4bn. The DfT has recently announced plans to engage in significant further investment⁶³.

4.117 To help understand the drivers for new build, we have divided the post-privatisation investment in rolling stock for franchised passenger services into the following broad categories:

- 'replacement' - replacement of life-expired⁶⁴ stock (about 2,300 vehicles, or 55% of all new stock);
- 'growth' – stock introduced to meet growth in passenger demand (about 850 vehicles, or 20% of all new stock); and
- 'commercial' - new stock that has displaced non life-expired vehicles when introduced onto the network (about 1,050 vehicles, or 25% of all new stock).

4.118 Of these three types of new build, only the third can be expected to have imposed a genuine competitive constraint on the ROSCOs' incumbent stock.

4.119 The main drivers of this new build within these categories have been:

- replacement - the single largest cause of new build has resulted from the Railway Safety Regulations 1999 which required the withdrawal of unmodified Mark 1 slam door stock from 1 January 2005. It involved the replacement of about 2,300 vehicles at a cost of around £2.3bn;
- growth – new build EMU and DMU stock has been introduced onto the network to satisfy growth requirements across a number of franchises (for

⁶³ See, for example, the Secretary of State for Transport's speech to the Rail Magazine conference on 14 March 2007, discussing the addition of around 1,000 new vehicles, aimed at increasing capacity.

⁶⁴ Here we use the term to include stock that has been withdrawn for legislative (including safety) reasons.

example Midland Mainline introduced new Turbostar DMUs on new 'stopping' services from London St Pancras to cities in the East Midlands in the late 1990s); and

- commercial – the biggest new build program within this category saw Virgin replace incumbent stock on its WCML/Cross-Country franchises with new Pendolino/Voyager stock with the objective of improving the overall quality of its service, in order to attract new patronage.

4.120 The evidence submitted by both the DfT and TOCs (contrary to the arguments made by the ROSCOs) suggested that the competitive pressures on incumbent stock that are imposed by new build are frequently weak. We discuss the factors that explain these views, together with counter-arguments submitted by the ROSCOs, in the paragraphs below.

The DfT acting as the driver for introducing new stock

4.121 The evidence supplied to us by stakeholders suggests that there are some instances in which the DfT's franchise policy restricts the scope for TOCs to exercise their own discretion in considering new build alternatives. For example, in its description of the ICEC re-franchising that took place in 2004-05, the DfT told us that: *"The Government had already set in progress a project to replace all HST rolling stock in GB. The ITT stated that Government did not want the successful franchisee to be the procurement agent for national HST replacement"*.

4.122 Angel has argued in a number of its submissions to us that TOCs often consider new build and will choose incumbent stock only if it is cost-effective. It, therefore, *"... needs to price competitively as new entry is still a viable option if the TOCs consider that value for money has not been demonstrated"*⁶⁵. Angel has, however, also acknowledged that the DfT's renewed focus on

⁶⁵ Paragraph 87 of Angel's response of 28 February 2007.

value for money franchise bids means that TOCs are less willing to consider new build than was the case in the period following privatisation⁶⁶.

4.123 Porterbrook⁶⁷ told us that the DfT has been instrumental in preventing the acquisition of new stock by TOCs on a number of occasions. Porterbrook also told us that, in its view:

- The DfT has on occasion been very prescriptive with franchise bidders and TOCs as to new rolling stock and has structured franchise tenders so that the DfT was the sole decision maker with respect to new rolling stock; and
- less prescription from the DfT would enable TOCs to introduce more new stock in cases where this was cost-effective.

4.124 HSBC told us⁶⁸ that there are a range of mechanisms (including the use of section 54 undertakings by the DfT) that can be used to mitigate the time lag between order and delivery.

New build lead times and the DfT's franchising timetable

4.125 The lag between new build stock being ordered and it being ready for use on the network varies significantly, but can be substantial. Our view is that this factor, together with the tight franchise replacement timetable described in Chapter 2 (including the relatively short length of each franchise relative to the economic life of rolling stock), restricts the ability of new build to provide a constraint on incumbent fleets.

4.126 All stakeholders have agreed that the lead times associated with new build can be substantial. Lead times can vary significantly depending on the extent to which past production can be used as a template, for example at two extremes:

⁶⁶ Paragraph 94 of Angel's response of 28 February 2007.

⁶⁷ Paragraph 5.12 of Porterbrook's response of 28 February 2007.

⁶⁸ Paragraph 1.7 of HSBC's response of 28 February 2007.

- follow-on orders for proven designs may be deliverable in less than one year; and
- lead times for new build based on an entirely new design may be in the region of 6 years.

4.127 In its response to our minded to refer decision, Porterbrook told us⁶⁹ that long timescales between order and delivery often result from the “*multiplicity*” of train classes and types used in the UK, and noted that in cases where ‘standardised’ stock is ordered (such as Turbostar and Electrostar multiple units), total delivery times can be lower.

4.128 The main arguments that have been used by the ROSCOs to dispute that new build lead times can dampen the competitive constraints imposed by new build were based on the scope for TOCs to make use of short-term leases, as discussed earlier in this chapter. The ROSCOs also argued that use of call options by the DfT, as discussed in the next subsection, could be used to increase the scope for TOCs to take out short-term leases.

4.129 In its response to the argument in our minded to refer decision that the relative magnitudes of franchise length and new build served to restrict competition between old and new stock, the DfT argued that⁷⁰:

- other factors such as the high cash cost of new build stock play a more important role in restricting competition from new build stock; and
- current franchise lengths of seven to ten years are desirable from a policy perspective, representing an optimal trade-off between allowing bidders to earn a return on any investment that they make and providing bidders with a short enough franchise period to enable a reasonable degree of accuracy in the cash-flow forecasting that feeds into the bids of would-be franchise operators.

⁶⁹ Paragraph 5.13 of Porterbrook’s response of 28 February 2007.

⁷⁰ The DfT’s response to question 7 of our minded to refer decision (page 15 of its response of 28 February 2007).

4.130 We remain of the view that it is appropriate for us to list the relative magnitudes of new build lead times and franchise lengths as a feature that restricts competition in these markets. We do not necessarily argue that a movement away from current franchise lengths would lead to more efficient outcomes (we have not attempted to carry out a cost-benefit appraisal of such a suggestion). We do, however, think that it is appropriate to refer to this factor in our findings. A system under which franchise length and asset lives were more closely aligned would clearly introduce more scope for TOC ownership of stock and hence greater competition between incumbent stock and new build even if other (for example, commercial) considerations often prove to be a limiting factor.

Use of call options

4.131 In Chapter 2 above we explained the way in which the DfT enters into 'direct agreements' with the ROSCOs. These agreements contain clauses that provide a call option for the Government in certain circumstances. The call option was inserted into the original OPRAF/ROSCO direct agreements. It allowed OPRAF (later the SRA and now the DfT) to require that the ROSCO enter into a new lease for the relevant rolling stock whether with OPRAF or with its nominee (the new franchise operator) for a period of three years. The call option was intended to restrict the power of each ROSCO to demand increased lease rentals at the end of the current contracts for three years, so enabling train operators to source alternative supplies, including new build.

4.132 All of the three ROSCOs have argued that the DfT has the option of increasing the level of competition in these markets by invoking the call option to give an incoming franchisee time to order new stock and hence mitigate the factors outlined in the previous subsection of this chapter.

4.133 The DfT's view is that the three-year call option can only be exercised in limited circumstances, namely pursuant to its duties under section 30 of RA93 in the event of market failure or should it be able to demonstrate that there was evidence of market abuse. The DfT told us that it sees either of these conditions as being too high a threshold. In its response to our minded to refer

decision, the DfT told us⁷¹ that it would have additional concerns about using the call option, including a suggestion that its use might lead to increased premia being charged by ROSCOs in order to compensate for perceived increases in risk.

4.134 All three of the ROSCOs questioned the DfT's interpretation of the call option in their responses to our minded to refer decision. Angel's response noted⁷² that the original OPRAF/ROSCO agreement merely required the DfT to notify the ROSCO in advance when the option is being exercised (in the circumstances contemplated by section 30 of RA93 or where there is evidence of market abuse in order to allow the ROSCO to modify its offer to any bidder(s)).

4.135 The ROSCOs told us that they have conducted negotiations on the basis that the call option could be invoked, and hence that the threat of the call option has led to favourable outcomes. In other words, in their view, the fact that the call option has not been used should be interpreted as being evidence of its effectiveness.

4.136 The then Rail Regulator's 1998 study of the rolling stock leasing market considered (paragraphs 1.22 and 5.56 to 5.60) that the DfT's three-year call option might to some extent act as a constraint on the ROSCOs. In our view the call option has not in practice served as an effective constraint.

4.137 It is possible that the value of the call option in present circumstances is in many cases reduced by the relatively weak commercial case for the introduction of new build (see below).

Lack of speculative purchase by ROSCOs

4.138 Speculative purchase of new rolling stock by the ROSCOs would have the potential to enable TOCs to circumvent the problems associated with long

⁷¹ DfT's response to question 9 of our minded to refer decision (page 19 of its response of 28 February 2007).

⁷² Paragraph 91 of Angel's response of 28 February 2007.

new build lead times. The information available to us, however, suggests that the ROSCOs rarely engage in genuinely speculative new build (i.e. new build funded by a ROSCO without a clear view regarding its future use).

4.139 The DfT told us that, of the 4,700 new build vehicles since privatisation (as at mid-2006), only 158 have been purchased by a ROSCO without a firm order.

4.140 In discussing this issue with the ROSCOs, we encountered a number of difficulties in arriving at a definition of the term 'speculative', for example:

- HSBC told us that *"we have not made any speculative purchases and do not believe that there have been any since privatisation"*; but
- Porterbrook told us⁷³ that it had made speculative purchases of new stock amounting to some 567 vehicles since 2000, and (in its response to our minded to refer decision) that, *"it seems unlikely that a ROSCO would make speculative purchases if it did not expect demand growth"*.

The commercial case for introducing new stock

4.141 The DfT's submission argued that, in addition to the factors listed above, franchise bidders are often dissuaded from viewing new build as a commercially attractive alternative to incumbent fleets because of the extra expense involved, including:

- higher capital cost/rental charges; and
- higher track access charges (due to new trains tending to weigh more than MOLA stock).

4.142 These factors are offset to varying degrees by higher maintenance or refurbishment costs associated with some of the older MOLA stock. On franchises that include a significant amount of 'discretionary'⁷⁴ travel, the

⁷³ Paragraph 5.15 of Porterbrook's response of 28 February 2007.

⁷⁴ 'Essential' travel such as commuter services would fall outside of this category.

introduction of new build stock may also provide TOCs with improved revenue-generating capabilities.

4.143 Comparisons between the capital charges levied by the ROSCOs for old and new build stock are complicated by a number of factors (for example, comparisons of the prices of loco-hauled stock with multiple units may be misleading). We consider, though, that comparisons between charges for suburban and inter-regional DMUs and EMUs may provide useful approximations of the magnitude of this factor, for example in assessing the scope for introducing new DMUs at the recent Northern franchise renewal, the DfT told us that First Group had told it that:

“Our discussions with the ROSCOs have identified that a typical lease rental for a class 170 style DMU is around £12.5 k per vehicle per month. This is more than twice the lease rental of a class 142 unit and some 20% more expensive than a class 158 unit. Although the introduction of new DMUs would improve the overall level of RVAR compliance of the Northern fleet an assessment of such new units against the service criteria specified in the ITT has shown that, in all other respects, the benefits are likely to be minimal given the nature of the Northern operation. This assessment, together with the belief that the introduction of new DMUs would not offer any significant operational savings compared to the inherited fleet, has led to the conclusion that new trains are not, at the present time, a viable option for the Base Case bid for the Northern franchise”.

4.144 In its response to our minded to refer decision, the DfT told us that⁷⁵, “... *similar comparisons can be made in relation to EMUs. For example, DfT understands that, on average, capital lease rates per vehicle are around 30% higher for new build AC EMUs than for MOLA stock. For DC EMUs capital lease rates are around 10% higher for new build vehicles*”. This estimate looks reasonable to us, based on the available evidence, although we note

⁷⁵ The DfT's response to question 6 of our minded to refer decision (page 14 of its response of 28 February 2007).

that rentals vary quite substantially between different classes and generations of MOLA stock.

- 4.145 The DfT also argued⁷⁶ that, in its view, “...*the gap between lease charges for new rolling stock and lease charges for MOLA rolling stock is so great that according to traditional (SSNIP) market definition principles, they could not be regarded as demand-side substitutes and could not therefore be considered to form part of the same market. Demand side substitutes would be those to whom TOCs could switch if the price of MOLA rolling stock were to rise by 5-10%*”.
- 4.146 Whilst lease rates do change from time to time due to re-franchising and other contract variations, we consider that these comparisons demonstrate the general principle that new vehicles tend to have higher capital lease rates than incumbent (MOLA) stock.
- 4.147 TOCs told us that, where new build is not specifically instructed (by the DfT), it is rarely viable in a commercial sense.
- One TOC told us: “*Given the strong focus on affordability, it has been [our] experience that new build rolling stock proposals are very difficult to justify. Retention and refurbishment of the existing fleet has generally proved to be more cost effective. Only where either... significant growth requirements require fleet expansions...; or... fleet obsolescence requires fleet replacement... [h]ad it been appropriate to propose the procurement of new rolling stock and then only when suitable off-lease existing rolling stock cannot be assured to be available at the relevant time*”.
 - A second TOC told us: “*It is usual for letting of new franchises to be constrained by affordability criteria. In these circumstances, new build is unlikely to be viable where not specifically instructed.*”

⁷⁶ Ibid (page 15).

- A third TOC told us: *“On recent franchises, we have not found new procurement to be cost effective in the base case where we have been given a choice.”*

4.148 There were, though, some exceptions to this overall trend. For example, a fourth TOC told us that: *“The option for new rolling stock has been considered for franchise bids when this has not been a condition of the new franchise. In many cases the proposals made by the ROSCOs are tested against new build costs and are often close in financial terms. Energy efficiency with new EMUs including regenerative braking may make the case more attractive in the future. In addition many new fleets are performing reliably and will be a more advantageous option than some of the less reliable mid-life fleets.”*

Conclusions on competition from new build

4.149 Both the DfT and TOCs have told us that it is relatively rare for constraints to be imposed on the pricing of incumbent stock by the possibility of new build being used. The available evidence is consistent with this, and our view is that factors such as new build lead times and the commercial attractiveness of retaining incumbent stock rather than a new build alternative favour the use of incumbent stock.

4.150 Certain fleets of incumbent rolling stock are on occasion in direct competition with new build stock (for example in cases where an on-build of an existing production order can be exploited, and where the maintenance or refurbishment costs of retaining old stock are high), but the evidence available to us suggests that such situations are relatively rare.

4.151 In addition to downplaying the significance of the factors discussed in the preceding paragraphs, in both their initial submissions and responses to our minded to refer decision the ROSCOs argued that a weak case for introducing new build is in itself a sign that the MOLA stock provides value for money. For example, HSBC (whilst acknowledging that DfT support for new stock is a ‘major spur’ to its introduction and a major influence on the choice faced by

TOCs), argued⁷⁷ that the relative condition and the price of alternative stock are decisive, and, that its use of an 'indifference pricing' methodology ensures that its charges for MOLA stock are priced fairly⁷⁸.

4.152 We do not agree with this view because:

- as explained above, our dialogue with stakeholders suggests that, in some instances, DfT policy and other factors such as lead times prevent TOCs from choosing between MOLA and non-MOLA options on the basis of value for money; and
- we think that, whilst the price of new stock may be a factor to take into account when assessing whether MOLA stock represents value for money, we would not think it appropriate to reach a view on this issue without a fuller assessment, which might additionally include an assessment of further factors such as differences in product quality and the reasons behind any changes in the underlying value of the assets in question, and how these should be treated in a profitability analysis.

Buyer incentives and buyer power

Introduction

4.153 Both the DfT and the ROSCOs have devoted fairly substantial parts of the various submissions that they have made to us to discussions of the incentives of TOCs at franchise renewal, and the question of whether either TOCs or the DfT might be in a position to exert countervailing buyer power.

4.154 At an intuitive level, it is fairly easy to envisage circumstances under which, if ROSCOs quote the same (price and non-price) terms for rolling stock to all bidders in a franchise competition (as was suggested by the DfT in its submission), TOCs will be indifferent to the level of rolling stock charges

⁷⁷ HSBC's response to question 10 of our minded to refer decision (page 12 of its response of 28 February 2007).

⁷⁸ HSBC's response to question 3 of our minded to refer decision (page 7 of its response of 28 February 2007).

quoted in the period up to them being announced as the preferred bidder. Indifference of this sort will arise because rolling stock leasing charges will not have an impact on the chances of any individual TOC being successful in its attempt to win franchises, or on the returns earned by a TOC if its bid is successful⁷⁹.

4.155 The remainder of this section discusses buyer incentives, particularly in the light of a suggestion made by a number of parties that the Codes of Practice mandate that ROSCOs offer the same terms to all TOCs.

4.156 We also discuss the arguments made by the ROSCOs that some of the TOCs and/or the DfT are in a position of countervailing buyer power. We conclude that, in our view:

- there are compelling reasons to suppose that TOCs have weaker incentives to negotiate favourable terms than is the case for buyers in a 'normal' market; and
- it seems unlikely to us that TOCs or the DfT should properly be characterised as being in a position of countervailing buyer power.

Similarity of terms offered to TOCs and the impact of the Codes of Practice

4.157 Soon after receiving an ITT, short listed bidders approach the ROSCOs with a view to obtaining rolling stock. TOCs aim to have signed heads of terms with ROSCOs prior to responding to the ITT. Given that each bidder is typically requesting terms and conditions for the same set of vehicles, it is reasonable to suspect that the terms quoted to different bidders are broadly similar. This is particularly true given the non-discrimination element of the Codes of Practice.

⁷⁹ Given the impact on their bottom line, the incentives for TOCs to obtain more favourable terms from ROSCOs following their being chosen as preferred bidder are clear, but is not obvious to us why a TOC would have any significant leverage over a ROSCO at this stage.

- 4.158 The non-discrimination clause in the ROSCOs' Codes of Practice requires them not to discriminate between bidders. Stakeholders told us that all bidders initially receive the same quotes for the incumbent fleet.
- 4.159 The ROSCOs have told us that they do offer similar *initial* terms to bidders, in compliance with this non-discrimination requirement. Angel, for example, told us that it offers an identical generic 'base case' to all bidders. They have, however, gone on to explain that there is scope for them to offer different terms following the base case offers and that the ensuing individual negotiations with bidders may result in significant and divergent offers to all bidders concerned (with further negotiations taking place between ROSCOs and the preferred bidder once one has been announced). Different bidders may also specify different fleet mixes.

Buyer power

- 4.160 The strength of buyers and the structure of the buyer side of a market may constrain any market power held by a seller or sellers. Buyers may have sufficient bargaining power to prevent suppliers from exerting market power in cases where, for example:
- there are small numbers of large and informed buyers;
 - buyers have the ability to find credible alternative suppliers;
 - switching costs are low; and
 - buyers have the ability to produce the goods or services themselves, or to sponsor entry.
- 4.161 The ROSCOs have argued, in their responses to both our pre-consultation questions and our minded to refer decision, that the size of the larger TOC groups and/or the DfT are such that the ROSCOs faced significant countervailing buyer power as a result of vigorous negotiations carried out by TOCs and the DfT.

- Angel argued that, “*franchise bidders have considerable buyer power*” and that this was evidenced in a number of aspects of its submission including its comments on the DfT’s case studies.
- HSBC argued that the “*monopsony power*” of the DfT has a twin effect on competitive outcomes, because the DfT:
 - is prescriptive regarding the stock to be used in franchise bids, thereby “*reducing contestability*”; and
 - organises stock replacement in a way that exposes the ROSCOs to substantial risks of stock becoming stranded.
- Porterbrook argued that buyer power has been conferred on the bigger TOC groups by means of recent consolidation in franchise holding, which has given some TOCs a high level of knowledge of, and the ability to compare, leasing charges across franchises. Porterbrook also argued that the DfT is effectively in a monopsony position.

4.162 In their responses to our minded to refer decision, the ROSCOs highlighted additional factors such as the fact that the DfT has repeated interaction with the ROSCOs and TOCs, and that they therefore need to maintain reputations as suppliers that offer attractive terms (although each franchise bid represents a new and different competition).

4.163 Our view is that it seems unlikely that any of these factors are sufficient to mitigate the strong bargaining position conferred on the ROSCOs by the tight balance between supply and demand of stock (as described in more detail earlier in this chapter). This view has been borne out by our discussions with stakeholders and our assessment of the case studies supplied by the DfT and ROSCOs. Whilst rolling stock is characterised by a relatively small number of large buyers, opportunities for the exercise of buyer power are restricted by a number of factors including a lack of credible cost effective alternative supply, and the inability of buyers to self-supply or sponsor new entry (other than in regard to new build stock).

4.164 In our view, the ability of a buyer to compare prices, contrary to the argument made by Porterbrook, is unlikely to confer a position of buyer power on it if other aspects of the balance of power between buyer and seller are unfavourable. Of the issues raised by HSBC in its response to our pre-consultation questions, it appears to us that the effect of the first of these is to increase, rather than mitigate, the level of market power enjoyed by the ROSCOs, and the second does not have obvious implications for buyer power in a case where the balance between supply and demand is tight.

Conclusion on buyer incentives and buyer power

4.165 The majority of TOCs agree that they have limited incentives to negotiate on rolling stock leases. TOCs confirmed that the Codes of Practice have an impact on their incentives, and noted that the costs of rolling stock are passed on by TOCs to the DfT via the level of subsidy or premium.

4.166 We think that there are compelling reasons to suppose that TOCs have weaker incentives to negotiate favourable terms than is the case for buyers in many markets. Whilst the scope for differentiation around the base case offers means that it would be inaccurate to describe TOCs as being 'indifferent' towards all aspects of the terms offered by ROSCOs, we consider that it is appropriate for weak TOC incentives to be considered as a further factor dampening price competition from either existing or new build stock. It seems most likely to us that the absence of alternative suppliers makes TOCs dependent purchasers who are not in a position of countervailing buyer power.

4.167 The DfT plays a central role in these markets, and has been involved with the ROSCOs in discussions regarding leasing charges for both MOLA and non-MOLA stock. We do not think, however, that it would be appropriate to characterise it as having a position of countervailing buyer power. The available evidence suggests that the absence of alternative suppliers and the need to maintain service levels means, in our view, that the ROSCOs are in many cases dealing with captive customers.

Other indicators of the level of competition

4.168 In this section we consider some key indicators of the level of competitive constraint imposed on the ROSCOs by both existing and new build alternatives to their incumbent fleets.

4.169 We discuss the following indicators:

- profitability; and
- switching rates.

4.170 We conclude by arguing that these indicators provide evidence that is consistent with the ROSCOs enjoying a position of market power with regard to incumbent stock. We discuss why we have not put a significant amount of weight on price trends or other pricing evidence within our assessment below.

Profitability

4.171 Given the possible ambiguities that exist in the relationship between profitability and market power, our view is that (other than perhaps in cases where the evidence is particularly striking or unambiguous) for the purposes of a first stage⁸⁰ study such as this, it is appropriate to be circumspect with regard to the amount of weight placed on profitability estimates as an indicator of market power. We did, however, consider that it was worthwhile for us to carry out an analysis of profitability data, since:

- profitability analysis formed a fairly substantial element of the DfT's submission; and
- an assessment of the level of profits being earned by the ROSCOs can be useful as an indicator of the extent of competition and of the level of detriment that is arising from any competition problems in the markets under examination, which is in turn relevant to the exercise of our discretion over whether a reference to the CC is appropriate.

4.172 We have considered a range of profitability estimates provided to us by the DfT and the ROSCOs, in addition to estimates that we calculated based on raw accounting data supplied to us by the ROSCOs. Our method, results and conclusions, together with a discussion of stakeholder views, are set out at Annex C. Of the number of approaches that have been suggested for profitability analysis and that are described here, not all of them suggest excess profits. It is significant, however, that plausible approaches that we have considered are consistent with excess profits being earned. This means that the signals from our profitability analysis, whilst not conclusive in themselves, nevertheless support the conclusion that there are grounds to suspect an inadequate degree of competition.

Switching rates

4.173 Switching rates can provide an indication about the level of competition and choice faced by consumers. Other things being equal, evidence of buyers switching frequently may be suggestive of suppliers facing competition, with low switching rates suggesting the opposite.

4.174 The DfT told us that a weighted average of around 90% of incumbent stock had been retained on long-term leases in recent rounds of franchise replacement.

4.175 All of the ROSCOs have agreed that switching rates are low. In our pre-consultation questions we asked the ROSCOs to provide us with switching rates for recent franchise renewals.

- Angel told us that, of the 12 re-franchises where it has been involved as an incumbent:
 - ten cases involved all of its stock being re-leased; and
 - two involved 94% and 84% of its incumbent stock being re-leased respectively.

⁸⁰ We use this term to denote a pre-CC investigation such as those carried out by the OFT.

- HSBC told us that, of the eight franchises in which it was an incumbent supplier:
 - seven cases involved all of its incumbent stock being re-leased; and
 - one involved none being re-leased.
- Porterbrook told us that, of the seven franchises in which it was an incumbent supplier:
 - six cases involved all of its stock being re-leased; and
 - one involved most of it being re-leased, with the exact proportion being difficult to calculate because of a franchise re-mapping that took place.

4.176 Taken on their own, low switching rates do not necessarily demonstrate a lack of competition, since in some cases the *threat* of switching may have been sufficient to ensure competitive outcomes. Whilst we accept that such threats have existed in some cases, the evidence and views available to us (and in particular the arguments made by the DfT and ROSCOs in relation to the DfT's case studies) are such that we suspect that they have not imposed an effective constraint in respect of the majority of incumbent fleets.

4.177 The lack of variation in stock proposed by bidders other than the winners (as, for example, shown by bidding data provided to us by the DfT in support of its case studies) further suggests that switching was not an attractive proposition for bidders. All of the ROSCOs have, to varying degrees, been critical of our interpretation of data on switching. They have correctly argued that, as acknowledged in the previous paragraph and in our minded to refer decision, evidence on low switching rates is not in itself determinative of a position of market power. We consider that our data on switching is significant given that it is consistent with the other types of evidence that we have gathered and the opinions that have been put to us by stakeholders, namely that TOCs are frequently in a position of limited choice when sourcing rolling stock.

Price trends

- 4.178 All of the ROSCOs (to varying degrees) in their responses to both our minded to refer decision and pre-consultation questions, argued that a full competition assessment of these markets should include a focus on various aspects of the available evidence on pricing.
- 4.179 A number of types of supplementary analysis were suggested by the ROSCOs. The most prominent suggestion was that we should put more weight on an analysis of price trends over time. The ROSCOs argued that we should look closely at those instances where capital rental charges had remained broadly constant since privatisation despite further capital expenditure having been incurred by the ROSCOs, and that such cases represented examples of them responding to negotiating pressure from TOCs and/or evidence that charges were at a reasonable level.
- 4.180 We agree that such an analysis might provide potentially useful evidence on market outcomes. We think, however, that the interpretation of pricing evidence provided by the ROSCOs is flawed in a number of respects, for the reasons set out below.
- 4.181 Some of the types of capital expenditure carried out by the ROSCOs (collectively described as 'heavy maintenance') are funded via ROSCOs' non-capital leasing charges (the ROSCOs' submissions on price trends⁸¹ focus only on trends in capital rentals and implicitly assume that all capital expenditure is funded from out of these).
- 4.182 Any reductions in 'effective capital rentals'⁸² need to be viewed in the context of the considerable falls in both specific and systematic risks faced by the ROSCOs at the time of recent lease renewals as opposed to at privatisation.

⁸¹ The same is true of their submissions on profitability.

⁸² This term was used by one of the ROSCOs to describe the product of a series of adjustments applied to their current capital rentals in order to reach a figure that, having had the value of post-privatisation investments stripped out, was directly comparable with the capital rentals set at the time of privatisation.

- 4.183 We do not agree that any departure from a model in which all post-privatisation capital expenditure is funded via increased rentals should be viewed as an indicator of particularly favourable terms being offered to customers or the ROSCOs reacting to particularly strong competitive pressures.
- 4.184 This is particularly true of stock that has reached, or is close to reaching, the end of its asset life, and where investments have the effect of increasing asset lives. In its discussion of the DfT's [X] franchise case study, Angel cited "a £[X] package of work to extend the life of the fleet" (with headline prices remaining constant) as an example of it facing competitive pressures. It is clear, however, that (depending on the rate of return involved), an investment program which extends the revenue-generating life of the assets in question has the potential to be viewed as a very favourable outcome for the ROSCO in question, and should not be interpreted, as implied by Angel, as a 'concession' on the ROSCO's part.
- 4.185 More generally, it could be argued that the allowances for stranding risk incorporated in the rentals set at privatisation were intended to enable the ROSCOs to fund a degree of further expenditure in order to ensure that their rolling stock remained attractive to franchisees for as long as possible.
- 4.186 These flaws in the ROSCOs' interpretation of the evidence on pricing suggest to us that a fuller analysis of these issues at this stage would be complex and quite possibly inconclusive. In these circumstances, given that other types of evidence point towards competition problems in these markets and the timescale and 'reasonable suspicion' evidential threshold that we are working to as a first stage authority, we have concluded that it is not necessary for us to carry out a full assessment of prices. We think that a profitability assessment, which can be used to assess all relevant cash inflows and outflows in the round, provides an indicator that is easier to interpret.

4.187 Porterbrook⁸³ also argued that we should make more use of a comparison of lease charges in cases where other indicators suggest that competitive pressures are weak against charges in cases where other indicators suggest that they are stronger.

4.188 We do not think that such an analysis would be a necessary or appropriate exercise for us to carry out as a first stage authority since, as discussed elsewhere in this report, our view is that the features that we have identified are prevalent across many of the markets in which the ROSCOs operate. Given that the boundaries of these markets have the potential to change over time, we do not think it would be appropriate for us to make a reference that only spanned a subset of the ROSCOs' leasing activities.

Other indicators – summary

4.189 We have set out information on two further indicators of competition. Of these, we consider that our analysis of profitability and, in particular, switching rates, is consistent with the ROSCOs enjoying a position of market power with regard to incumbent stock. For the reasons set out above, we have not put a significant amount of weight on price trends or other pricing evidence within our assessment.

Maintenance contract terms

4.190 The terms and conditions covering the supply of maintenance services offered by the ROSCOs represent another (beyond the initial concerns raised by the DfT regarding the level of capital rentals) area of potential concern about the competitiveness of rolling stock leasing.

4.191 Before discussing these issues, for clarity we draw a distinction between the following types of terms offered by the ROSCOs:

- 'wet leases', where maintenance is included as part of the lease; and

⁸³ Paragraph 3.23 of Porterbrook's response of 28 February 2007.

- 'dry leases', where maintenance is separate from the lease and is carried out either by the TOC itself or by an outside source such as the manufacturer or a ROSCO.

4.192 ROSCOs also sometimes offer maintenance packages that lie somewhere in between these two models, namely where maintenance is shared in some combination between the ROSCO and TOC⁸⁴. Such arrangements are sometimes referred to as 'semi-wet' or 'soggy' leases.

4.193 Concerns raised by TOCs in this area include the following, discussed in more detail under the headings below:

- the transparency of maintenance charges contained within wet/semi-wet leases (in particular the transparency and method of calculation of the maintenance reserve); and
- the extent to which ROSCOs were willing to enter into service level agreements (SLAs) to better incentivise them to manage performance risk from poor maintenance and/or lack of availability of rolling stock.

4.194 We also investigated the extent to which the ROSCOs are prepared to offer maintenance on both a bundled (with capital leases) and unbundled basis.

Maintenance reserve

4.195 The maintenance reserve represents the value of the non-capital element of train leases that has been accumulated by a ROSCO in order to procure the heavy maintenance that it provides as part of the lease contract. The concern expressed by TOCs is that the way in which the maintenance reserve is calculated restricts their ability to move from a semi-wet to dry lease for mid-life MOLA stock. It does so in two ways.

4.196 Firstly, TOCs told us that they think there is an overall lack of transparency over the level of the maintenance reserve specific to a train lease. This is

⁸⁴ 'Maintenance' in this respect refers to heavy maintenance; the majority of TOCs carry out routine 'light' maintenance themselves.

because, in general, the reserve is aggregated across fleets rather than applied to a specific train lease. GNER for example, told us that transparency in the financial aspects of the non-capital element of the leases (how costs are made up and allocated and the calculation of the maintenance reserve) is “*crucial*” both to deciding on the commercial, technical and risk elements and when deciding whether to operate a wet or dry lease; and, “*...the treatment, calculation and movement over time of the maintenance reserve are an area where a current lack of transparency does cause concern today...*”.

4.197 Secondly, difficulties in estimating the size of the maintenance reserve contribute to the difficulty in switching from wet to dry leases. This is because the amount of repayment offered by the ROSCO to the TOC on seeking to move to a dry lease is often substantially lower than the amount initially paid under the (semi-) wet lease.

4.198 TOCs told us that they did not consider that the ROSCOs provided them with a high degree of transparency regarding this shortfall. They also told us that they would expect to make savings through dry leases due to the lack of a margin payable to the ROSCOs and that as a result of the perceived lack of transparency, it is often not commercially viable for them to move to dry leases. GNER, for example, said that, in cases where it had decided to continue with a wet lease rather than enter into a dry lease, it had done so because of concerns about the opening and closing level of the maintenance reserve not being appropriate to the circumstances.

4.199 The impact of the maintenance reserve is different in relation to new trains, where all maintenance, both heavy and light, typically is provided by manufacturers on a transparent basis.

Performance/penalties/SLAs

4.200 A number of TOCs also raised concerns over the apparent unwillingness of ROSCOs to negotiate back-to-back performance regimes and SLAs to share the risk of poor maintenance on TOCs’ operating performance, even as a priced option. Poor reliability and/or availability of rolling stock can impose

significant performance costs on the TOCs. The TOCs told us that an increased number of SLAs, where the risks associated with poor performance are shared between TOCs and ROSCOs, would strengthen the incentive on ROSCOs to offer higher maintenance standards.

Flexibility - dry/wet leases

4.201 Overall, our dialogue with TOCs suggested that the ROSCOs in most cases offer both wet and dry leases, although the extent to which this is true appears to differ depending on the exact combination of buyer and seller involved.

ROSCOs' views

4.202 The ROSCOs do not agree that there are problems associated with their provision of maintenance terms.

4.203 Angel told us that there is, "*...a natural conflict of interest between the requirements of a TOC, which has a (relatively) short lease period and a service to operate each day, and those of a ROSCO, which has a long-life asset and a residual value position to protect*"⁸⁵. It provided examples of SLAs that it has already put in place for many of its new build fleets, where the responsibilities for maintenance rest with the manufacturer. It stated, however, that for mid-life MOLA fleets the split of maintenance responsibilities between the TOCs (for light maintenance) and the fleet owner (for heavy maintenance) makes this sort of arrangement less feasible.

4.204 HSBC told us that it is always willing to offer dry leases⁸⁶.

4.205 Porterbrook argued that none of the concerns which we identified within our minded to refer decision, "*...apply to its rolling stock leases with TOCs*"⁸⁷. It also maintained that, "*Where maintenance reserves are used, there is a high degree of transparency as to the basis for their calculation and their*

⁸⁵ Angel response dated 28 February 2007 (paragraphs 103-106).

⁸⁶ HSBC response dated 28 February 2007 (to question 13 of our minded to refer decision).

⁸⁷ Porterbrook response dated 28 February 2007 (paragraph 6.2).

*referability to individual fleets*⁸⁸. It also told us that it offers both wet and dry leases, and that it offers back-to-back performance guarantees in relation to maintenance (so-called 'No Train, no Pay' arrangements) in accordance with its Code of Practice⁸⁹.

Our view

4.206 In their responses to our minded to refer decision, the TOCs reiterated their original concerns and provided some further commentary on their experiences.

4.207 First Group, whilst observing that the rolling stock market is undergoing change (including the increasing willingness of ROSCOs to provide 'dry' or 'soggy' leases, goes on to say that, "...*this needs significant further encouragement*"⁹⁰. It also argued that "*Where ROSCOs retain maintenance responsibilities, then they should be taking a fuller responsibility for performance in the obligations they owe their customers*"⁹¹.

4.208 National Express Group told us that it, "... *has concerns about the funding and control of heavy maintenance. The terms being offered are variable between ROSCOs. Whilst they all claim to offer dry leases on some occasions the conditions offered are so onerous that they present too much risk to the TOC, others are more equitable*"⁹². It went on to say, "*Transparency of cost would be welcome so that we are able to judge the value we are getting from our non-capital rental payments and influence it.*"

⁸⁸ Paragraph 6.3 *ibid.*

⁸⁹ Paragraph 6.4 *ibid.*

⁹⁰ Paragraph 3.2 of First Group response dated 28 February 2007.

⁹¹ Paragraph 3.3 *ibid.*

⁹² National Express Group response dated 28 February 2007.

4.209 ATOC told us that⁹³, *“We think that, if there is a referral, this would be a major opportunity to achieve much greater transparency for operators on heavy maintenance costs and spending on refurbishment and modification.”*

4.210 We consider that the concerns expressed by the TOCs cannot be discounted, and that this is an area which would benefit from more detailed scrutiny by the CC.

Competition assessment - summary and conclusions

Summary

4.211 The key findings outlined in this chapter are listed below.

- The leasing of rolling stock has remained very concentrated in the period since privatisation, with three suppliers holding over 95% of all stock and no material new entry.
- Data on switching rates and profitability are consistent with the ROSCOs enjoying positions of market power.
- The availability of viable surplus stock is very limited.
- There are a number of factors that restrict competition from existing stock, including:
 - switching costs;
 - franchises terminating at different dates; and
 - restrictions within DfT ITTs.
- There are also factors restricting competition from new build, including:
 - the limited commercial case for introducing new build stock;

⁹³ Page 4 of the ATOC response dated 28 February 2007.

- the time limited nature of railway franchises relative to new build lead times;
 - the DfT's deliverability criteria in the franchise process;
 - the higher rental cost of short-term leases; and
 - uncertainty over the value of call options.
- Contrary to the suggestions made by the ROSCOs, we do not consider it likely that TOCs and/or the DfT are frequently in a position of countervailing buyer power. Indeed, buyer incentives to obtain low prices appear to be weak in many cases.

4.212 We have additionally identified a number of issues concerning maintenance provision.

5. Conclusions

Introduction

- 5.1 This chapter summarises our conclusions, including a summary of those features that, we suspect, lead to a prevention, restriction or distortion of competition in connection with the leasing of rolling stock for franchised passenger services and related maintenance services.
- 5.2 We include within this chapter our assessment of why, in the balance of our statutory duties⁹⁴, we consider that a decision to refer these markets to the CC would be an appropriate exercise of our discretion under section 131 of EA02. As part of this consideration we provide our thoughts on the availability of remedies.
- 5.3 Finally, we explain why we do not consider that alternative measures involving, for example, our sector-specific regulatory powers or undertakings in lieu, would be appropriate.

Market definition

- 5.4 Our view is that the leasing of rolling stock for franchised passenger services is likely to be characterised by distinct product markets split by type of stock. We do not, however, consider it necessary for us to arrive at a precise market definition in this study. Our analysis of market definition issues is adequate to inform our understanding of competitive constraints. It is also sufficient to make us confident that a number of the features with an adverse effect on competition that we have identified are potentially prevalent across most, if not all of the relevant markets.

⁹⁴ Our statutory duties as laid out in section 4 of RA93.

Assessment of competition

Concentration

5.5 The three major incumbent suppliers collectively own 96% of all of the rolling stock used for franchised passenger services, and ownership is more or less evenly distributed between the three incumbent ROSCOs. Further, this situation of only three (and the same) significant suppliers has persisted since privatisation. The overall level of concentration and absence of new entry on a significant scale, are useful preliminary indicators that these markets may not be effectively competitive.

New entry

5.6 A set of markets that have been widely reported as earning high profits, might, other things being equal, have been expected to attract new entry in the period since privatisation. This has proved not to be the case. Differences in the understanding of, and attitudes and exposure to, various political risks (plus, possibly, advantages associated with having existing portfolios that include MOLA stock) may go some way towards explaining why the three incumbent ROSCOs have retained a high share of these markets, despite the opportunities for entry provided by the many new build vehicles that have been introduced since privatisation.

The constraints imposed on the ROSCOs by competition from existing and new build stock

5.7 We consider that there are many instances in which the choices of rolling stock available to TOCs at franchise renewal are extremely limited. The available evidence suggests that there is a tight relationship between supply and demand in these markets. Our study has revealed no reason to suppose that this will change in future, given the high level of industry consensus that the deliberate creation of surplus supply would not provide value for money and forecast continued increases in passenger demand.

- 5.8 We have observed that there is currently, and has been historically, very little surplus stock available. The significant numbers of new vehicles introduced since privatisation have not created a large, viable surplus since they have most often been procured to replace stock which can no longer be used on the network (either because it is commercially unattractive or because of changing legislative requirements).
- 5.9 Our dialogue with stakeholders has highlighted a number of costs that are incurred by TOCs when considering switching stock. It seems likely to us that such costs can play a role in the decisions made by TOCs in their choice of rolling stock in some circumstances.
- 5.10 The Government's programme of franchise awards provides only limited incidence of coterminous franchises. We consider that this factor frequently limits the choice of stock since alternative, potentially compatible fleets are generally already leased to other franchisees.
- 5.11 The DfT's submission, our analysis of the case studies submitted by the parties, and dialogue with stakeholders have indicated that in many cases the franchise specification developed by Government constrains bidders' choice of rolling stock. This can arise either directly where, for example, the DfT specifies use of the existing stock or indirectly by specifying the number of services on each route, together with minimum capacity, journey times and stopping patterns, which, in practice, restricts the types of alternative rolling stock which can be used.

New build

- 5.12 Since privatisation, over 4,000 new vehicles have been bought on behalf of the franchised passenger TOCs, at a cost of just over £4bn. However, we consider the extent to which such new build stock is able to impose a competitive constraint on incumbent fleets is limited by a number of factors. These factors include lead times for new build relative to franchise length.

- 5.13 We have also been advised by TOCs that the DfT's franchise deliverability requirements provide a strong incentive for franchise bidders to secure 'existing' stock over entire franchise lengths.
- 5.14 The introduction of new stock onto the network would require TOCs to enter into short-term leases at outset for all or part of their stock. TOCs have advised that these are offered at less attractive rates by the ROSCOs than those for a lease which extends through the life of the franchise.
- 5.15 The ROSCOs have argued that the DfT could facilitate new build by exercise of a call option within the direct agreement between the ROSCOs and the DfT. ORR's 1998 review⁹⁵ took a similar view. The DfT has, however, advised that the call option only applies to very restricted circumstances. It believes that, in practice, this represents too high a threshold to satisfy, and has never attempted to exercise it.
- 5.16 The DfT has told us that it considers that new build involves prohibitively high cash costs, and that a surplus pool of rolling stock being kept in unremunerative storage would have possible adverse implications for Government funding. This appears to us to have led to a situation where new build generally occurs to serve growth or is driven by legislation. The evidence provided to us by market participants has suggested that speculative purchase either on the part of the current ROSCOs, new entrants or indeed the TOCs themselves is limited in part due to the lack of Government (central or devolved) encouragement and/or sponsorship. Instances of new supply have, in most cases, not been driven by commercial motive.

Buyer incentives and the extent of buyer power

- 5.17 The majority of TOCs have agreed with the view initially put forward by the DfT and reflected in our minded to refer decision that they have limited incentives to negotiate on rolling stock leases. This lack of incentive primarily arises from the fact that the costs of rolling stock are passed on by TOCs to

⁹⁵ *Review of the Rolling Stock Market – Report to the Deputy Prime Minister, May 1998.*

the DfT via the level of franchise subsidy or premium. The initial offer to the preferred bidders (or 'base case') also provides no competitive advantage for a TOC, given that the ROSCOs have interpreted their Codes of Practice as obliging them to offer the same base case to all TOCs⁹⁶. We consider that these factors limit the incentive on a TOC, at outset, to try to negotiate the capital rentals downwards.

Features that prevent, restrict, or distort competition

5.18 Our view is that the evidence received during the course of our market study gives us reasonable grounds to suspect that a number of features prevent, restrict, or distort competition.

- The technical and operational characteristics of rolling stock within Great Britain and its specificity for certain routes and services result in limited interchangeability between different types of stock.
- The limited availability of a pool of surplus stock of viable, alternative vehicles restricts the choices available to the TOCs.
- Different franchise offer/award dates limit the amount of liquidity during the bidding phase for a franchise.
- The costs of transferring stock between franchises act as a barrier to TOCs switching between ROSCOs.
- The restrictions within some ITTs for franchises can limit the choices available to TOCs.
- The commercial case for introducing new build stock is limited by its high cash costs.
- The time limited nature of railway franchises relative to new build lead times disincentivises new build.

⁹⁶ Bidders can, however, negotiate variant offers or change the fleet mix.

- The DfT's deliverability criteria in the franchise process encourage TOCs to lease stock for the entire duration of franchises.
- The higher rental cost of short-term leases, and uncertainty over the value of call options and the precise circumstances in which they can be exercised, tends to favour retention of incumbent stock.
- New build activity is limited in the absence of Government support.
- Buyers (TOCs) have limited incentives to negotiate over lease terms given that rolling stock costs are passed through into subsidy or premium payments.

5.19 Another relevant factor is the growth in passenger demand since privatisation, which has led to a limit to the volume of surplus stock available.

5.20 Based on our assessment of the responses of Angel and the DfT to our minded to refer decision, we agree that it would not be appropriate for us to categorise section 54 undertakings as a feature preventing, restricting, or distorting competition.

Indicators of markets not working effectively

5.21 We have identified a number of indicators that are suggestive of competition problems in these markets. These indicators include higher profits than would be expected in a competitive market (based on some measures), low switching rates of TOCs between ROSCOs, and a lack of transparency in negotiations on maintenance, together with lower standards of service level commitment than might be expected in a situation where providers face effective competition.

Profitability

5.22 We have considered a range of profitability estimates provided to us by the DfT and the ROSCOs, in addition to estimates that we calculated based on raw accounting data supplied to us by the ROSCOs. Our method, results, and

conclusions, together with a discussion of stakeholder views, are set out at Annex C.

- 5.23 Of the number of approaches that have been suggested for profitability analysis and that are described in Annex C, not all of them suggest excess profits. It is significant, however, that plausible approaches that we have considered are consistent with excess profits being earned. This means that the signals from our profitability analysis, whilst not conclusive in themselves, nevertheless support the conclusion that there are grounds to suspect an inadequate degree of competition, which should be investigated further.

Switching rates

- 5.24 Other things being equal, evidence of buyers switching frequently may be suggestive of competition between suppliers, with low switching rates suggesting the opposite. The DfT has told us that a weighted average of around 90% of incumbent stock had been retained on long-term leases in recent rounds of franchise replacement. All three ROSCOs agree that switching rates are low (although they do not agree that this should be interpreted as a sign of weak competitive pressures).

Maintenance and service provision

- 5.25 The TOCs have advised us of a number of concerns relating to the non-capital elements of their lease arrangements with the ROSCOs. For example, they have expressed concern about maintenance provision and the extent to which they can negotiate service level agreements above the minimum in terms of performance requirements, even as a costed option. We have also been advised of a lack of transparency in the maintenance reserve where TOCs are unable to validate the opening and closing balance and are, therefore, unable to challenge any call on them for extra funding during the course of the lease. We have not investigated maintenance and service provision in detail, but it is inextricably (particularly from a TOC perspective) linked with the leasing of rolling stock and so will need to be considered by the CC, as was made clear in our minded to refer decision.

Referral to the CC

5.26 In order to make a market investigation reference we must have: “*reasonable grounds for suspecting that any feature or combination of features, of a market in the UK for goods or services prevents, restricts or distorts competition in connection with the supply or acquisition of any goods or services in the United Kingdom, or part of the United Kingdom*” (‘the section 131 test’). Where this threshold is met, we have discretion to decide whether to make a reference.

Section 131 test

5.27 The evidential threshold under section 131 is that of ‘reasonable grounds to suspect’. Having considered the matters set out in this report, including in particular the features set out above, we consider the section 131 test to be met.

5.28 In this regard, we take note of the comment of the Competition Appeal Tribunal (CAT) in *Association of convenience stores*⁹⁷ that, “*There is, if we may say so, some risk that one may mistake the height of the hurdle. ... It is a ‘reasonable ground to suspect’ test. The scheme of the Act is that a full investigation is carried out at the stage of the Competition Commission...*”. Thus, whilst we consider that we have carried out a thorough analysis of all the views and evidence presented to us, we emphasise that our analysis has been for the purpose of assessing whether the ‘reasonable grounds to suspect’ test is met, and not necessarily to reach definitive views.

5.29 Furthermore, we have taken into account the concerns expressed by the CAT that a first stage investigation should not be unduly long. Accordingly, we have taken care not to carry out analysis to a level of detail that would be disproportionate given that this is a first stage investigation.

⁹⁷ Judgment of 1 November 2005.

Discretion to make a reference

Section 4 duties

5.30 Section 67(2) of RA93 provides for concurrent functions of the OFT and ORR under Part 4 of EA02 so far as they relate to the supply of services relating to railways. Our statutory duties under section 4 of RA93 apply to the exercise of functions assigned or transferred to us under Part 1 of RA93. Our duties are not in order of priority and it is for us to decide how to balance them when reaching a decision.

5.31 We have considered all of our statutory duties and are of the view that the following duties are of particular relevance:

- promoting improvements in railway service performance (4(1)(zb));
- protecting the interests of users of railway services (4(1)(a));
- promoting competition in the provision of railway services (4(1)(d));
- promoting efficiency and economy on the part of persons providing railway services (4(1)(c));
- to enable persons providing railway services to plan the future of their business with a reasonable degree of assurance (4(1)(g)); and
- to have regard to the financial position of the Secretary of State (4(5)(c)).

5.32 Lower prices, whether because of increased competition or as a result of behavioural remedies imposed on the ROSCOs, would have a beneficial impact on the financial position of the Secretary of State.

5.33 Additionally, more competitive markets may result in more, or more appropriate, rolling stock becoming available in the future, as increased competition should lower the overall cost of providing railway services to Government. This, together with improvements in maintenance service quality

and performance, should eventually flow through to passengers and taxpayers.

- 5.34 In the short-term, a referral does not provide immediate certainty and clearly introduces some perceived risks. In the longer term, however, the outcome of a referral to the CC is likely to provide greater certainty for all parties. These markets have been reviewed several times since privatisation. Our view is that a reference to the CC for a thorough review of all the relevant issues should introduce greater certainty and stability for the future.

The costs and benefits of a reference

- 5.35 We recognise that a reference to the CC would have considerable resource implications for all the parties, namely the CC, ROSCOs, the DfT, and other stakeholders including TOCs and ORR. By creating short-term uncertainty within these markets, a reference might also have implications for the willingness of firms to supply new stock and/or on the terms on which they are prepared to invest⁹⁸.
- 5.36 The costs and risks set out in the previous paragraph should be set against the potential longer-term benefits of a CC reference. The rail industry currently buys services worth over £1bn per year from the ROSCOs, representing a significant cost to Government and the taxpayer. Any benefits resulting from increases in competition and/or behavioural remedies might therefore, other things being equal, be expected to be substantial.
- 5.37 Information on costs and prices might be used to quantify the benefits of a CC reference to the extent that a 'competitive' market counterfactual, and the asset values, price levels, and rates of return that would prevail under such circumstances, can be reliably identified. Profitability analysis is, therefore, a factor in our assessment of the potential benefits of a reference.

⁹⁸ Although our ongoing dialogue with DfT suggests that its view, as the funder of the industry, is that such risks are at an acceptably low level.

- 5.38 At first sight it is not clear which, if any, of the profitability measures that we have considered represent the most appropriate standard for assessing the potential detriment arising from the ROSCOs' current level of pricing. Intuitively, such an analysis would measure the difference between the profits earned by the ROSCOs and the profits that they would earn if they faced 'effective competition'. Arriving at a satisfactory definition of effective competition in this industry is, however, not straightforward. Both the DfT and the ROSCOs have observed a link between competition and the level of prices when looking at the prices charged at franchise renewal, but it is difficult to translate these differences into a single, effectively competitive, standard.
- 5.39 As described in Annex C, we have carried out an assessment of the aggregate profitability of the ROSCOs based on both our own calculations and estimates supplied by stakeholders with, for the reasons set out in Annex C, a particular focus on MOLA stock. Some of these estimates are, in our view, consistent with excess profits being earned by the ROSCOs.
- 5.40 As explained in Annex C we consider that some, at least, of the DfT's estimates of profitability appear to be reasonable. The DfT's estimates of the annual consumer detriment (in 2005) caused by the ROSCOs pricing based on a whole-fleet analysis ranged from £34m per year to £177m per year. These figures correspond to total detriment figures of £375m and £1.9bn respectively in present value terms.
- 5.41 We have not reached definitive views on whether the ROSCOs are currently earning excessive profits. Nevertheless, we have identified plausible profitability analyses which indicate excess profits of a level that, in our view, warrants a CC reference.
- 5.42 In our view, there is also a risk that the features that we have identified as affecting the leasing of MOLA stock, and which we consider have the potential to distort outcomes, will re-occur in the future leasing of non-MOLA stock upon lease renewal (for example following the expiry of current section 54 agreements).

Availability of remedies

5.43 We have also considered the likelihood that remedies capable of meeting the competition concerns that we have outlined would be available. We have not attempted a comprehensive assessment of all the remedies that might be available to the CC. Rather, we have sought to satisfy ourselves that suitable potential remedies exist.

Market based remedies

5.44 In our minded to refer decision we listed two groups of potential market based remedies. The first group represented incremental improvements to the franchising process which we considered might provide sufficient liquidity at the margins to give TOCs more leverage than currently exists. The second group suggested more far-reaching changes that, we acknowledged, might have wider implications outside rolling stock that would need careful cost/benefit evaluation.

5.45 The DfT's response to our minded to refer decision argued that it, "*...does not agree that the way Government procures franchised passenger services restricts or distorts competition in the way described by the ORR*"⁹⁹. and considers the key factor limiting TOCs choice of rolling stock is simply that supply is meeting demand and that there is no economic case to invest in surplus. Further, the DfT argued that changes to its franchise policy would not be effective in improving competition in these markets, and that remedies aimed at doing so would not be proportionate given that, "*Government has set the framework of passenger franchising in which competition for the supply of rolling stock needs to take place and upsetting that framework in order to drive competition into a malfunctioning part of the rail sector is not an option which merits serious consideration*"¹⁰⁰.

⁹⁹ Paragraph 5 of the DfT's response dated 28 February 2007.

¹⁰⁰ Page 22 of the DfT's response of 28 February 2007.

- 5.46 We recognise that the way in which the DfT discharges its responsibilities for the procurement of passenger railway services is a matter for Government, and that franchising policy is driven by a number of considerations of which the terms on which rolling stock is leased is only one.
- 5.47 We acknowledged in our minded to refer decision that certain features may not be amenable to change if the Government does not see net benefits in funding and/or performance terms in doing so. We also believe that the DfT has made a number of good arguments in support of retention of certain parts of its franchising framework and timetable. It does not follow, however, that decisions made in order to achieve well-founded public interest benefits necessarily have a benign impact on competition and the competitive process itself.
- 5.48 A number of respondents to our minded to refer decision have expressed concern about whether the market features, which relate to the DfT's franchising process, are capable of remedy by the CC.
- 5.49 Angel argued that ORR, as the specialist railway industry regulatory body, would be *"...best placed to make recommendations to Government as to how the franchising system may be reformed"* and pointed out that there is *"...no difference between ORR and the CC in respect of the power to make such recommendations"*¹⁰¹, since neither authority has the power to legislate or force the DfT to change its procurement practices. HSBC argued that it would be disproportionate to make a reference to the CC without first inviting the DfT to carry out a review of its franchising policy¹⁰².
- 5.50 Our view is that a more detailed examination of the relevant issues would be necessary in order to reach a fully developed view on remedies. The CC is a specialist second stage investigatory body and so is best placed to carry out a detailed investigation of this sort. Moreover, our sectoral expertise will be available to the CC during the course of its investigation.

¹⁰¹ Paragraph 14 of Angel's response of 28 February 2007.

¹⁰² See paragraph 3.1 of HSBC's response of 28 February 2007.

5.51 Further, it is far from certain that a full investigation would conclude by identifying changes to the franchise system that would be feasible and sufficient to introduce effective competition into these markets. If so, behavioural remedies of the sort discussed below may prove necessary. Whilst the CC has the powers to impose such remedies, we can only take undertakings that have been offered voluntarily (see below for a further discussion).

Behavioural remedies

5.52 Following a full investigation, the CC might reach the view that behavioural remedies represented the best way to address competition concerns in these markets. Such remedies could relate to either price or non-price aspects of financing and/or maintenance services and might include, for example, commitments regarding the level or transparency of prices.

5.53 As noted at paragraphs 5.34 to 5.35 of our minded to refer decision, any price remedy imposed on the ROSCOs would have an element of complexity. This might arise from a number of factors including differences in types of stock and the sorts of issues identified in our discussion of profitability (such as asset valuation). Such problems have been emphasised by some stakeholders in their responses to our minded to refer decision¹⁰³. We remain of the view, though, that given that price controls have been devised to address complex situations for other markets/industries, the CC should be in a position to devise an appropriate remedy for the particular circumstances of these markets if it were to decide that such remedies were appropriate.

Conclusion on availability of remedies

5.54 Our view is that there is a reasonable likelihood that remedies would be available to the CC in relation to the concerns we have identified.

5.55 We consider that a thorough review of the issues by the CC is likely to result in more certainty and stability for all parties in the future, allowing them to plan

¹⁰³ See, for example, paragraph 7.30 of Porterbrook's response of 28 February 2007.

their businesses with a greater degree of assurance than currently. It is important, going forwards, that the relationship between all stakeholders is built on a foundation of confidence that each party to the arrangements is securing value out of that relationship. It seems clear to us that that such confidence is currently lacking.

Alternative powers

Regulatory powers

5.56 We do not regulate the rolling stock companies under sector specific statute (the RA93) and therefore cannot utilise regulatory tools, such as licence conditions to address the market features that we have identified.

Competition law

5.57 We have considered whether the concerns identified (for example, about pricing) should be investigated as an abuse of a dominant position under the Competition Act 1998, but consider that many of the competition problems in these markets are inherent to the operation and structure of the markets rather than the direct result of abusive conduct of one or more players.

Undertakings in lieu

5.58 We have the power, in lieu of a reference, to take voluntary undertakings¹⁰⁴ from the ROSCOs. Our statutory responsibility when considering the possibility of accepting undertakings, is distinct from the 'reasonable grounds to suspect test' that we have to satisfy in order to make a reference to the CC. In respect of the former we have the same duty as the CC to "*have regard to the need to achieve as comprehensive a solution as is reasonable and practicable to the adverse effect on competition concerned and any detrimental effects on customers so far as resulting from the adverse effect on competition*".

¹⁰⁴ Section 154 of EA02.

- 5.59 In the weeks following the publication of our minded to refer decision, we had a number of discussions with the DfT and the ROSCOs regarding the possibility of finding a resolution to the various stakeholder concerns that we had identified by means other than a CC reference. These discussions have been an important factor in forming our view that voluntary undertakings would not be a realistic means by which to arrive at a solution that was acceptable to all parties.
- 5.60 We have encountered a number of complex issues that would require a significant amount of further scrutiny to enable us to arrive at a definitive view on a set of undertakings which would provide the comprehensive solution which is required of us under section 154 of EA02. We additionally note that undertakings would be dependent on the co-operation of all three parties and moreover would not bring about changes to the underlying market features that we have identified.
- 5.61 Contrary to suggestions made by Porterbrook¹⁰⁵, the discussions referred to above, together with the analysis set out in this report have been more than adequate for us to consider sufficiently the question of undertakings.
- 5.62 We do not think, therefore, that voluntary undertakings would be appropriate in this case.

The Codes of Practice

- 5.63 At various times during our consultation process, the ROSCOs have argued that the existing Codes of Practice are sufficient to ensure competitive outcomes and/or that they could be modified to deal with some of the concerns raised in our minded to refer decision.
- 5.64 We do not agree with this view. Firstly, we do not think that the Codes of Practice could be an effective means by which to address the DfT's fundamental concerns regarding excessive pricing (which may be substantiated following a further detailed analysis by the CC). Whilst they

¹⁰⁵ Paragraph 1.8 of Porterbrook's response of 28 February 2007.

could arguably be used to address a subset of the concerns raised by stakeholders, we consider that most or all of these concerns should be viewed as different facets of the market power enjoyed by the ROSCOs, and that there would be a benefit associated with a detailed look at all aspects of these markets (including remedies) by the CC.

Scope of the reference

5.65 Our Terms of Reference are contained at Annex A to this report. We discuss a number of key aspects of these terms, followed by our conclusions on the scope of our reference, in the following paragraphs.

MOLA vs. non-MOLA stock

5.66 We defined 'incumbent' stock in Chapter 3 of this report, and explained in Chapter 4 that the nature of these markets is such that the re-leasing of incumbent stock is affected by a number of features that are not present when ROSCOs are competing to be appointed as a lessor of a consignment of new stock¹⁰⁶. We also explained that the initial terms of a substantial proportion of non-MOLA stock have yet to be renewed, meaning that current prices were not agreed in the 'incumbent stock' conditions that are the focus of Chapter 4.

5.67 Because of these differences between MOLA and non-MOLA stock, Porterbrook's response to our minded to refer decision¹⁰⁷ argued that our reference should be restricted to the leasing of MOLA stock only.

5.68 We do not agree with this view. Some non-MOLA stock is incumbent stock that has been re-leased. It also seems to us that there are significant potential linkages between incumbent and new stock, both in the way that they are (on occasion) in direct competition with each other and in the degree of competition that they are likely to face going forwards. In our view, there is a risk that the features which we identify as relevant to the leasing of MOLA

¹⁰⁶ We also noted in Chapter 4 that our investigation has not analysed the extent of competition between suppliers of new stock in any depth.

¹⁰⁷ Porterbrook's response to question 15 of our minded to refer decision (Porterbrook's response of 28 February 2007).

stock, and which we consider have the potential to distort outcomes, will re-occur in the future leasing of non-MOLA stock upon lease renewal. On a forward-looking basis, we think that there is the potential for a high proportion of these features to apply to non-MOLA stock.

- 5.69 In the course of our study we have not found any evidence of factors that prevent, restrict or distort competition in connection with the initial terms agreed for the leasing of new rolling stock. The issue of competition of this sort is not, however, an issue that we have considered in any depth. This might, as suggested within the DfT's submission, be something for the CC to consider in more detail.

'Supply' vs. 'leasing'

- 5.70 Contrary to the arguments made by Angel and Porterbrook in their responses to our minded to refer decision, as explained in Chapter 3 of this report, we consider that our terms of reference should refer to the 'leasing' of rolling stock, rather than 'supply'.
- 5.71 It was argued that we should use the latter definition because of the potential for the self-supply of stock by TOCs by way of direct purchase from manufacturers. We agree that, where feasible, self-supply is in direct competition with the services supplied by the ROSCOs and hence may be a demand-side substitute for leasing services. However, as discussed in Chapters 3 and 4, the instance of self-supply is currently very small. We think that the use of the term 'supply' of stock would risk confusion with other parts of the industry, notably the sale of stock by rolling stock manufacturers to the ROSCOs, in which we do not have grounds to suspect competition problems.

Relationship between market definition and market features

- 5.72 In Chapter 3 we explained our view that the leasing of rolling stock for franchised passenger services is likely to be characterised by distinct product markets differentiated by different types of rolling stock, but:

- we have not reached definitive views on a precise segmentation of markets; and moreover
- we do not consider it necessary, as a first stage investigator, to do so.

5.73 We do not, therefore, consider it would be feasible or indeed incumbent upon us to:

- “identify each market concerned”;
- “identify the features of each market concerned”; and
- “set out the reasonable grounds which cause the ORR to suspect that the features of each market prevent, restrict, or distort competition”,
which Porterbrook inferred¹⁰⁸ is an obligation on us arising from section 133(1)(b) of EA02.

5.74 Our failure to do this, Porterbrook argued, meant that the scope of our reference was too broad.

5.75 We consider that the market definition exercise that we have carried out is adequate to inform our understanding of competitive constraints, in particular having regard to the limitations on interchangeability between different types of stock, and for us to be confident that the features with an adverse effect on competition are, in principle, potentially prevalent across most, if not all, potential product markets.

Services provided by manufacturers

5.76 First Group's response to our minded to refer decision¹⁰⁹ pointed to the existence of a potential set of competition problems arising from the increase in 'turnkey' maintenance arrangements sometimes offered by new build manufacturers or other maintainers. First Group suggested that these

¹⁰⁸ Paragraph 4.3 of Porterbrook's response of 28 February 2007.

¹⁰⁹ Paragraph 3.4 of First Group's response dated 28 February 2007.

arrangements risked replicating the ROSCOs' control of rolling stock maintenance on the MOLA fleets. First Group suggested that as initial maintenance arrangements came to an end, such turnkey manufacturer/maintainers could be in a very strong position, controlling essential depot facilities, technical data, spares, and so on, creating the potential for an exploitation of a position of market power.

- 5.77 We have decided to exclude these services from the scope of the current reference. This is an issue which has been raised by a single respondent at a relatively late stage of our consultation process, and concerns a (potential future) source of monopoly power that is different in many ways to the ones that we have identified in relation to the ROSCOs. It seems likely to us that a number of the ROSCO-specific competition problems (particularly ones involving the DfT's franchising process) will not apply to these services.

The scope of our reference – conclusion

- 5.78 The concerns that we have identified relate to the leasing by the ROSCOs of incumbent stock, whether MOLA or non-MOLA, for franchised passenger services and related maintenance services. This, accordingly, defines our Terms of Reference.
- 5.79 It is important to recognise that for the purposes of this report we have considered it sufficient to provide only an overview of the possible relevant economic markets in which the reference goods and services are supplied. We have defined them with no more precision than seemed appropriate given the evidence provided to us by stakeholders and to the extent necessary in order to carry out our competition assessment. The CC, in its more detailed investigation, may wish to come to its own view with regard to market definition.

Annex A – Reference

Terms of Reference

1. ORR, in exercise of its powers under section 131 of the Enterprise Act 2002 and having had regard, in particular, to its statutory duties under section 4 of the Railways Act 1993 (RA93), hereby makes a reference to the Competition Commission for an investigation into the leasing of rolling stock for franchised passenger services and the supply of related maintenance services (the reference goods and services) in Great Britain.
2. ORR has reasonable grounds for suspecting that a feature or a combination of features of the markets in which the reference goods and services are supplied prevent, restrict or distort competition in connection with the supply of the reference goods and services in Great Britain, being part of the United Kingdom.
3. For the purposes of this reference:
 - "franchised passenger services" has the same meaning as in section 23 of RA93; and
 - "related maintenance services" means the provision of services for the maintenance of leased rolling stock vehicles by a lessor (whether or not through a subcontractor), including, but not limited to, refurbishment and the overhaul or replacement of major components.

Annex B – Case studies

1. The DfT's submission included a number of case studies concerning five recent franchise renewals, covering over 3,500 incumbent vehicles. We asked the ROSCOs to supply us with their comments on these case studies. Angel also supplied us with its own case studies on the ScotRail, Integrated Kent and South Western franchises.
2. The DfT's case studies attempted to assess the extent to which the ROSCOs faced competition at five franchise renewals that took place in the last three years, as set out in the figure below.

Figure 6 - The DfT's case studies

Franchise	Re-franchising date	Service types	Main stock types
'One'	April 04	Commuter, regional, rural	75-100 mph DMUs, EMUs and Mark 2 coaches
Northern	Dec 04	Inter-urban, commuter, and rural	75-100 mph EMUs and DMUs
ICEC	May 05	Intercity	HST; 225
Thameslink ¹¹⁰	April 06	Commuter and suburban services	75-100 mph EMUs (AC and dual-voltage)
Greater Western	April 06	Intercity, commuter, local and regional	125mph stock, 75-90 mph DMUs

3. Each of these franchise renewals involved the re-leasing of several hundred incumbent vehicles, spanning between about 5 and 20 different vehicle types offered by two or, in most cases, all three of the ROSCOs. The DfT told us that the extent to which incumbent stock faced competition varied considerably both across franchises and within franchises. For all of the

¹¹⁰ The successor to this franchise is referred to as 'Thameslink/First Capital Connect' in Chapter 3 of this report.

classes of incumbent vehicle involved in each franchise, the DfT presented us with an analysis of:

- the alternatives available to bidders; and
 - any movements in lease terms that occurred following lease renewal.
4. The DfT and the ROSCOs largely agreed on points of fact but differed widely on the extent of the competition faced by the ROSCOs on re-leasing. In the majority of cases (affecting about two thirds of all the incumbent MOLA vehicles covered by the case studies), the DfT and the ROSCOs disagreed as to whether or not there had been effective competition.
 5. The principal case where the DfT and the ROSCOs agreed that there had been effective competition between ROSCOs was the Northern franchise, where the risk at the time of re-franchising of service reductions meant that the DfT and the ROSCOs agreed that the entire incumbent fleet was subject to effective competition.
 6. Given the scope and timetable of this first stage study, we have not sought to reach definitive conclusions on these disagreements. We do, however, consider that we have been able to reach some broad conclusions that are consistent with the concerns identified in Chapter 4.
 7. Firstly, we note that the combination of evidence supplied by the DfT and the ROSCOs makes it fairly clear that it would be incorrect to say that the incumbent ROSCOs invariably find themselves in a monopoly position when stock is being renewed. We have identified examples from the case studies of:
 - stock being displaced, sometimes several years into the life of a franchise;
 - displacement by cascades; and
 - stock being displaced by new build.

8. Actual examples of the substitution and movement of stock included:
 - Class 158s, displaced from TransPennine Express (TPE) by the introduction of the new build Class 185s, will soon displace another ROSCO's Class 158s from First Great Western (FGW);
 - some ex-TPE Class 158s are moving to SWT, displacing Class 170s which are being taken up by TPE;
 - Class 312s which were close to life expiry were displaced from the 'One' franchise by new build; and
 - one case of displacement of an almost new fleet by MOLA stock (HSTs for Class 180s on FGW).
9. However, these examples seemed to us to represent what was very much a minority of cases.
10. The case studies also illustrated a number of the features restricting competition mentioned elsewhere in this report, including:
 - the DfT's ITT for the franchise precluding bidders from proposing new build alternatives (HST replacement on ICEC);
 - the specific requirements of the route constraining the selection of rolling stock (dual voltage Class 319s on Thameslink/First Capital Connect);
 - TOCs commenting that it was rare for new build to be an economic substitute for existing stock in the absence of a specific DfT requirement; and
 - incumbent stock being retained because the only competing stock was owned by the same ROSCO (ICEC).
11. Stock was in most cases (over 90% of incumbent MOLA vehicles) re-leased for the full length of the franchise.

12. We noted that these outcomes appeared to be different in those instances where case studies suggested to us that attractive surplus stock was available. Notably, a number of HSTs, Mark 3 stock and Class 158s, have been displaced by new build from CrossCountry, West Coast and TPE respectively, with some of this stock being surplus at present. Where this stock has been re-leased, it has often been at sharply lower rates and/or has displaced other competing stock. The contrast with the general picture of incumbent stock being retained at similar rates is, we think, itself significant.
13. A significant proportion of the ROSCOs' submissions on the case studies were devoted to providing detailed descriptions of the terms offered to TOCs in the franchise bidding process (principally in cases where they had invested in refurbishment and reliability improvement for existing stock¹¹¹ which was then leased at rates close to those on the previous franchise). We did not consider these parts of the ROSCOs' submissions in great detail. We do not consider it possible for us to assess the extent to which such investments and improvements are useful as an indicator of the level of competition (other than by means of a comparison of costs and revenues taken in the round, which would to some extent duplicate our analysis of profitability). It should also be noted that a lack of transparency in the maintenance reserve would make it difficult to establish the extent to which these investments had been funded from unexpended balances in the maintenance reserve.
14. Our view is that it is possible for us to form a reasonably accurate picture of levels of competition, given the amount of information provided to us by the DfT and the ROSCOs, without a detailed assessment of prices or other terms before and after re-franchising.
15. Angel's response to our minded to refer decision was strongly critical of the approach that we took to assessing case studies in our minded to refer decision, arguing that we had not fully taken into account the evidence that it had submitted in response to our pre-consultation disclosure of the DfT's case studies. We do not accept this. The majority of Angel's case studies covered

¹¹¹ The best examples being ICEC, FGW and Integrated Kent.

the same franchises as the DfT's case studies (it also submitted three additional case studies), and we considered all this material alongside the DfT's case studies, considering that it did not materially alter the conclusions that we reached from our analysis of all of the evidence submitted by the various relevant stakeholders. Some of the examples of apparently competitive outcomes that we identify above are drawn from franchises in respect of which Angel submitted case studies.

16. A key focus of Angel's submission on case studies was a set of detailed descriptions of the terms that it had offered to the different bidders for the same franchise. We interpret this detail as being intended to make two distinct points, namely:
 - the extent to which differing terms are offered to differing bidders; and
 - the reasonableness of the terms offered by Angel, particularly with reference to a counterfactual in which all capital expenditure undertaken by Angel was funded via increased monthly rental rates.
17. We consider that we have fully taken these arguments into account, particularly in our discussion of TOC incentives, buyer power and price trends in Chapter 4.
18. A second key focus of Angel's submission on case studies concerned its view that the threat of displacement of part of a fleet can be sufficient to impose a competitive constraint on an entire fleet, based on a 'critical loss' analysis. We acknowledge in Chapter 4 of this report that this might alter the balance of bargaining strengths in favour of TOCs, but consider it unlikely that it is sufficient in most cases to ensure competitive outcomes given the lack of choice that is available in many cases. We think that this is illustrated by some aspects of Angel's own case studies.
 - The owner of one small fleet (which Angel identified as a risk to part of its larger fleet of the same class of stock) separately argued that its small fleet was not a competitive threat to Angel's fleet.

- Angel itself noted that it failed to secure re-leasing of its Class 158 fleet on SWT because the TOC preferred to lease a larger homogeneous fleet from a single, but different ROSCO.

Annex C – Profitability analysis

Introduction

1. The DfT's submission included a detailed profitability analysis (more details of which are set out later in this annex). The DfT used this analysis to, firstly, support its view of the competition within the relevant markets and, secondly, arrive at a quantified estimate of the level of detriment resulting from the ROSCOs' current level of pricing.
2. The intuition behind the idea that there is a negative correlation between a firm's level of profitability and the level of competition that it faces is straightforward. In equilibrium, profits above the minimum rate of return that is required by a firm to induce it to stay in a market (its cost of capital) will be dissipated by competition from one or both of new entrants and other existing suppliers. But making inferences about market power from profitability data is rarely straightforward, because of a number of factors, including those set out below.
 - Efficiency considerations:
 - high profits may arise from superior efficiency rather than market power; and
 - a monopolist that faces little or no competition may earn modest returns if a lack of competition reduces its incentives to minimise its costs.
 - Difficulties in arriving at economically meaningful valuations of assets.
 - Difficulties in allocating costs that are common to a number of products.

- The influence of transitory or cyclical factors (for example, short-term 'excessive' profits may arise from unanticipated increases in demand but be quickly dissipated by new entry).
 - The influence of accounting policies and changes to these over time (where profits are calculated using accounting techniques).
3. These sorts of issues mean that the potential ambiguities in the nature of the relationship between market power (and its exploitation) and profitability are widely recognised by competition authorities and regulators¹¹². Nonetheless, there is a degree of consensus behind the idea that, in those cases where relatively few of the potential problems listed above apply, or where a number can be controlled for, profitability data (when used together with other indicators) can provide useful evidence in competition assessments. Our view is that in the context of our report, information on profitability provides evidence that is relevant to our competition assessment and to our assessment of the costs and benefits of a reference, and hence to our discretion over whether to refer these markets to the CC.
4. A brief discussion of the DfT's submission on profitability is provided later in this annex, as is a description of the further analysis that we undertook and the corresponding arguments submitted by the ROSCOs. A number of caveats apply to any inferences that might be made from data on the profitability of the ROSCOs, important examples of these being listed below.
- Our results are sensitive to the use of different asset valuation methodologies (as are those of the DfT).
 - As discussed in our competition assessment, our view is that there are some fairly substantial variations in the level of competition in different transactions, meaning that our estimates of a broad part of the business of the ROSCOs are inevitably a blended average of:

¹¹² See, for example, paragraph 3.81 to 3.82 of *CC3 – Market Investigation References: Competition Commission Guidelines*.

- returns on any stock where the ROSCOs have a position of market power; and
 - returns in cases where the ROSCOs have faced effective competition.
 - Our analysis focuses only on the capital portion of the rentals levied by the ROSCOs.
5. Analysis of the ROSCOs' profitability is, however, facilitated by the following relatively favourable circumstances:
- it entails relatively few problems with common cost allocation (since capital costs, which are easily allocated to different types of stock, form the bulk of the costs of the ROSCOs' financing businesses); and
 - the products offered by each of the ROSCOs are very similar.
6. The remainder of this annex provides a discussion of the following issues:
- two key methodological issues that are common to all of the profitability estimates that we have discussed with stakeholders;
 - benchmark rates of return;
 - the DfT's work on profitability;
 - the additional work that we carried out on profitability;
 - the views of the ROSCOs on profitability; and
 - our conclusion with regard to the profitability of the ROSCOs for the purposes of this report.

Methodological issues

Relationship between our market analysis and profitability analysis

7. As set out in Chapter 4, we think that the key features of these markets from a competition perspective relate to the lack of attractive alternatives to incumbent stock at the point of franchise renewal. Historically, these features have been largely confined to MOLA stock, and not, as far as we are aware, to non-MOLA stock, due to the ability of all ROSCOs to compete on equal terms to lease this stock when it is new without being constrained by limited availability of surplus stock (although we have not investigated the level of competition between lessors of new stock in any depth).
8. It might be argued that our profitability analysis should separately analyse returns in:
 - cases where our other (non-profitability) indicators suggest that the ROSCOs have enjoyed a position of market power; and
 - cases where our other indicators suggest that competition has been effective.
9. An analysis of this type would have enabled us to analyse both the absolute level of returns in the former cases and the relative magnitudes of returns in the two different categories of cases.
10. We decided, though, to group the ROSCOs' returns into only two distinct categories in our analysis, namely MOLA stock and non-MOLA stock, because:
 - this approach is based on a level of data and resource intensity that is consistent with the scope and timetable of our study. Whilst we were aware that it might not produce definitive findings, we considered its output would be adequate given the section 131 test and in particular the reliance being placed on it as a cross-check against the concerns identified in Chapter 4 and against the DfT's findings on profitability; and

- the same categorisation was used by the DfT and by one of the two ROSCOs that provided us with their own detailed profitability analysis which facilitated comparison between different sets of results.
11. In the remainder of our discussion of profitability we therefore draw a distinction between MOLA and non-MOLA stock.
12. The remainder of this section is focused primarily on the level of profits earned by the ROSCOs in leasing MOLA stock, with returns on non-MOLA stock sometimes referred to as a comparator. Our view is that an aggregate analysis which spanned both MOLA and non-MOLA activities¹¹³ would risk obscuring the true underlying returns of the ROSCOs in different parts of their businesses given:
- the fact that most of competition problems identified within this report are only manifest at the point of re-leasing; and
 - the differing means by which the relevant assets were acquired.

Asset valuation

13. Assets provide a business with the ability to generate income. Many commonly used methods of profitability analysis require estimates of asset values, for example:
- an estimate of the value of capital employed is a key component of the denominator of return on capital employed (ROCE) calculations;
 - opening and/or starting asset valuations are required in a truncated internal rate of return (IRR) analysis; and
 - in capital-intensive industries, depreciation charges are an important component of all EBIT-based profitability ratios (such as ROCE and return on sales (ROS)).

¹¹³ Angel argued in favour of such an approach at paragraph 58 of its response of 28 February 2007.

14. Widely used approaches to asset valuation in competition analysis include:
- historic cost, namely valuing assets based on their original purchase cost (less accumulated depreciation); and
 - replacement cost, namely arriving at asset values by asking how much it would cost to replace them today. One example of this methodology is a modern equivalent asset (MEA) approach, which measures the cost of replacing existing assets with replacements that, whilst not necessarily of exactly the same specification as the originals, are a modern equivalent that could be used to carry out the same function.
15. MEA valuation is often cited as the most meaningful method of asset valuation to be used when using profitability data in various types of competition analysis¹¹⁴.
16. Asset valuation is a particularly important issue for assessing the profitability of the ROSCOs. In their accounts, all of the ROSCOs currently value MOLA assets at substantial premiums over initial privatisation prices. A number of alternative valuation methods were available to us during the course of our review though, including ones based on:
- the 'acquisition cost' asset values implied by the prices historically paid by the ROSCOs to acquire their businesses, either:
 - at privatisation; or
 - at subsequent re-purchase;
 - the value of assets as they are currently recorded in the accounts of the ROSCOs; and
 - a measure of replacement cost (for example an MEA approach).

¹¹⁴ See, for example, *Assessing profitability in competition policy analysis*, OFT, July 2003.

17. The revaluations that have been applied by each of the ROSCOs in their accounts differ in a number of respects, namely:
- date of re-valuation (for example Porterbrook's MOLA assets were revalued upwards as recently as [X], whereas those of HSBC have not been revalued since [X]);
 - frequency of re-valuation (for example Porterbrook's assets have been revalued upwards [X] times since privatisation but Angel's have only been revalued [X]); and
 - methodology used (for example the revaluation carried out by Angel in 1999 adjusted the gross book value (GBV) of MOLA assets *down* by £[X] whilst also reducing the value of accumulated depreciation by £[X], leading to an increase in net book value (NBV) of £[X], whilst Porterbrook's revaluations applied upward adjustments to both the gross and net book values of MOLA assets).
18. We have been presented with and have calculated profitability estimates based on the following bases of asset valuation.
- The DfT's analysis:
 - depreciated privatisation price – the value attributed to the ROSCOs at the point of privatisation, depreciated to 2005 on an annuity basis;
 - depreciated purchase price – the most recent purchase price paid for the ROSCOs, depreciated to 2005 on an annuity basis; and
 - depreciated replacement cost (DRC) – a depreciated measure of the current replacement cost of the ROSCOs' MOLA assets (calculated for a sample of the ROSCOs' fleets).
 - Our analysis:
 - vesting value –the cost of the assets at privatisation; and

- revalued assets – the value of the MOLA assets as they are currently recorded in the accounts of the ROSCOs.
 - Estimates supplied by the ROSCOs:
 - revalued assets; and
 - DRC – the ROSCOs provided us with (in some cases indicative) replacement cost calculations in relation to a sample of their fleets.
19. We discuss the estimates calculated on all of these bases in the next sections of this annex.

Benchmark rates of return

20. In our minded to refer decision we explained that, in our view, a range of 6-8% (measured in nominal, pre-tax terms) represented an appropriate benchmark against which to compare profitability estimates for the ROSCOs.
21. A more detailed discussion of this issue is provided in Annex D.

The DfT's full-fleet profitability analysis

Approach

22. The DfT's submission included an analysis of the profitability of the ROSCOs across all of their MOLA stock (in this annex we use the term 'full-fleet' to refer to all of the ROSCOs' MOLA stock only), calculated on depreciated privatisation and purchase price bases (in addition to a sample-based DRC analysis, which is discussed in the next section of this annex). Certain key aspects of the DfT's full-fleet profitability analysis are summarised in the figure below.

Figure 7 - The DfT's full-fleet profitability analysis

Method	Comment/detail
Model used	The DfT used a truncated IRR approach. It constructed a cash flow forecast for the MOLA stock for each of the ROSCOs. These cash flow forecasts had two main components: <ul style="list-style-type: none"> ▪ the value of MOLA assets as of 2005, which was treated as a cash outflow in year zero of the model; and ▪ the net cash inflows forecast for the remainder of the lives of the MOLA stock.
Time period covered	The DfT's discounted cash flow (DCF) analysis spanned a period from 2005 to the end of MOLA asset lives.
Key variables	Broadly speaking, the two key variables in the DfT's approach were: <ul style="list-style-type: none"> ▪ the value of assets as of 2005 – this was calculated using two alternative methods (see below); and ▪ estimates of ROSCOs' future cash flows, derived from forecasts of future pricing, costs and demand.
Results	The DfT's results vary substantially between the ROSCOs, and in particular depending on what asset valuation methodology is used. A more detailed discussion of the DfT's results is provided below. In summary, the ROSCOs' forecast returns on MOLA stock look some way above our competitive benchmark when calculated using depreciated privatisation price asset values, but the gap is significantly smaller when calculated using depreciated purchase price asset values.

23. Given the scope and timetable of our study, we have not carried out an exhaustive review of the DfT's analysis. Notably, we have not attempted to verify the cost and revenue forecasts used by the DfT in arriving at its estimates. We considered that attempting to carry out a detailed forward-looking profitability analysis for all three ROSCOs would be disproportionate given the section 131 test and our objective to provide certainty for the industry as quickly as possible on whether there would be a CC reference or not.
24. We did, however, provide the ROSCOs with an opportunity to comment on the DfT's analysis (see our discussion of the ROSCOs' views on profitability later in this annex), in addition to carrying out a number of high-level checks of our own.

25. The steps that our checks took to verify the DfT's analysis were to:
- carry out a high-level review of the DfT's approach (see below for a short outline of our views on its merits); and
 - check its calculations for any anomalous aspects including spreadsheet modelling errors.
26. Based on these checks, and subject to the caveats outlined below, our view is that the DfT's results provide a useful source of information on profitability to be considered in conjunction with our own calculations and those supplied by the ROSCOs. The DfT's approach is in most respects more information and resource-intensive than our own method, and our comments on it should not be seen as an attempt at a definitive critique. We have not ourselves concluded on the main unresolved issue in the DfT's analysis, namely the most appropriate means by which to arrive at an economically meaningful valuation of the assets of the ROSCOs.
27. In our view, the main strength of the DfT's approach is that, as a (truncated) IRR analysis it:
- covers a significant proportion of the lives of the assets in question; and
 - is (to some extent) free from the distortions associated with an accounting data based approach such as the one that we have used in our more simple assessment.
28. Some other key features of the DfT's approach are that:
- whilst free of accounting distortions, its starting asset valuation, which is a key driver of its final results, is dependent on the choice of depreciation method used to arrive at a depreciated valuation of the ROSCOs assets¹¹⁵;

¹¹⁵ Whilst the DfT's preferred annuity depreciation methodology has a number of advantages, it is dependent on a forecast of the revenue earned by the ROSCO, rather than a 'competitive' path of prices (to the extent that these might be expected to differ).

- it depends partly on (unverifiable) assumptions about future prices and costs; and
 - in some cases, it uses input parameters (relating to assumptions such as the level of overheads) that are not based on actual company data from the ROSCOs, but on assumptions made by the DfT based on its industry knowledge and on that of its advisors.
29. In summary, we think that the DfT's results provide some useful insights into the profitability of the ROSCOs, but that it is appropriate for us to also take our own accounting data based results, together with the information supplied to us by the ROSCOs, into account in attempting to arrive at a balanced view on profitability.

The DfT's full-fleet results

30. The DfT's results were (as described above, each figure representing an IRR for MOLA stock from today to the end of the life of the MOLA stock):
- with assets valued at depreciated privatisation price:
 - Angel: [X]%;
 - HSBC: [X]%; and
 - Porterbrook: [X]%.
 - with assets valued at depreciated purchase price:
 - Angel: [X]%;
 - HSBC: [X]%; and
 - Porterbrook: [X]%.
31. The DfT presented its results in the form of a quantified estimate of 'consumer detriment', expressed in both annual and present value terms. This detriment was calculated as the difference between:

- the present value of forecast net cash inflows; and
 - the present value of forecast rentals adjusted so that prices were at a competitive level calculated by the DfT based on its view of a reasonable rate of return as described above.
32. The DfT's estimates of the annual consumer detriment arising from the ROSCOs' charging above the competitive level were:
- depreciated privatisation price: £157m to £177m; and
 - depreciated purchase price: £34m to £70m.
33. Returning to the forecast IRRs set out above, it is clear that:
- the DfT's forecast of the ROSCOs' returns are substantially above its view of competitive returns on a depreciated privatisation price basis, with fairly striking differences between forecast IRRs and its view of competitive returns; but
 - the gap between projected actual returns and its view of competitive returns is significantly smaller when assets are valued on a depreciated purchase price basis.
34. Our view on the implications of these results for our review are provided at the end of this annex.

Our full-fleet¹¹⁶ profitability estimates

Introduction

35. As explained above, we consider the DfT's results to provide a useful piece of evidence in looking at the profitability of the ROSCOs, and that it would not be appropriate for us to duplicate or fully review its approach during our review (beyond the high-level checks that we carried out as described above).

¹¹⁶ As in the previous section, we here use the term 'full-fleet' to denote all of the ROSCOs MOLA (only) stock.

36. We carried out our own assessment of the profits of the ROSCOs (with a focus on ROCE), calculated using a combination of publicly available accounting data and further detailed accounting data supplied to us by the ROSCOs.

Our approach

37. Our profitability analysis was based on accounting data collected from the ROSCOs in July to September 2006. In brief, our methodology was to:
- send financial questionnaires to the ROSCOs asking them to supply us with accounting information on a range of variables including revenues, operating costs, and capital values/depreciation charges;
 - ask the ROSCOs to disaggregate, for the purposes of our questionnaire, their activities into MOLA/non-MOLA and capital/non-capital categories;
 - ask the ROSCOs to supply information on asset values and depreciation charges calculated on two different bases; and
 - use the data supplied by the ROSCOs to calculate a series of profitability figures to be compared with the benchmarks decided earlier in this annex, using a normalised straight-line approach to depreciation.
38. These steps were carried out on our behalf by our financial advisors Grant Thornton. Certain key aspects of our analysis are set out in the figure below.

Figure 8 - Our profitability analysis

Method	Comment/detail
Model used	We calculated standard profitability ratios (ROCE, ROS) based on accounting data supplied to us by the ROSCOs.
Time period covered	We calculated ratios using three ¹¹⁷ years (2003 – 05) of data supplied by the ROSCOs.
Key variables	Value of assets for calculating depreciation charges and value of capital employed- two alternative methods.
Results	<p>As with the DfT's results, our results were critically dependent on the asset valuation methodology that we used. Our results are provided later in this subsection.</p> <ul style="list-style-type: none"> ▪ In short, estimates of the ROSCOs' ROCE on MOLA stock appear to be qualitatively fairly similar to the DfT's IRR results. ▪ returns are substantially above our benchmark range of returns when assets are valued on a vesting values basis; but ▪ the gap between projected actual returns and our benchmark range of returns is significantly smaller when the value of assets is calculated on a revalued assets basis.

39. In our view, the main strengths of an accounting approach to assessing the ROSCOs' profitability are:

- its consistency with the level of analysis typically undertaken by the OFT in first stage enquiries;
- accounting information and results are widely recognised and understood;
- it is not reliant on forecasts of the ROSCOs' future prices and/or costs;
- it produces results that are verifiable in the sense that they can be reconciled to the ROSCOs' published accounting data; and
- by calculating a series of annual figures, we were able to look for any obvious trends in the profitability of the ROSCOs.

¹¹⁷ In the case of one ROSCO, we were supplied with data for one year that only spanned a 10-month period. We converted this information into annual figures by simply inflating the 10-month data by a factor of 12/10.

40. The key weaknesses of an accounting approach include the fact that it:
- relies on accounting estimates of depreciation, which may be a poor proxy for changes in the economic value of the relevant assets; and
 - only spans a period of three years, which means that it can only be considered a 'snapshot' in the context of businesses with asset lives that routinely exceed periods of 30 years.
41. The snapshot nature of our approach is such that our results may fail to reflect some important aspects of the ROSCOs' financial performance. Notably, our data window might be too short to reflect any significant instability or future uncertainty in the ROSCOs' financial performance.
42. Our view, though, is that there are good reasons to think that the financial performance of the ROSCOs in the area of focus is likely to be stable, since:
- a substantial proportion of their revenues are earned from long-term contracts, where lessee credit and insolvency risk is mitigated by Government funding and credit support; and
 - as explained in our competition assessment, information on switching rates and the amounts of stock that are currently off-lease, plus increasing demand for new stock, suggest that the level of asset re-lease risk faced by the ROSCOs is relatively low.

ROCE estimates

43. The two figures below set out the results of our accounting profitability calculations.

Figure 9 - Return on capital employed (MOLA stock) – vesting value of assets



Figure 10 - Return on capital employed (MOLA stock) – revalued assets



44. These findings are qualitatively fairly similar to the ones obtained by the DfT using IRR analysis. Their implications for our review are discussed at the end of this annex.

ROS estimates

45. Our minded to refer decision presented comparisons between the ROS earned by the ROSCOs on both MOLA and non-MOLA stock between 2003 and 2005 and recent company-level profits earned by a sample of aircraft leasing companies.
46. Additionally, the consultation responses submitted by National Union of Rail Maritime and Transport Workers (RMT) and Transport Salaried Staffs' Association (TSSA) included an analysis of the company-level ROS achieved in the period since privatisation.
47. Our view is that estimates of the ROSCOs' profitability that have been calculated on a ROS basis are difficult to interpret. Competition authorities sometimes place weight on ROS as an indicator in cases where there are particular difficulties in arriving at an economically meaningful asset valuation, as is the case here. But the usefulness of ROS as an indicator for analysing the profits of the ROSCOs is reduced significantly by the fact that depreciation, which is sensitive to the chosen asset valuation methodology, accounts for the majority of the costs of the ROSCOs when calculating EBIT. Added to the difficulty common to the use of ROS analysis generally, namely finding meaningful benchmarks, and in the light of consultation responses on this issue (the ROSCOs or the DfT argued that these results were not meaningful), we consider on balance that it is not useful for us to set out our analysis of these results within this report. ROS estimates (along with other types of alternative estimate methods) might, however, be an area for the CC to look at in more detail.

The DfT's DRC analysis

48. The term 'replacement cost' is commonly applied to a number of valuation methods that are used to arrive at asset values by asking how much it would cost to replace them today. An example is an MEA approach, which measures the cost of superseding existing assets with replacements that, whilst not of exactly the same specification as the originals, are a modern equivalent that could be used to carry out the same function. In industries with low barriers to entry, the market value of companies' assets might often be expected to tend towards replacement values. DRC is an example of the various methods that might be used to arrive at an estimate of MEA values.
49. In its submission to us, in addition to the full-fleet privatisation and purchase price analysis described above, the DfT provided us with replacement cost based profitability estimates calculated for a sample of the ROSCOs' MOLA stock (the time and resource-intensive nature of replacement cost valuations being such that the DfT did not consider a full replacement cost valuation to be appropriate). It termed this analysis, described in more detail below, a DRC analysis.
50. In our minded to refer decision (see Annex C, paragraphs 21 onwards) we said (based on general principles regarding the use of replacement cost values referred to above):
- “Our current view is that MEA values are likely to provide the best means of valuing the ROSCOs' MOLA assets... We have not carried out a sufficiently detailed review of the depreciated replacement cost analysis carried out by the DfT to enable us to reach a view as to whether this represents the most appropriate means by which to arrive at MEA values.”
51. This caution regarding the DfT's methodology notwithstanding, at paragraph 25 we said:

“...the results obtained by DfT using a sample fleet suggest that the DRC-based estimates of the ROSCOs' profitability are closer to depreciated privatisation value-based estimates than to ones calculated using depreciated purchase price. We therefore think that it is appropriate for us to put more weight on estimates calculated on the former basis”.

52. All of the ROSCOs provided comments on this aspect of our minded to refer decision. All were critical of the methodology used by the DfT in arriving at its estimates (see below). The remainder of this section provides a short description of the DfT's DRC methodology.
53. The DfT carried out its DRC analysis in relation to a sample of the ROSCOs' MOLA stock, spanning over 1,000 vehicles in key broad classes of MOLA stock (DMU, EMU, and HST). The DfT's analysis took the form of a series of IRR calculations (truncated from 2005 to the forecast life end of the sampled stock), supported by estimates of the opening replacement cost of MOLA stock that were calculated on its behalf by Henry Butcher International (HBI).
54. In brief, the key steps taken in the HBI analysis were to:
 - identify a 'modern equivalent' asset (for example HBI identified Bombardier 'Electrostar' EMUs as the modern equivalent of [S&P]'s early 1980s Class 315 EMUs);
 - depreciate the asset values identified in the first step in order to estimate a net (of depreciation) asset value as of 2005, assuming the same date of manufacture as for the actual MOLA stock in question; and
 - apply adjustments to the depreciated asset values calculated in the previous step in order to reflect any factors that make MOLA stock less attractive than the modern equivalent from a buyer's perspective (for example older stock not being equipped with passenger air conditioning).
55. The DfT used these DRC asset values as an input into its truncated IRR calculations, in which estimates of DRC (calculated as described in the

previous paragraphs) were treated as a year zero cash outflow and compared with the net cash flows forecast to be earned over the remainder of the lives of the assets in question.

56. As outlined in our discussion of stakeholder views below, the depreciation methodology used in HBI's analysis attracted a significant amount of comment from the ROSCOs. HBI depreciated the replacement cost of the MOLA stock that it analysed based on the following reducing balance profile (assuming a [X]-year working life):
- day one – [X]%;
 - years 1 to 10 – [X]% per year;
 - years 11 to 20 – [X]% per year; and
 - years 20 to end of life – [X]% per year.
57. In other words, HBI assumed a depreciation profile that was substantially accelerated relative to a straight line or annuity depreciation approach¹¹⁸.
58. As explained in our minded to refer decision, the IRRs calculated by the DfT based on its DRC approach were closer in magnitude to its depreciated privatisation price results than to its depreciated purchase price results. In other words they suggested profitability that was considerably higher than our competitive benchmark range. HBI's use of an accelerated depreciation profile was the key driver of this result, as highlighted in the comments made by the ROSCOs on this subject.
59. We give our view on replacement cost estimates in our conclusions at the end of this annex.

¹¹⁸ This simplified description omits the details of a number of detailed assumptions used by HBI some of which might be considered to be 'favourable' to the ROSCOs' case, but, we feel, provides a meaningful description of the key issues involved.

Stakeholder views on profitability

60. In its response to our minded to refer decision, the DfT re-iterated the view expressed in its initial submission that all three of its estimation methods (depreciated privatisation price, depreciated purchase price, and depreciated replacement cost) represented potentially useful sources of information on profitability, and that all three were consistent with excess profits being earned. The main focus of our discussion of stakeholder views in this annex is therefore on the responses submitted by the ROSCOs.
61. In our ongoing dialogue with the ROSCOs, and in the text of our minded to refer decision, we made it clear that we did not consider it necessary or appropriate for us to carry out an exhaustive study of the ROSCOs' profitability. Prior to our minded to refer decision we set out the implications of this approach for the level of detail of our profitability analysis and the amount of reliance that we would place on it, and in particular explained that we did not intend to engage in a very detailed review of, or consultation on, the DfT's methodology and results.
62. The ROSCOs' responses to our minded to refer decision (which discussed all of the results set out in the preceding sections of this annex) adopted differing stances with regard to use of profitability information generally¹¹⁹.
- Angel had previously submitted a short paper outlining its views on profitability and its own preferred estimates during the course of our pre-consultation dialogue with all stakeholders.
 - HSBC provided a fairly short criticism of the approach to profitability set out in our minded to refer decision. HSBC did not supply us with its own detailed profitability estimates.
-

- Porterbrook's response had a fairly strong focus on profitability results, including a paper critiquing the approach taken to profitability in our minded to refer decision, written on its behalf by its advisors NERA.
63. Following a request that we sent to the ROSCOs in January 2007, they also provided us with individual submissions setting out their views on the DfT's DRC methodology.

Estimates supplied by the ROSCOs

64. Both Angel and Porterbrook supplied us with fairly detailed estimates of their own profitability¹²⁰.
- Angel provided us with estimates of its profitability calculated using two alternative methods, namely IRR and ROCE¹²¹. Angel's estimates were calculated across *all* of its stock (i.e. MOLA and non-MOLA), on a revalued assets basis and in pre-tax terms:
 - IRR – [X]; and
 - ROCE – [X].
 - Porterbrook provided us with a (revalued assets, MOLA stock only) IRR estimate of its profitability of [X] in pre-tax terms.
65. The IRR figures calculated by Porterbrook were broadly similar, in terms of both methodology and results, to the DfT's depreciated purchase price figures. The main differences were that:
- Porterbrook's estimates used its own, most up-to-date, forecasts of its future cash flows, whilst the DfT's forecasts were based in many cases on its own data sources; and

¹²⁰ In its response to questions prior to our minded to refer decision, HSBC told us that the return that it earned on its assets amounted to an average of [X]%, but it did not supply us with details of how this figure had been calculated.

¹²¹ As discussed later in this annex, Angel argued that the first of these two estimation methods was more appropriate.

- its estimates of asset values were based on its own forecasts of the cash flows that these assets would generate, rather than the actual purchase price that it paid for the business.

Asset valuation methods

66. As outlined above, all of the ROSCOs submitted comments on the DRC approach used by the DfT in its submission and on asset valuation generally.
67. There was a significant degree of variation in the ROSCOs' view as to the most appropriate method of asset valuation:
- Angel maintained, throughout its dialogue with us, that a DCF approach to asset valuation was appropriate;
 - HSBC's submission argued that, "the assessment of profitability should be based on the depreciated replacement cost of the assets, properly estimated"¹²²; and
 - Porterbrook's submission argued that, "MEA values are the most relevant measures of the ROSCOs' assets"¹²³, and also that, "...the ORR should be relying on profitability estimates based on asset values based on the Abbey purchase price..."¹²⁴.
68. The ROSCOs were unanimous, however, in criticising the particular formulation that the DfT used to arrive at its DRC estimates. Their comments in this area are summarised in the next subsection of this annex.
69. The ROSCOs were also unanimous in arguing against the use of asset values calculated on a depreciated privatisation price methodology. In support of this argument, both Angel and Porterbrook referred to the findings of the 1998 NAO report on the privatisation of the ROSCOs¹²⁵, which discussed, amongst

¹²² Page 14 of its response of 28 February 2007.

¹²³ Paragraph 14 of NERA paper on profitability, 28 February 2007.

¹²⁴ Paragraph 7.8 of its response of 28 February 2007.

¹²⁵ National Audit Office, *Privatisation of the Rolling Stock Leasing Companies* (1998).

other things, possible reasons as to why full value may not have been realised from the privatisation process.

Approach to calculating replacement costs

70. Whilst the ROSCOs differed slightly in the terminology that they used and in some of their detailed suggestions, there was a significant amount of common ground in their responses with regard to the DfT's approach to arriving at DRC-based profitability estimates as described above. The key arguments made by the ROSCOs included the following:
- *depreciation profile* – all of the ROSCOs argued that HBI's use of an accelerated depreciation profile was inappropriate (discussed in more detail below);
 - *overheads and refurbishment costs* – Angel¹²⁶ argued that their actual ongoing costs (assumptions regarding these were an input into the IRR calculation that the DfT used to inform its DRC analysis) were above the levels assumed by the DfT; and
 - *asset lives* – Angel¹²⁷ argued that the requirements of DDA compliance were such that there was a risk that much of the MOLA stock would have lives shorter than those assumed by the DfT.
71. The ROSCOs argued that properly formulated estimates of the replacement cost of their MOLA assets were significantly higher than the values implied by privatisation prices. The key driver of this result was the departure of the ROSCOs from the DfT's accelerated depreciation methodology. The ROSCOs all argued that, in their experience, the earning power of passenger rolling stock decreases at a much slower rate than implied by HBI's methodology. They argued that, if such declines in earning power were observed in practice, the ROSCOs' pricing would have to be higher in earlier years of asset lives in order to ensure full cost recovery (in contrast to the

¹²⁶ Page 8 of Angel's submission of 31 January 2007.

¹²⁷ Ibid.

predominant actual pattern of rentals remaining broadly flat across the life of rolling stock).

72. Angel and Porterbrook both suggested amendments to the DfT's methodology and provided calculations carried out using non-accelerated depreciation methodologies. As noted above, these calculations suggested significantly higher asset values, and hence lower returns, than the ones calculated using the DfT's methodology.

The usefulness of accounting-based estimates

73. All of the ROSCOs were critical of the accounting-based estimates discussed above, raising a number of the well-known limitations of accounting-based estimates such as the ones referred to above. The DfT, whilst acknowledging the drawbacks of methods that rely on forecast data, made similar comments.

Interpretation of results

74. There seems little doubt that the ROSCOs' returns on MOLA stock, when calculated on a depreciated privatisation price basis, are substantially higher than benchmark returns. As explained above, though, there has been considerable disagreement between the parties as to the relevance of such estimates to assessing the profitability of the ROSCOs. The extent of disagreement between the parties on methodology is such that the interpretation of a single set of results calculated on a replacement cost basis was not a key area of disagreement in the arguments submitted by stakeholders.
75. There was, however, a disagreement between the DfT and the ROSCOs in their interpretation of results calculated on a depreciated purchase price or revalued assets basis. Crucially, the DfT argued that excess profits were suggested in cases where forecast returns were a small number of percentage points higher than its estimate of a competitive benchmark. The

ROSCOs, on the other hand¹²⁸, interpreted the same results as being within a 'normal' (i.e. non-excessive) range, arguing that only returns that are much higher than a point estimate of the competitive level could be described as 'excessive'.

76. The next section sets out our conclusions on this and other profitability issues in the light of the comments made by various stakeholders.

Our conclusions

77. This annex has discussed a wide range of estimates of the ROSCOs' profitability. The most important of the full (MOLA)-fleet estimates that we have calculated or been supplied with are summarised in the figure below. We have not presented the figures supplied to us by HSBC because of the lack of transparency of these estimates.

Figure 11 - Summary of key full-fleet profitability estimates (nominal, pre-tax figures)

Estimate	Stock	Time period	Asset valuation methodology	Value
Competitive benchmark (ORR)	n/a	n/a	n/a	6-8%
Forecast IRR (DfT)	MOLA	2005 -	Depreciated privatisation price	[<]-[<]%
			Depreciated purchase price	[<]-[<]%
ROCE (ORR)	MOLA	2003 - 05	Vesting values	[<]-[<]%
	MOLA		Revalued assets	[<]-[<]%
ROCE (Angel)	MOLA + non-MOLA	2003 - 05	Revalued assets	[<]-[<]%
IRR (Angel)	MOLA + non-MOLA	2005 -	Revalued assets	[<]-[<]%
IRR (Porterbrook)	MOLA	2000 -	Revalued assets	[<]%

¹²⁸ Notwithstanding any comments that they had on the appropriate level of a benchmark or on the exact level of returns.

78. We assess these estimates (in addition to estimates calculated on a replacement cost basis) below.

Asset valuation methods

79. We have not arrived at a definitive view on the exact most appropriate method of asset valuation.
80. That said, our view is that a replacement cost methodology may prove to be the most relevant basis for assessing profit levels. But, in the light of the disagreement between stakeholders and the practical issues outlined in this annex (which suggest to us that more than one possible 'replacement cost' methodology is available), do not consider that we are in a position to provide a definitive opinion. We also do not consider that it is necessary for us to do so as a first stage authority, particularly given our findings in other areas as outlined in Chapter 4.
81. Of the other available estimates, namely ones based on privatisation/vesting values and purchase/revalued asset values, it is clear that both have a number of disadvantages.
82. It seems likely to us that the asset values implied by privatisation prices were, as argued by the ROSCOs, depressed at privatisation by a number of factors, including perceptions of the risks faced by the ROSCOs and the extent of competition between buyers, suggesting that caution should be exercised when interpreting these results. But, as shown in Figure 11, the gap between privatisation asset values and forecast cash flows is significant. Even applying a substantial uplift to privatisation values, such as the one previously applied by ORR to the value at privatisation (based on first day trading value) of Network Rail's equity¹²⁹ of 15% would result in a forecast IRR of [X] for the ROSCOs, which is some way above our benchmark range.

¹²⁹ For example, see *Periodic review of Railtrack's access charges: Final conclusions*, ORR, October 2000. Porterbrook's response argued (at paragraph 28 of NERA's report on profitability, 28 February 2007) that, "Average discounts of around 40% are reported in the economic literature". We would not, however, accept the validity of such a large uplift

83. Revalued or purchase price asset values suffer from the problem of circularity between asset values and expected future cash flows, which clearly has the potential to make any monopoly profits self-justifying¹³⁰. We consider that the arguments in favour of such approaches put forward by both Angel and Porterbrook are inappropriate given this well-established principle, clearly set out in the OFT/Oxera report *Assessing profitability in competition policy analysis*, July 2003¹³¹. We are not persuaded that Porterbrook's argument that the fact that its revalued asset values were based on a "prudent assessment"¹³² of future cash flows by Abbey should be viewed as eliminating or substantially mitigating these problems, since its asset values still reflect a (relatively recent) forecast of their revenue earning potential.
84. Our view is that the issue of asset valuation (and profitability analysis generally) would benefit from further more detailed consideration by the CC.

Approach to calculating replacement costs

85. As noted above (and in our minded to refer decision) there are a number of arguments in favour of the use of an MEA approach. We do not think, however, that the results submitted by any of the parties are sufficiently comprehensive to allow us to reach a definitive view on the level of profits calculated based on an MEA asset valuation approach. Nor do we think that it would be proportionate for us to carry out our own MEA asset valuation.
86. The main differences between the replacement cost methodologies suggested by the DfT and ROSCOs arise from the DfT's application of an accelerated depreciation profile. We have some sympathy with the criticisms of the DfT's methodology put forward by the ROSCOs.

without significant further work in this area, including an assessment of the particular circumstances surrounding the privatisation of the ROSCOs.

¹³⁰ Depending on the exact nature of expectations at privatisation, to some extent the same may also be true of privatisation price values.

¹³¹ This report was written by Angel's advisers, Oxera, and referred to by Porterbrook in support of its submission on profitability.

¹³² Paragraph 3.16(b) of Porterbrook's response of 28 February 2007.

87. We note that rapid declines in (second-hand) market value have been observed in a small number of real-life sales of second-hand stock, as well as for other types of commercial vehicles. But, as argued by the ROSCOs, profitability estimates calculated using this method should be interpreted with caution. This can be illustrated by means of a simple worked example¹³³.
- An investment of £1m at the end of 2005 that is forecast to earn constant net cash inflows of £70,000 per year for 30 years will have a forecast IRR of 5.66%; but
 - If the same asset is subjected to 25% day one depreciation, a forecast truncated IRR calculation as of the end of 2006 will be 8.44%, i.e. significantly higher than the full-life IRR.
88. Whilst the example in the previous paragraph assumes 25% first-day depreciation here, the same basic result (inflated truncated IRRs) would be obtained using any accelerated¹³⁴ depreciation profile. The use of an accelerated depreciation methodology such as the one employed by the DfT therefore has the potential to significantly inflate truncated IRR calculations (other than in cases where the earning power of assets experiences a similarly rapid decline).
89. In order to conclude on this issue, it would be necessary to perform a number of further steps, which might include some or all of the following:
- firmly establishing a conceptual framework and methodology for assessing replacement costs;
 - identifying appropriate sample fleets; and
 - analysing longer-term issues such as the reasons behind any changes over time in the underlying value of the assets in question, and how these should be treated in a profitability analysis.

¹³³ Ignoring the effects of tax and capital allowances.

¹³⁴ Or indeed a straight-line depreciation approach.

The usefulness of accounting-based estimates

90. We agree, as argued by both the ROSCOs and the DfT, that accounting-based profitability estimates have a number of limitations in a competition assessment, but as explained above, we are also mindful of the drawbacks of approaches that rely on forecast data, which we think have been inappropriately downplayed by the ROSCOs.
91. In both its response to our minded to refer decision and to our earlier pre-consultation questions, Angel supported its arguments in favour of a 'forward-looking' approach (arguing that, "*Competition authorities have recognised the importance of forward-looking profits when using profitability to assess the competitiveness of a market*¹³⁵") with reference to a quote from a speech by the former Competition Commission Chairman¹³⁶, "...we need to take a more forward looking approach to profitability analysis".
92. We think, though, that Angel's quoting of this speech overlooked important contextual aspects. Firstly, we note that the speech included a discussion of the differing levels of analysis appropriate for first and second stage authorities. Secondly, Angel has omitted the full context in which 'forward-looking' profitability estimates was discussed: where the legitimacy of backward-looking estimates for the assessment of market power was acknowledged whereas, for a forward-looking analysis, it was argued that, "*The most natural setting for this kind of profitability analysis is a merger*".
93. Based on the factors set out earlier in this annex, we therefore consider that, whilst a sole reliance on accounting data would not be appropriate, our accounting profitability results provide useful information in the context of an overall assessment. At a minimum, a cross-check against accounting data would be a useful validation exercise to be carried out in a fuller IRR analysis.

¹³⁵ Paragraph 57 of Angel's response of 28 February 2007.

¹³⁶ Geroski, P (2005), *Profitability Analysis and Competition Policy*.

Interpretation of results and our view

94. The ROSCOs have argued that the magnitudes of profitability results calculated on a depreciated purchase price basis are such that returns should not be interpreted as being 'excessive'. As noted above, we do not consider that profitability estimates calculated on this basis should (at least without significant further scrutiny) be accepted as robust indicators of whether excess profits are being earned as a result of inadequate competition to incumbent stock. Additionally, our view is that the DfT's estimate of 'consumer detriment' calculated on this basis¹³⁷ might be unduly low since, for example:
- the DfT's analysis compares the value paid by the ROSCOs for their *entire* (MOLA) businesses with *capital* rentals only, when non-capital rentals have been and continue to be an important source of income for the ROSCOs with regard to the leasing of MOLA stock; and
 - the DfT's cash flow forecasts may be unduly conservative because of, for example, the omission of the rentals associated with 'slam door' stock that was taken out of service before 2006.
95. More generally, we think that a detailed reconciliation between time series cash flow data and audited company accounting data might be a valuable exercise.
96. As explained above, based on the estimates made available to us:
- the ROSCOs' returns appear to be substantially above benchmark ranges when calculated on a depreciated privatisation price/vesting values basis; but
 - the gap between the ROSCOs' returns and benchmark returns is significantly smaller when assets are valued on a depreciated purchase price/revalued assets basis.

¹³⁷ The same is true of the DfT's depreciated *privatisation* price estimates.

97. On this basis, we remain of the view (expressed in the minded to refer decision) that we have been presented with plausible estimates that suggest excess profits that reinforce our suspicion, arising from the analysis in Chapter 4, that competition in the leasing of stock at renewal is not working well and that the detriment associated with the ROSCOs' current level of pricing is potentially significant. That said, we acknowledge that our profitability results are not determinative in themselves, and are of the view that this issue merits a more detailed analysis being carried out. For the reasons set out in Chapter 5, we think that the CC is the most appropriate body to carry out this analysis.
98. In their responses to our minded to refer decision, the ROSCOs have made a number of valid criticisms of the estimates presented in our minded to refer decision. But we do not consider that the alternative approaches suggested by the ROSCOs can be accepted without further work in this area, and plausible excess profit findings remain despite these criticisms. However, bearing these criticisms in mind, we think that the following issues are worthy of drawing to the CC's attention as being relevant to any further work carried out in this area:
- whether the use of an amended privatisation price methodology, adjusted to reflect any initial under-valuation of assets, might be possible (see above for a simple example of an uplift);
 - the extent to which both purchase price and privatisation price asset valuations incorporate expectations of weak competition;
 - how differences in the functionality of MOLA stock and modern equivalents should be treated; and
 - longer-term issues such as the reasons behind any changes in the underlying value of the assets in question, and how these should be treated in a profitability analysis.

99. In all cases, we think that further work on data validation, including an expansion of the analysis to encompass the profits associated with non-capital rentals, is desirable, and consider that the CC is well-placed to consider whether any other estimation methods are appropriate.

Annex D - Benchmark rates of return

Introduction

1. Establishing an appropriate benchmark against which to compare actual returns is an important part of attempting to assess the profits earned by the ROSCOs.
2. Two profitability measures often used by competition authorities and regulators (and in our assessment of the ROSCOs' profitability as set out in Annex C) are ROCE and IRR. Both ROCE and IRR measure the income generated by firms from the total amount of capital that they have invested. The appropriate benchmark against which to measure such figures might therefore reflect one or both of:
 - the actual return on capital achieved in markets that are similar to the one(s) under examination and that are recognised as being subject to effective competition; and
 - estimates of returns on capital required by investors in order to invest in a company, namely its weighted average cost of capital (WACC).
3. The DfT's submission compared forecasts of returns expected to be earned by the ROSCOs on MOLA stock (see the next subsection of this annex for details) with a range of benchmarks, including the ones discussed below.
 - Estimates of the IRRs earned by the ROSCOs from the leasing of non-MOLA rolling stock – the DfT calculated forecast IRRs for a sample of the non-MOLA stock procured by the ROSCOs since privatisation. These calculations were based on the assumption that current nominal capital rentals would remain constant for the remainder of the lives of these assets and on forecasts of future expenditure to be incurred by the ROSCOs.

- Bond yields in the rolling stock market – the DfT analysed historic yields on two bond issues that were made by Angel in the years following privatisation.
 - Estimates of the WACC of a hypothetical ROSCO – the DfT estimated the WACC of a hypothetical ROSCO, based on its assessment of the risk characteristics of rolling stock leasing.
 - Achieved IRRs from a sample of PFI projects – the DfT summarised a 2002 study in this area carried out by PricewaterhouseCoopers (PwC).
4. Based on these sources, the DfT concluded that an appropriate pre-tax nominal benchmark rate of return for rolling stock leasing was in the range of 5.3-7.3%, which it presented as a 'surplus' over a risk free rate (4.3%) of 1% to 3%.
5. Our assessment makes use of all of the types of benchmarks used by the DfT. In arriving at our benchmark range we, therefore, put weight on:
- our own estimate of the WACC of a hypothetical ROSCO; and
 - the DfT's benchmarks (in which its estimate of the returns associated with the leasing of non-MOLA stock played a key role).
6. The main advantages of comparing the returns earned by the ROSCOs from leasing MOLA stock with a WACC estimate are that such a benchmark:
- is not reliant on forecast data or business secrets; and
 - is in widespread use by competition authorities and regulators.
7. The main disadvantage¹³⁸ of using a WACC estimate as a benchmark against which to assess the ROSCOs' returns is that our estimates of the firm-specific parameters in the cost of equity (equity beta) must rely on (in some cases

¹³⁸ Beyond the usual difficulties inherent in WACC estimation, which have been discussed at length elsewhere, for example in *Assessing profitability in competition policy analysis*, OFT, July 2003.

fairly speculative) assertions about the risk characteristics of rolling stock leasing, since there are no 'pure play' listed comparators available¹³⁹.

8. Comparisons with non-MOLA rolling stock are attractive because of the many similarities in the underlying characteristics of the leasing of non-MOLA and MOLA rolling stock.
9. The main shortcomings of the use of comparisons between the returns on non-MOLA and MOLA stock include the following:
 - estimates that rely on the forecast profitability of either non-MOLA and MOLA stock may be subject to significant margins of error; and
 - there may be some differences in the risk characteristics of non-MOLA and MOLA stock, for example section 54 commitments apply more often in the former case.
10. Based on all of these factors, our approach has been to put weight on both:
 - our own estimate of a WACC for rolling stock leasing (see below) which is equal to 8%. The means by which we arrived at this estimate are described later in this annex; and
 - other benchmarks, namely the DfT's surplus range of 1-3%, which, given our estimate of the risk free rate of 5% (see below), translates to a return of 6-8%.
11. Both of these measures, as with the rest of our profitability analysis, are expressed in pre-tax nominal terms. The use of such an approach does not capture some important features of the financial performance of the ROSCOs, given the importance of capital allowances for asset leasing companies. The group structure of the ROSCOs might make such an analysis complex. Levels

¹³⁹ There is also only limited information available on other firm-specific parameters required to make a WACC calculation, including cost of debt and gearing levels.

of return at the upper end of the DfT's range for non-MOLA stock are based on figures that take the benefits of capital allowances into account.

12. The approach we have used to arrive at these benchmarks falls below the level of depth and rigour that might be expected in a second stage investigation carried out by the CC, in which benchmark rates of return might be a key focus. In particular, we have not undertaken an exhaustive analysis to verify the DfT's forecast IRRs for non-MOLA stock, or carried out a robust assessment of the cost of equity of the ROSCOs¹⁴⁰. We consider, though, that our estimates do provide a useful guidance in support of the analysis set out in Annex C and are sufficient for a first stage investigation, particularly given the relatively low weight placed on precise figures in our overall assessment of the competitiveness of these markets.

Our WACC estimates

Introduction

13. This section sets out our estimate of an appropriate WACC for the ROSCOs' leasing activities. We use this estimate to inform our competition assessment and our discussion of our discretion to refer these markets to the CC. As discussed above, we have adopted a relatively simple, high-level approach, which we consider appropriate for a first stage authority.
14. In line with most recent regulatory precedents, we have based our estimates of the WACC of the ROSCOs on the Capital Asset Pricing Model (CAPM). The CAPM is a single factor model that predicts the expected rate of return for assets. Risk is measured relative to a market portfolio, with WACC estimates expressed as a weighted average of a company's cost of equity and its cost of

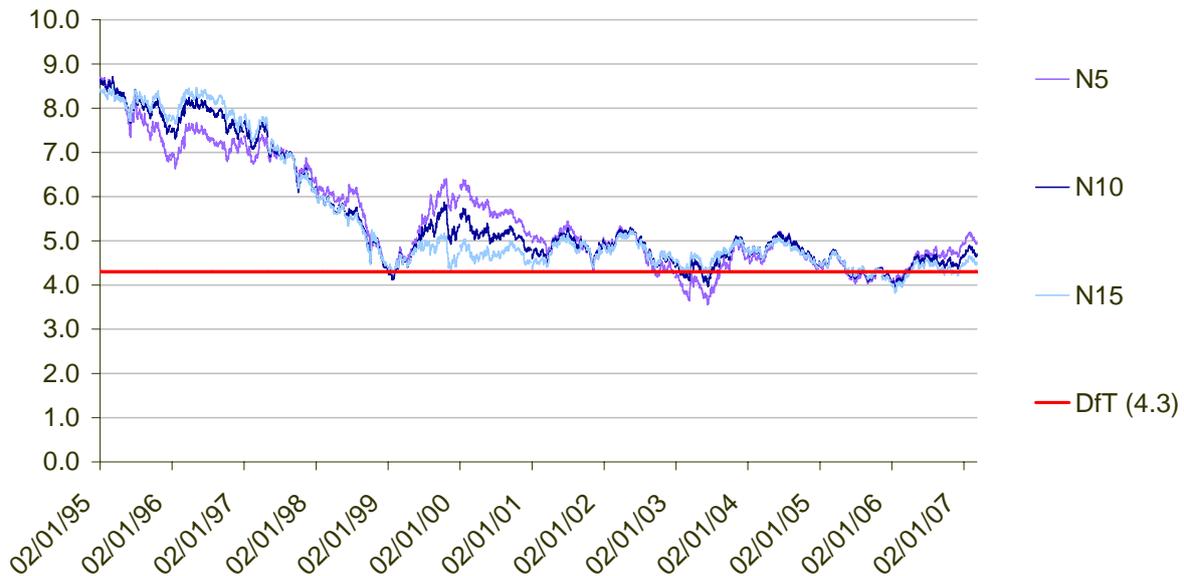
¹⁴⁰ Our view on optimal gearing means that the cost of equity is given a much smaller weight than the cost of debt, meaning that asset beta (and also the equity risk premium) are not critical inputs to the same extent as they were in, for example, the CC's investigation of mobile call termination in 2003. For example, even using an extreme set of assumptions such as an equity beta of 2.0 and an equity risk premium of 10%, our estimate of a nominal pre-tax WACC would still be below 10%.

debt. The remainder of this annex sets out the parameter values that we used for our central WACC estimate.

The risk-free rate

15. The risk-free rate is an input into the calculation of both the cost of debt and the cost of equity. In UK regulatory and competition policy, the risk free rate is often proxied by the yield to maturity on gilts.
16. There is a range of maturities on Government debt that could be used as the basis for an estimate of the risk free rate. For the purpose of this assessment the appropriate maturity might correspond to:
 - the average duration of leases in this industry (which typically span the entire 7 to 10 year duration of a franchise); or
 - the average lifetime of the relevant assets (often 30 years or more).
17. It should be noted that the yield curve is not currently upward-sloping, meaning that using the yield on longer term gilts would not lead to higher estimates, as has often been the case historically.
18. In the light of these considerations, we have estimated the risk free rate from an analysis of the yields on 5-, 10-, and 15- year gilts.
19. Market yields can fluctuate fairly substantially over time. We would expect firms to make pricing decisions based on expectations of future values measured at the time that such decisions are made. The period covered by the profitability assessments in this report vary significantly, for example, lifetime IRR figures for MOLA stock span a period in excess of 30 years.
20. Recent trends in the nominal yields to maturity on gilts with 5-, 10- and 15-year maturities in the period since privatisation are shown below, together with the DfT's assumed rate of 4.3% as included in its submission.

Figure 12 – Recent gilt returns (nominal)



Source: Bank of England

21. The figure above shows that (nominal) market yields on gilts have fallen fairly substantially since 1995. Yields have also been subject to a degree of volatility in the period since privatisation. We have decided to base our estimate of the WACC of a hypothetical ROSCO on an estimated nominal risk free rate of 5.0%. This figure is broadly in line with, albeit towards the higher end of, market values over the last five years or so. It is also consistent with the fairly widely used 'rule of thumb' assumption of a 2.5% real risk free rate and a 2.5% rate of inflation.
22. This is not necessarily the estimate of the risk free rate that we would suggest if we were, for example, carrying out a forward-looking price controlling exercise. But we think this is a sensible approach when assessing returns that are a function of prices agreed at various points in time over a period during which the risk free rate fluctuated substantially. Our estimate is somewhat higher than the value of 4.3% used by the DfT in its calculations. DfT's estimate was based primarily on current market yields at the time it carried out its analysis.

Equity risk premium

23. In the CAPM, the Equity Risk Premium (ERP) reflects the extra return that investors require in return for holding a diversified portfolio of equities rather than a risk free asset. Arriving at an estimate of the ERP can be a complex undertaking, since a wide range of fairly commonly used techniques and estimates are available broadly categorised as follows.
- *Ex post* estimation:
 - extrapolating historical risk premia; and
 - extrapolating adjusted historical risk premia.
 - *Ex ante* estimation:
 - using the dividend growth model;
 - surveys of academic and practitioner expectations; and
 - regulatory benchmarks.
24. Recent regulatory precedents suggest a range that is mostly centred around a range of 4 to 5%:
- Ofcom, statement on mobile call termination (2007): 4.5%;
 - CC, LPG (2006): 3.0 to 5.0%;
 - Ofwat, PR04 (2004): 4.0 to 5.0%; and
 - Ofgem, DPCR04 (2004): 4.5%.
25. We think that an estimate of the ERP in a range of 4 to 5% is appropriate. We consider that a range derived from regulatory precedents appropriately incorporates the various estimates that are available from using the estimation techniques described above. Our central estimate (see the end of this annex) uses the midpoint of this range, 4.5%.

Equity beta

26. A company's equity beta measures the correlation between the returns of a company's shares and the returns on a diversified portfolio of equities.
27. Regulators and competition authorities often calculate betas by means of statistical analysis using historic data on company returns, particularly in cases where the company or companies in question are listed and the activities that are coming under scrutiny make a reasonably large contribution to the market value of the listed parent company. An alternative to these methods, which is sometimes used when these conditions are not satisfied, is to derive beta estimates from a comparator analysis of listed firms that are engaged in activities with similar risk characteristics.
28. None of the three ROSCOs are individually listed, being relatively small parts of much bigger parent groups. We are not aware of any other UK companies that are very close comparators for the ROSCOs in terms of systematic and specific risk. Our inclination is to agree with the view expressed by the DfT, namely that rolling stock leasing is subject to a relatively low level of systematic risk. Whilst passenger rail travel is cyclical to a degree, we consider it unlikely that significant fluctuations in the demand for rolling stock, and in particular for MOLA stock, would arise as a result of changes to systematic (non-diversifiable) risk factors, such as the global economy. Our view is that company specific risks (diversifiable risks) such as Government policy are a much bigger source of both upside and downside risk for the ROSCOs.
29. As a first stage authority and given the modest amount of weight that we have put on the results of our profitability analysis, we do not consider it proportionate for us to expend significant amounts of resource on estimating an equity beta for rolling stock leasing. On this basis, we have used an equity beta of 1.0 in our central estimate. Together with our assumption on gearing (see below), this implies an asset beta of 0.15 (assuming a debt beta of zero).

Optimal gearing

30. A company's gearing measures its ratio of debt to equity capital. The DfT based its profitability analysis on a range of 80-90% for the gearing of the ROSCOs, stating that past dialogue with the ROSCOs had suggested that they were broadly in agreement with the use of this assumption. On this basis, we have assumed a gearing level of 85% for our central estimate.

Debt premium

31. A company's debt premium measures the additional return required by bondholders in return for holding corporate debt rather than a risk-free asset. We have based our estimate of the debt premium on information supplied by the DfT on the yields of bonds that were issued by Angel after privatisation. Historically, the yield spread over gilts varied between 1% and 2%, with more recent values at the lower end of this range. We have based our WACC estimate on what we consider to be a conservative, in other words high, value at the top of this range, namely 2.0%.

Our central WACC estimate

32. The figure below shows the calculation of our central WACC estimate of 8.0% (on a nominal, pre-tax basis).

Figure 13 – WACC estimate for the leasing of rolling stock

Parameter	Estimate
Risk-free rate (nominal)	5.0
ERP	4.5
Equity beta	1.0
Cost of equity (post tax, nominal)	9.5
Cost of equity (pre tax, nominal)	13.6
Debt premium (nominal)	2.0
Cost of debt (pre tax, nominal)	7.0
Gearing	85%
WACC (pre tax, nominal) (15%*13.6+85%*7.0)	8%

WACC estimate - consultation responses

33. The WACC estimate set out above is based on the same parameter values that we used in our minded to refer decision.
34. Whilst the three ROSCOs differed fairly significantly in the level of detail that they presented in response to our minded to refer decision, all of them argued that our WACC estimate was inappropriately low. They argued that we had understated the level of systematic risk faced by the ROSCOs, and hence that our equity beta estimate of 1.0 was too low. None of the ROSCOs commented on any of the other parameter estimates that we used to arrive at a central WACC estimate.
35. The key comments made by the ROSCOs, together with our reasons for remaining of the view that the estimates we calculated in the minded to refer decision are appropriate, are summarised below.
36. Broadly speaking, the rationale used by the ROSCOs to argue that our equity beta estimate was too low was to:
- note that the our implied asset beta estimate was lower than those implied by recent UK regulatory decisions (mainly in the aviation, utility and telecom markets) and;
 - argue that the risk characteristics of rolling stock leasing relative to these other markets imply an asset beta for the leasing of rolling stock that should be towards (or at) the upper end of the range of implied asset beta estimates used in these decisions.
37. Porterbrook's response to our minded to refer decision¹⁴¹ included an illustrative alternative estimate of its WACC, calculated using the same parameter values as set out in our minded to refer decision together with an alternative asset beta of 0.6 (suggested by its advisers, NERA, as a more realistic assumption than our implied figure of 0.15). This revised asset beta

¹⁴¹ NERA paper on profitability, 28 February 2007.

assumption implied an equity beta of 4.0 and a nominal pre-tax WACC of 10.9%.

38. We do not agree that the arguments made by the ROSCOs justify a move from the WACC estimate set out in our minded to refer decision.
39. Our intuitive view of the likely equity beta of a standalone ROSCO is set out above. The leasing of MOLA stock is a relatively stable business, consistent with the ROSCOs' agreement that the activity has a high debt capacity and hence a high optimal level of gearing. The risks that the ROSCOs face, in our view, predominately relate to specific rather than systematic factors. We are not aware of any examples of the cyclical nature of the demand for passenger rail travel having any significant impact on the demand for MOLA stock.
40. A key risk faced by a lessor of MOLA stock is that its stock will be displaced by a new build alternative (although, as explained in Chapter 4, our view is that this risk is relatively modest in most cases). It seems very unlikely to us that the chances of this happening is increased by falls in aggregate demand or market demands¹⁴². The ROSCOs are protected from fluctuations in demand, including lessee credit risk, by long, Government-protected, contracts.
41. In arguing that they face more risk than the UK regulated utilities, the ROSCOs pointed to a number of further (i.e. beyond the cyclical nature of the demand for rail travel) factors, including¹⁴³:
 - the fact that the ROSCOs face a greater level of competition than the utilities;
 - the fact that the utilities are subject to price cap regulation; and

¹⁴² Indeed, at an intuitive level it seems that the opposite is more likely to be true if high aggregate demand is associated with high tax receipts and hence an increased Government budget.

¹⁴³ The most detailed arguments were provided by Porterbrook, from paragraph 49 of NERA's paper on profitability dated 28 February 2007.

- the ROSCOs' high level of operational leverage.
42. We are not persuaded that these factors justify a movement away from the parameters used in our minded to refer decision, since:
- we are not aware of any straightforward causal link between the level of competition faced by a firm and its cost of capital;
 - in our view, the relationship between regulatory regimes and the cost of capital is ambiguous from a theoretical and empirical perspective¹⁴⁴; and
 - whilst we agree that operational leverage is one of the determinants of betas, we are not, in the absence of more detailed evidence, persuaded by the assertion that operational leverage is materially greater for the ROSCOs than for the regulated utilities. Even if this were the case, this difference would have to be considered in the context of other, possibly outweighing, factors such as the stability of the demand for the ROSCOs' services.
43. In summary, we are not persuaded by the arguments made by the ROSCOs on their level of systematic risk relative to that of the regulated utilities.
44. We note that our arguments in favour of the use of an assumed equity beta of 1.0 (like those of the ROSCOs used to criticise it) are largely assertion-based, having been arrived at without the benefit of a statistical analysis of market data. This is to some degree unavoidable when attempting to assess the beta of an activity that is not separately listed (although a more in-depth analysis, making use of a greater range of proxy techniques, would be possible within a second stage investigation). Rolling stock leasing accounts for such a small proportion of their parent companies' revenues that it appears unlikely that market data relating to these firms would be useful.

¹⁴⁴ See, for example, Chapter 6 of Wright, Mason and Miles, *A Study into Certain Aspects of the Cost of Capital for Regulated Utilities in the U.K* (2003), and the National Audit Office/NERA report *Pipes and Wires* (2002).

45. In these circumstances, we think that simple cross-checks against observable values are useful in assessing the plausibility of beta (and hence WACC) estimates. We feel that such comparisons suggest that our assumptions are more reasonable than the alternative assumptions supplied by Porterbrook (the only one of the ROSCOs to provide us with quantified alternative assumptions). We discuss two such cross-checks below.
46. Firstly, Porterbrook's alternative asset beta of 0.6 implies an equity beta of 4.0 (assuming a debt beta of zero), which we consider to be implausibly high. For example, the July to September 2006 London Business School *Risk Management Service* update provides estimates of equity betas for all listed UK firms, of which the highest is 1.91. Porterbrook's alternative estimate therefore implies that investors in rolling stock services incur substantially more systematic risk than investors in other UK companies, which, in light of the intuitive assessment of the ROSCOs' risk characteristics, does not seem plausible to us.
47. Our second cross-check compares the overall WACC implied by different equity beta estimates (where Porterbrook's alternative asset beta assumption implied a nominal-pre tax WACC of 10.9%, rather than our estimate of 8.0%) with forecasts of ROSCO returns on new stock. The available information (including the DfT's submission and the data supplied by the ROSCOs) suggests¹⁴⁵ that the forecast weighted average return to be earned by the ROSCOs on new stock is in the region of [redacted] in pre-tax terms (the DfT's calculations suggested an equivalent figure of around [redacted] after taking the benefit of capital allowances into account), which is much closer to our WACC estimate than that implied by Porterbrook's alternative assumption. The WACC estimate implied by Porterbrook's alternative assumption implies that the ROSCOs earn substantially less than their cost of capital on new stock, which (unless the WACC for leasing new stock is significantly lower than for MOLA stock, which has not been suggested to us), suggests to us that such WACC estimates are inappropriately high.

48. Whilst this is an area that would benefit from further analysis by the CC, our view is that, taken together, these factors suggest that our WACC estimate is more plausible than the alternative suggested by Porterbrook's alternative asset beta assumption.

Other benchmarks

Our view

49. As explained above, in addition to our WACC estimate, we think that the other benchmarking methods used by the DfT, which included comparisons with rates of return earned on new stock, are useful in establishing a benchmark range.

Consultation responses

50. Putting a degree of weight on the non-WACC benchmarks discussed above does not represent a departure from the assessment that we set out in our minded to refer decision.
51. Our WACC estimate was the main focus of the responses submitted by the ROSCOs with regard to benchmark rates of return. We did, however, receive responses from the ROSCOs regarding other aspects of our assessment. In particular, the ROSCOs argued that there was a risk that our comparison between MOLA and non-MOLA rates of return would be invalidated by the impact of capital allowances.
52. We disagree with this view. The pre-tax non-MOLA profitability estimates supplied to us by the DfT had been adjusted to reflect the value of capital allowances associated with non-MOLA stock.

¹⁴⁵ See page 47 of the DfT's submission and page 10 of NERA's paper on profitability, 28 February 2007.

Summary

53. We consider that a range of 6 to 8% in pre-tax terms represents an appropriate benchmark against which to compare the returns earned by the ROSCOs for the purposes of this report. Whilst we accept that a more detailed examination of this issue by the CC might yield a range that differs from this one, we do not consider that the arguments made by stakeholders on this issue provide a compelling case for us to deviate from this range.

Annex E – List of stakeholders who made submissions during our review

- ROSCOs:
 - Angel Trains Ltd.;
 - HSBC Rail; and
 - Porterbrook Leasing Company Ltd.
- TOCs:
 - Arriva Trains Wales (Trenau Arriva Cymru);
 - Centro;
 - First Group;
 - Govia;
 - Grand Central;
 - GNER;
 - Heathrow Express;
 - National Express;
 - SERCO;
 - Stagecoach; and
 - Virgin Rail Group.
- Other:
 - The DfT;
 - Association of Train Operating Companies;
 - Babcock and Brown;
 - Bank of Scotland;
 - CSRE (UK representative of the Chinese DMU manufacturer);
 - London Travelwatch;
 - National Union of Rail, Maritime and Transport Workers (RMT);
 - Passenger Focus;
 - Rail Industry Association;
 - Siemens;
 - Strathclyde Partnership for Transport (SPT);
 - Transport Salaried Staffs' Association (TSSA);

The leasing of rolling stock for franchised passenger services
ORR's reasons for making a market investigation reference to the Competition Commission

- Transport Scotland; and
- Travelwatch South West.

Annex F - Product market segmentation – views of stakeholders

The DfT's product market segmentations

Figure 14- Product market segmentation – branch line/inner suburban routes (speed requirement of 75mph)

Route power	Type of rolling stock meeting requirements	Classes of rolling stock meeting requirements
None	Diesel 75 mph Diesel 90/100 mph	142, 143, 144, 150, 153, 155, 156, 165 158, 159, 165/1, 166, 168, 170, 171, 175, 185.
25kV AC	25kV AC 75 mph 25 kV AC 90/100 mph Dual-voltage 75 mph Dual-voltage 100 mph	314, 315, 320 317, 318, 321, 322, 323, 333, 334, 357, 360 313 319, 350, 365, 375/6, 377/2
750V DC	750V DC 75 mph 750V DC 90/100 mph Dual-voltage 75 mph Dual-voltage 100 mph	455, 456, 465, 466, 507, 508 375, 376, 377, 442, 444, 450, 458, 460 313 319, 350, 365
Dual-voltage	Dual-voltage 75 mph Dual-voltage 100 mph	313 319, 350, 365, 375/6, 377/2

Figure 15 - Product market segmentation – inter-regional/outer suburban routes (speed requirement of 90/100 mph)

Route power	Type of rolling stock meeting requirements	Classes of rolling stock meeting requirements
None	Diesel 90/100 mph Diesel 125 mph	158, 159, 165/1, 166, 168, 170, 171, 175, 185 180, 220, 221, 222, HST, Mark 3 coaches
25kV AC	25kV AC 90/100 mph 25kV AC 125 mph Dual-voltage 100 mph	317, 318, 321, 322, 323, 333, 334, 357, 360, Mark 1/Mark 2 373, 390, IC225, Mark 3 coaches 319, 350, 365
750V DC	750V DC 90/100 mph Dual-voltage 100 mph	375, 376, 377, 442, 444, 450, 458, 460 319, 350, 365, 375/6, 377/2
Dual-voltage	Dual-voltage 100 mph	319, 350, 365, 375/6, 377/2

Figure 16 - Product market segmentation – inter-city (speed requirement of 125 mph)

Route power	Type of rolling stock meeting requirements	Classes of rolling stock meeting requirements
None	Diesel 125 mph	180, 220, 221, 222, HST, Mark 3 coaches
25kV AC	25 kV AC 125 mph	373,390, IC225, Mark 3 coaches

Product segmentations suggested in stakeholder responses

Figure 17 - Product market segmentation – branch line/inner suburban routes (speed requirement of 75 mph)

Route power	Type of rolling stock meeting requirements	Class of rolling stock meeting requirements
None	Diesel 75 mph Diesel 90/100 mph ¹⁴⁶	142, 143 ¹⁴⁷ , 144, 450 ¹⁴⁸ , 453 ¹⁴⁹ , 155, 456 ¹⁵⁰ , 165, 458 ¹⁵¹ , 159, 165/1,166, 168, 170, 171, 175, 185.
25kV AC	25kV AC 75 mph 25 kV AC 90/100 mph Dual-voltage 75 mph Dual-voltage 100 mph	314, 315, 320 ¹⁵² 317,318,321,322, 323, 333,334, 357, 360 313 319, 350, 365, 375/6,377/2
750V DC	750V DC 75 mph 750V DC 90/100 mph Dual-voltage 75 mph Dual-voltage 100 mph	455, 456, 465, 466, 507, 508 375, 376, 377, 442, 444 ¹⁵³ , 450, 458, 460 313 319, 350, 365
Dual-voltage Dual-voltage	Dual-voltage 75mph Dual-voltage 100 mph	313 319, 350, 365, 375/6,377/2

¹⁴⁶ GNER told us that some modern 100mph units can fulfil the same requirements as 125mph units where permitted by timetable configurations.

¹⁴⁷ First Group stated that Class 143s can also be used on outer suburban services.

¹⁴⁸ Arriva Trains Wales told us that this class of vehicle could also be used on outer suburban services.

¹⁴⁹ Both Arriva Trains Wales and National Express Group told us that Class 153s are unsuitable for inner suburban routes.

¹⁵⁰ National Express Group stated that Class 156s are unsuited to inner suburban routes due to door configuration.

¹⁵¹ National Express Group stated that Class 158s are unsuited to inner suburban routes due to door configuration.

¹⁵² Serco told us that Class 320s and 360s are designed for outer suburban routes only, although technically substitutable for branch line services.

¹⁵³ Stagecoach said that they doubt whether the interior configuration of Class 442s or 444s are suitable for inner suburban routes.

Figure 18 - Product market segmentation – inter-regional/outer suburban routes (speed requirement of 90/100 mph)

Route power	Type of rolling stock meeting requirements	Class of rolling stock meeting requirements
None	Diesel 90/100 mph ¹⁵⁴ Diesel 125 mph	(143) ¹⁵⁵ , (150) ¹⁵⁶ , 158, 159, 165/1, 166, 168, 170, 171, 175, 185 180, 220, 221, 222, HST ¹⁵⁷ , Mark 3 coaches
25kV AC	25kV AC 90/100 mph 25kV AC 125 mph Dual-voltage 100 mph	317, 318, 321, 322, 323, 333, 334, 357, 360, Mark 1/Mark 2 373 ¹⁵⁸ , 390 ¹⁵⁹ , IC225 Mark 3 coaches 319, 350, 365
750V DC	750V DC 90/100 Dual-voltage 100 mph	375, 376, 377, 442, 444, 450, 458, 460 319, 350, 365, 375/6 377/2
Dual-voltage	Dual-voltage 100 mph	319, 350, 365, 375/6 377/2

Figure 19 - Product market segmentation – inter-city (speed requirement of 125 mph)

Route power	Type of rolling stock meeting requirements	Class of rolling stock meeting requirements
None ¹⁶⁰	Diesel 125 mph	180, 220, 221, 222, HST, Mark 3 coaches
25kV AC ¹⁶¹	25 kV AC 125 mph	373, 390, IC225, Mark 3 coaches, (Mark 3 DVT), (90)

¹⁵⁴ Porterbrook suggested that faster stock could operate on routes featuring slower trains.

¹⁵⁵ First Group stated that Class 143s are also used on outer-suburban services.

¹⁵⁶ First Group stated that Class 150s are also used on outer-suburban services.

¹⁵⁷ National Express Group stated that HSTs are unsuited to outer suburban routes due to door configuration.

¹⁵⁸ National Express Group stated that Class 373s are unsuited to outer suburban routes due to door configuration.

¹⁵⁹ National Express Group stated that 390s are unsuited to outer suburban routes due to door configuration.

¹⁶⁰ Porterbrook told us that commuter and inter-city stock are not realistically interchangeable because of conflicting customer requirements.

¹⁶¹ Serco submitted that this sub-section should include Mark 3 DVT and Class 90s.