



## **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**



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# Executive Summary

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## Introduction

1. In July 2006 ORR published the scope and provisional timetable of its study into the markets<sup>1</sup> for the leasing of rolling stock for franchised passenger services, following a submission from the Department for Transport (DfT). We said that we would consult on our provisional findings in November 2006 and, further, that the consultation might be in the form of a draft market reference.
2. The objective of ORR's market study has been to establish whether the markets for the leasing of rolling stock for franchised passenger services are functioning effectively, or whether they exhibit features that lead or are likely to distort competition. We note the importance of rolling stock as an input into passenger rail markets and the need to establish certainty for investors in this sector.
3. This document sets out our findings, which lead us to suspect that there are features of these markets which are preventing, restricting or distorting the competitive process. ORR is minded to refer the supply of leasing of rolling stock for franchised passenger services and related maintenance services to the Competition Commission (CC) for a market investigation under section 131 of the Enterprise Act 2002 (EA02).
4. Due to the significance of these markets to the provision of passenger services, we have chosen to consult more widely by way of this document published on our website. We welcome views from all interested parties.
5. Our study has focused on the reference test so as not to prolong the study unduly. We are grateful to all who have engaged with us and who have helped us to come to these preliminary views.

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<sup>1</sup> We refer to 'markets' in the plural throughout this document 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 have not, however, formally concluded on this issue.

## Preliminary findings

6. In summary ORR does not consider that these markets can be given a clean bill of health. We suspect that there are a number of features which individually or in combination prevent these markets from operating competitively. We consider that the low<sup>2</sup> reference test has been met. ORR considers that in the balance of its statutory duties a reference to the CC is a proportionate and appropriate exercise of its discretion to refer, given the concerns that it has identified.
7. The evidence that we have gathered during the course of our study has indicated that, in many instances, Train Operating Companies (TOCs) have very limited choice when it comes to selecting passenger rolling stock for franchised passenger services. In many cases, and for various reasons, a new franchisee has few attractive alternatives other than to re-lease the rolling stock previously in use within that franchise, providing the rolling stock leasing company (ROSCO) that owns that stock with a significant degree of strength in the negotiation of leasing terms. This, we suspect, has led to higher prices and lower quality of service than would be the case in a more competitive market.
8. The DfT, in its submission, produced a wide range of estimates of the level of consumer detriment arising from the ROSCOs pricing above the competitive level. Our own conclusions on profitability are also consistent with excess profits. Whilst our findings are not strong enough for us to arrive at a quantified estimate of consumer detriment or reach a definitive view on the DfT's precise quantifications, we consider that what we have found warrants further investigation by the CC.
9. Additionally, the TOCs have also expressed concern about the non-capital element of leasing arrangements, relating to such matters as ongoing maintenance and service level agreements. TOCs have mentioned a lack of transparency in transactions and an unwillingness on the part of the ROSCOs to negotiate back-to-back performance regimes to share the risk of poor maintenance on a TOC's operating performance. In our view such concerns are consistent with markets that are not working effectively.

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<sup>2</sup> Association of convenience stores v. OFT: "*There is, if we may say so, some risk that one may mistake the height of the hurdle...It is a 'reasonable grounds to suspect' test*" (Judgement of 1 November 2005).

10. The lack of choice available to TOCs results from a number of factors (or 'features' for the purpose of a reference to the CC), which are either inherent to types of rolling stock or embedded in the way that Government procures franchised passenger services. The key features that may prevent, restrict or distort competition are listed below.
- 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 specificity within some Invitations to Tender (ITTs) can restrict the choices available to TOCs.
  - Section 54 undertakings, where they exist, can direct use of the incumbent stock.
  - 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 encourages 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.
11. Another relevant factor is the growth in passenger demand since privatisation, which has led to a limit to the volume of surplus stock available.
  12. It is evident that a number of these features arise from Government policies. We recognise that the way in which 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. These may not be amenable to change if the Government does not see net benefits in funding and/or performance terms in doing so.
  13. There is a balance to be struck and we believe that it is important to secure the alignment of incentives between the franchise objectives and other industry relationships to ensure a satisfactory outcome for all concerned. The DfT is of the view that, and we suspect that, the ROSCOs are charging higher lease charges than would be the case in a competitive market. We consider that changes to the current approach to franchising could facilitate addressing this.
  14. We are aware that there may be uncertainty during the reference period but we would hope that this would not affect the relationships between the TOCs and the ROSCOs. ORR has considered its discretion to refer against the balance of its section 4 duties<sup>3</sup>, and is of the view that a reference to the CC, which will involve a thorough review of the issues, is likely to result in more certainty and stability in the future. 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.

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<sup>3</sup> Railways Act 2003 (as amended) (RA93).

15. In our conclusions at chapter 5 we set out our initial views on potential remedies, either market based or behavioural. The latter type of remedy would directly address aspects of the ROSCOs' conduct, such as pricing and service quality, and the former with structural issues arising, in the main, from the franchise procurement process. A number of remedies, in the latter category may not be deliverable, or indeed desirable, from a franchising perspective. There are others, however, which represent incremental improvements aimed at providing sufficient liquidity at the margins to give the TOCs more leverage, in negotiating with the ROSCOs than is currently the case.

### **Next Steps**

16. During the next three months we intend to hold meetings with all key parties to seek views on our analysis and to inform our final decision. The information provided to us both in writing and at these meetings will help us to develop our initial thinking on remedies so that we can advise on potential options if we decide to refer the markets to the CC.



# 1. Introduction

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## Introduction

- 1.1 On 28 June 2006, we received a detailed submission (the submission) from the DfT requesting that we refer the passenger rolling stock leasing markets to the Competition Commission (CC) for a market investigation under section 131 of the Enterprise Act 2002 (EA02).
- 1.2 The DfT submits that the three Rolling Stock Leasing Companies (the ROSCOs) are in a position of market power and that has led to lease prices that are above the competitive level. The DfT claims that high lease prices lead to significant consumer detriment resulting from higher fares paid by passengers, and greater franchise subsidy paid by Government.
- 1.3 The submission sets out a number of structural and behavioural features of passenger rolling stock leasing markets, and discusses how, in the DfT's view, these are capable of preventing, restricting or distorting competition in the passenger rolling stock markets.

## Legal framework

- 1.4 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”.
- 1.5 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.

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

- 1.6 Concurrent jurisdiction under the EA02 goes beyond the definition of “*railway services*” in section 82 of the Railways Act 1993, and includes services such as the leasing or maintenance of rolling stock as provided by the ROSCOs.
- 1.7 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 section 4 duties.

## **Background and previous reviews**

- 1.8 When the industry was 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.
- 1.9 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 Authority<sup>4</sup> (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).
- 1.10 The Regulator’s review concluded that, whilst new entry was expected to occur, and that this would create a more liquid and competitive market, in the meantime 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 publishing a ‘code of practice’. The codes were developed through negotiation between the Regulator and the three ROSCOs.

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<sup>4</sup> As of 2005, the SRA’s franchising powers passed on to DfT Rail.

- 1.11 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 the 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.
- 1.12 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.
- 1.13 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-BR passenger rolling stock, (referred to in the remainder of this document 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 request ORR to refer the markets to the CC on the basis that it had serious concerns about the effective operation of the passenger rolling stock leasing markets.

## **Why we conducted this market study**

- 1.14 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.
- 1.15 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 £1 billion 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.

- 1.16 There has been a significant modernisation of the GB fleet since privatisation, with the ROSCOs investing £4.2 billion 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.

### **Scope and conduct of the study**

- 1.17 Our processes for conducting market studies under the EAO2 are set out in *ORR's approach to reviewing markets*,<sup>5</sup> published in August 2005.
- 1.18 In July 2006 we published the scope and provisional timetable for our study of passenger rolling stock leasing. We indicated that we would be consulting on our provisional findings in November 2006.
- 1.19 The objective of our market study has been to establish whether we have reasonable grounds for suspecting a prevention, restriction or distortion of competition. In doing so, we have considered whether the markets for passenger rolling stock leasing are functioning effectively.
- 1.20 We did not set out to undertake a fully comprehensive investigation of passenger rolling stock leasing markets, indeed that would not have been possible in the short period of the study. Our intention was to come to an early view on whether, firstly, these markets should be referred for more detailed scrutiny by the CC, and, secondly, whether the balance of our section 4 duties would, in the light of our assessment of the evidence, support an exercise of our discretion to refer.
- 1.21 Throughout July and August we held a series of meetings with all key stakeholders, including:
- the DfT;

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<sup>5</sup> <http://www.rail-reg.gov.uk/upload/pdf/282.pdf>.

- the three incumbent ROSCOs;
- other rail asset financiers;
- Train Operating Companies (TOCs);
- Passenger Transport Executives (PTEs); and
- other interested parties such as the Association of Train Operating Companies (ATOC) and the Railway Industry Association.

1.22 We issued questionnaires to the ROSCOs on 14 July and 1 August, and to the TOCs on 27 July. All those who provided information to us during the course of our study are listed at Annex D.

### **Responses to this document**

1.23 Section 169 of EA02 requires us to consult, so far as practicable, all those likely to be affected substantially by a decision to refer. Due to the importance of these markets to the supply of passenger services, we have decided to consult widely to give all industry stakeholders an opportunity to respond. We welcome views on any issue raised in this document but, in particular, on the questions we have specifically identified and listed in chapter 6 of this document.

1.24 **Responses to this consultation should be sent in electronic format, to be received as soon as possible, but no later than 12:00 hours on 28 February 2007, to:**

**Competition Team  
Office of Rail Regulation  
1 Kemble Street  
LONDON WC2B 4AN**

**Email to: [competition@orr.gsi.gov.uk](mailto:competition@orr.gsi.gov.uk)**

1.25 All responses will be made available in our library, published on our website ([www.rail-reg.gov.uk](http://www.rail-reg.gov.uk)) and may be quoted from by ORR. If a respondent wishes all or part of their response to remain confidential, they should set out clearly why this is the case. Where a response is made in confidence, it should be accompanied by a statement summarising the submission, but excluding the confidential information, which can then be used as above. We

will publish the names of respondents in future documents or on our website, unless a respondent indicates that they wish their name to be withheld.

## **Structure of this document**

1.26 The remainder of this document sets out the results of our findings in this market study. The remaining chapters are listed below.

- 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 that is faced by the ROSCOs.
- Chapter 5 summarises our conclusions, provides our initial thoughts on remedies and, an assessment of our discretion to refer to the CC.
- Chapter 6 discusses the next steps for this study and includes questions for consultees.

1.27 The subsequent annexes set out:

- the draft terms of our market investigation reference;
- a discussion of a set of refranchising case studies supplied to us by the DfT;
- further details of our assessment of profitability;
- a list of the stakeholders that responded to our pre-consultation questions; and
- tables in which rolling stock is classified by product characteristics

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

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### 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 website<sup>6</sup>.
- 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 the 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 Group (owned by HSBC) bought Eversholt, and in December 1997 Royal Bank of Scotland Group bought Angel. The three ROSCOs are currently

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[http://www.DfT.gov.uk/stellent/groups/DfT\\_railways/documents/page/DfT\\_railways\\_611464.hcsp](http://www.DfT.gov.uk/stellent/groups/DfT_railways/documents/page/DfT_railways_611464.hcsp).

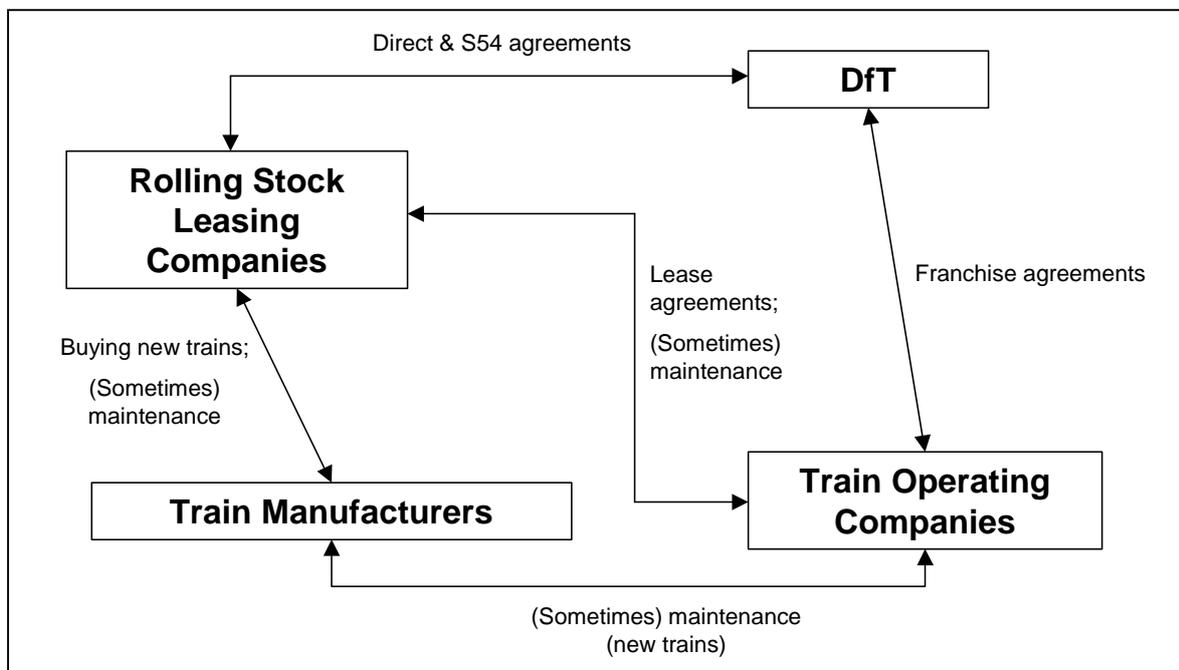
known as Angel Trains Ltd.; HSBC Rail; and Porterbrook Leasing Company Ltd. They are respectively referred to as Angel, HSBC and Porterbrook, throughout the rest of this document.

2.5 The ROSCOs are not subject to the regulatory controls placed on the operators of railway assets under sector specific powers provided by the Railways Act 1993 (RA93), such as the issue and enforcement of licences or regulatory control over contracts, beyond the codes mentioned at paragraph 1.10 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 document.

## 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, 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 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 the Railways Act 1993 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 options<sup>7</sup> 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 With the consent of the Secretary of State, the DfT may also give undertakings under section 54 of the Railways Act 1993 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 impact of section 54 undertakings on a TOC's choice of rolling stock is also discussed further in Chapter 4.

### **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. It is at this stage that 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.
- 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 document, short-listed bidders will seek to acquire rolling stock fleets that:

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<sup>7</sup> The three-year call option introduced by OPRAF in the direct agreements for all new rolling stock leases, enabling 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.

- 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 will each (individually) approach the ROSCOs for quotations for rolling stock (unless the ITT document 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 DfT’s 7-stage franchise replacement process.

**Figure 2 - Franchise replacement process**

<b>Stage</b>	<b>Typical duration</b>	<b>Comments</b>
<b>Stage 1</b> - Completion of pre-qualification questionnaires (PQQs)	4-5 weeks	Bidders provided with high level information about the franchise including standard set of questions.
<b>Stage 2</b> – DfT’s evaluation of PQQs	7-8 weeks	The DfT receives approx 10 bids, aims to shortlist 3-5 bidders at the end of this process.
<b>Stage 3</b> – 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.
<b>Stage 4</b> – 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.
<b>Stage 5</b> – DfT's bid evaluation	8-10 weeks	DfT bid evaluation – focuses on the base case bid submission.  DfT announces preferred bidder
<b>Stage 6</b> – DfT negotiation with preferred bidder	4-6 weeks	DfT finalises negotiations with preferred bidder.  Preferred bidder finalises lease terms with ROSCOs.
<b>Stage 7</b> - 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. The DfT aims to stagger its franchise renewals so as to renew one to three franchises per annum. 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 to be operated 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 DfT to minimise the extent to which railways are subsidised by Government.

2.25 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*

2.26 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*

2.27 The key objectives of TOCs include aiming to:

- win the franchise competition by submitting a bid that is attuned to the DfT objectives briefly described at paragraph 2.24 above; and
- do so by maximising 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).

- 2.28 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 document.



## 3. Market Definition

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### Preface – the focus of this study

- 3.1 The focus of this study is on the rolling stock used to supply 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 since:
- 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 a number of the factors that limit competition in the leasing of stock supplied for franchised passenger services; and
  - it has not been suggested to us that any significant constraints on the conduct of the ROSCOs are likely to be imposed by the owners of stock built for use outside of the franchising system.
- 3.2 The data on concentration that we present in chapter 4 is also focused only on these categories of stock.
- 3.3 We also focus on 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.
- 3.4 Lastly, as in the first two chapters of this document, 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/RBS<sup>8</sup>); and
  - the fact that we are not aware of:
    - any widespread competition problems affecting the leasing of stock by new entrants; or

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<sup>8</sup> Halifax Bank of Scotland/Royal Bank of Scotland joint venture.

- any significant competitive constraints that new entrants impose on the ROSCOs when agreeing terms for their incumbent stock .

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. The extent to which the scope for introducing new build stock imposes competitive constraints on incumbent stock, in practice, given other (for example commercial) considerations, is discussed in chapter 4 of this document.

3.6 In the remainder of the main body of this document 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 and stock that could potentially be cascaded from another franchise (either because the franchises are coterminous or because the alternative stock will be available during the course of the franchise);
- new (build) stock – stock that has not yet been built and/or accepted for use on the network.

3.7 In our annex on profitability we use the following terms:

- MOLA stock; and
- non-MOLA stock.

3.8 Note that both ‘incumbent’ and ‘existing’ stock as discussed in chapters 3 and 4 of this document could either be MOLA or non-MOLA stock. Many of the initial leases on non-MOLA stock have yet to be renewed, meaning that, as set out in the DfT’s submission, it is likely that the exercise of market power by the ROSCOs is currently largely restricted to the leasing of MOLA stock.

## Our approach to market definition

- 3.9 This market study concerns a sector within which there may be a series of individual economic markets, based on various product and temporal aspects of stock requirements. As a result, it would not be appropriate for our market definition to begin by considering the constraints facing a unique focal product (as is often done in investigations carried out under the Competition Act 1998). Instead, we use the high level principles of market definition to provide a summary of the extent of substitutability between classes of rolling stock.
- 3.10 The DfT's submission did not formally conclude on market definition. It argued that: "...*individual markets are markets to provide rolling stock for particular rail franchises*", but, since each franchise typically consists of a number of different types of service run using a number of different types of stock (normally supplied by two or more suppliers), this suggests that the DfT did not mean that stock falls within a series of markets that map to franchises on a 1:1 basis. Rather, we interpret the discussion of market definition within the DfT's submission as being intended simply to stress that the ROSCOs frequently find themselves in a position of market power with regard to some or all of certain fleets of stock at the time when TOCs are seeking to negotiate with suppliers of rolling stock.
- 3.11 We agree with the DfT's view 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). This has been borne out by our dialogue with stakeholders and our analysis of the DfT's case studies. 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.
- 3.12 Given these variations in the level of competition faced by the ROSCOs, we consider that the most appropriate means of assessing these variations in competition is via a direct assessment of the competitive conditions faced by the ROSCOs, as set out in Chapter 4 of this document. By sequentially considering all of the main potential sources of competitive constraint faced by the ROSCOs, we have assessed the frequency with which such constraints are weak, and hence whether the features of these markets give rise to negative outcomes that may merit regulatory intervention. In particular we

discuss the extent to which new build and existing stock acts as a constraint on incumbent MOLA fleets.

- 3.13 We next discuss a number of functional characteristics that restrict the interchangeability of different types of rolling stock. We consider it appropriate to 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*

- 3.14 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, for example revenue earning expectations, total annual cost, and the up-front costs of switching.

- 3.15 Some important examples of such factors are provided in the subsections below.

### *Route compatibility considerations – power type*

- 3.16 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 of:<sup>9</sup>

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<sup>9</sup> For example, see Figure 11.4 of Network Rail’s 2004 Technical Plan, [http://www.networkrail.co.uk/documents/3150\\_2004BusinessPlanNetworkCapability.pdf](http://www.networkrail.co.uk/documents/3150_2004BusinessPlanNetworkCapability.pdf), for a map dividing GB’s rail network into areas using these three types of power.

- non electrified;
- 750DC third rail system; and
- 25kv AC overhead system.

3.17 Additionally, 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.

3.18 Generally speaking, the three types of routes listed above tend to be served by diesel, DC electric and AC electric stock respectively. This applies to multiple units and locomotives. Some classes of coaching stock can be hauled by either diesel or electric locomotives. Whilst diesel powered rolling stock is technically capable of operation on all three types of route, its use on electrified routes is often considered unattractive<sup>10</sup> 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*

3.19 Types of stock with different maximum speeds are often not substitutable, since:

- TOCs require stock that will perform in a way that meets the requirements of the service to be operated; and
- 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 factors such as door configuration and capacity per vehicle. We are, however, aware of instances of 100mph EMU/ DMU stock being used on routes where only a 75mph maximum speed is required.

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<sup>10</sup> There remain a number of examples of diesel stock being used on electrified lines, for example intercity services on the ICEC franchise 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*

3.20 These factors are considered in more detail in chapter 4.

*The DfT's view on product market segmentation*

3.21 The first three tables in Annex E (Figure 22, Figure 23, and Figure 24), reproduced from the DfT's submission, represent a segmentation by the DfT of rolling stock into categories, based on the factors set out in the preceding paragraphs.

3.22 We asked the ROSCOs and TOCs to supply us with comments on the classifications used by the DfT. These comments, together with our views, are summarised in the remainder of this chapter.

*The ROSCOs' views*

*Angel*

3.23 Angel did not comment on the DfT's specific product market classifications. Instead, it made a series of higher-level criticisms of the DfT's approach, arguing that our inquiry should focus on: "...*the competitive constraints faced by the ROSCOs in leasing their rolling stock*", rather than market definition.

*HSBC and Porterbrook*

3.24 HSBC and Porterbrook were broadly in agreement with the notion that there are factors that restrict the substitutability of different types of stock, but had a number of specific comments regarding the DfT's classification. We have summarised these comments, together with comments made by TOCs, in the revised tables in Annex E at the end of this document.

3.25 The specific amendments suggested by the ROSCOs included the following:

- Porterbrook told us that commuter and inter-city stock may not be interchangeable because of conflicting customer requirements; and
- Porterbrook told us that faster stock could operate on routes featuring slower trains.

*TOCs' views*

3.26 None of the TOCs considered the DfT's use of a product market segmentation to be wrong in principle. A number of them did, however, supply us with suggested amendments to the DfT's chosen classification. We have summarised the most material of these amendments in annotated tables set out in Annex E.

3.27 The amendments suggested by the TOCs included the following:

- GNER<sup>11</sup> told us that some of the trains included within the DfT's '100mph' categories are capable of reaching speeds of 125mph; and
- National Express Group told us that some trains had been incorrectly classified, with specific door configurations having been overlooked in certain cases.

*Our view on product market classifications*

3.28 The amendments to the DfT's classifications that were suggested by TOCs are shown in Figure 25, Figure 26, and Figure 27 in Annex E.

3.29 We are broadly in agreement with the segmentation supplied by the DfT, although we recognise that it is almost certainly possible to make detailed improvements to it. 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 agree with some of these suggestions, and, if we had considered it appropriate 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 table 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).

3.30 Our view is that the leasing of passenger rolling stock almost certainly is characterised by distinct product markets split by type of stock, but we do not

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<sup>11</sup> GNER further clarified that this is where the timetable is configured to exploit train characteristics.

consider it necessary for us to arrive at a precise market definition based on these factors. Even a firm that has a relatively small share of the total combined fleets of stock that falls within such a product market may find itself able to exercise market power in cases where most or all stock of this type is committed to other uses at the time of re-franchising.

### **Market definition – conclusion**

- 3.31 With regard to market definition, we conclude that distinct markets should be defined by reference to the constraints on the interchangeability of stock, broadly along the lines suggested by the DfT.
- 3.32 A definitive view on market definition would also require an assessment of the further constraints on stock availability imposed by the point in time at which the need for rolling stock arises. However, for the purposes of this market study we consider that these temporal issues are best considered in the competition analysis in chapter 4.

### **Questions**

- |    |  |
|----|--|
| Q1 | Do you agree with our view that the technical and operational characteristics of rolling stock within Great Britain, have a negative impact on the interchangeability of different types of rolling stock? |
|----|--|

## 4. Competition Assessment

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### 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 run rail passenger franchises.
- 4.2 The remainder of 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 stock; and
    - new build stock;
  - buyer incentives and the extent of buyer power;
  - other indicators of competition (profitability and switching rates); and
  - various issues relating to the provision of maintenance.
- 4.3 A significant part of this chapter uses historical data on instances of incumbent stock being displaced by cascades and new build. This historic data is used to make inferences about the level of competition. To the extent that lease charges have historically been above the competitive level, data on the historic extent of displacement by cascades and new build will tend to overstate the extent to which such factors act as a constraint on prices when they are at the competitive level.

## 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 supply<sup>12</sup> of *all* rolling stock for passenger services, and have not made calculations based on the identification of individual economic markets or segmentations within this broad area. We consider that the direct assessment of competitive conditions carried out later in this chapter provides more useful insights than a more granular analysis of concentration.

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

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

	1996	2006	Change	Share in 2006
Angel	3,753	4,093	+340	33%
HSBC <sup>13</sup>	4,050	3,925	-125	32%
Porterbrook	3,455	3,868	+413	31%
Others <sup>14</sup>	0	517	+517	4%
<b>Total</b>	<b>11,258</b>	<b>12,403</b>	<b>+1,145</b>	<b>100%</b>

Source: stakeholder returns and publicly available information

4.6 Figure 3 shows that:

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

<sup>12</sup> 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.

<sup>13</sup> Named Eversholt in 1994.

<sup>14</sup> This total is comprised of the stock owned by HBOS/RBS and First Group, together with small quantities owned by Welsh authorities, ATW, Chiltern, and SWT.

- 4.7 Whilst analysing the returns 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 considered as a key factor in our analysis.
- 4.8 The overall level of concentration and absence of new entry are useful preliminary indicators in assessing the competitiveness of the markets for rolling stock leasing.

## Market Entry

- 4.9 New entry into these markets since privatisation has hitherto 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 set out 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 the factors that might have restricted entry into rolling stock leasing.
- 4.11 Although entering into a lease agreement with a rolling stock company 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 First Group is the only franchised TOC of which we are aware of self-supplying its own rolling stock in any material quantities<sup>15</sup>. First Group owns three sets of class 143 and five sets of HST (High Speed Train) stock. 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 negligible 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.

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<sup>15</sup> See the (relatively minor) exceptions listed at footnote 14.

- 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, but the ownership of rolling stock by a non-franchised passenger TOC is much more common, including Heathrow Express (BAA) and Nexus (Tyne and Wear Passenger Transport Executive).
- 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 over time within this wider group of franchises.
- 4.16 We are also aware that Transport for London (TfL) has plans to acquire a small number of new-build EMU vehicles to be operated on the North London Railway and the East London Line.

*Buying second-hand rolling stock*

- 4.17 Almost all rolling stock that was brought into service prior to privatisation remains in the ownership of the original purchasing ROSCOs or has been scrapped. 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 franchisees.
- 4.18 The potential for new entry to be a material constraint 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. The most important of these factors are discussed in the remainder of this section.

*Access to finance*

- 4.20 We consider it likely 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 leasing). As such, we do not consider it likely that this factor gives the incumbent ROSCOs any significant advantage over most would-be new entrants.

#### *Industry and technical expertise*

- 4.21 Our dialogue with stakeholders 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 entrant<sup>16</sup> with regard to maintenance, it is also likely that it would need to employ a number of staff with a high level of technical/ engineering knowledge.
- 4.22 Our view, based on dialogue with stakeholders from different parts of the sector, 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 risk, an example of the latter being the risk of major changes being made to service levels or the franchising process by the DfT.
- 4.24 It is possible that such risks have played some role in suppressing entry into these markets. Whilst these factors might 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 Mk1 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. This observation alone may suggest that

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<sup>16</sup> It might be the case that an entrant focusing on new build stock has fewer requirements for technical expertise than the incumbent ROSCOs given that maintenance and other support services are more likely to be available from manufacturers.

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*

- 4.25 A set of markets such as 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.
- 4.26 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 all rolling stock despite the opportunities for entry provided by the many new build vehicles that have been introduced since privatisation.
- 4.27 However, our view is that the failure of new entrants to capture a substantial share of this new build stock could also partly stem from the relatively competitive nature of the leasing of new build stock (at least compared to the leasing of MOLA stock).
- 4.28 Our current understanding is that competition between the incumbent ROSCOs to lease new stock is fairly strong, certainly more so than is the case for incumbent stock. This is because, in contrast with the typical MOLA stock situation whereby there frequently appear to be no attractive, cost-effective alternatives to the incumbent stock, when tendering to be the lessor of new stock, none of the three incumbent ROSCOs has any major incumbency advantage over the others. This idea is supported by the returns earned by the ROSCOs on new rolling stock, which, as described in our annex on profitability, are significantly lower than those earned on MOLA stock. Additionally, Babcock and Brown told us that they regarded the GB market as being mature and one in which entry would not be cost effective given the small number of opportunities available to new entrants.
- 4.29 We do not think this lack of market entry in itself or the level of concentration set out in the previous chapter to be either a key indicator or a key cause of a lack of competition in the leasing of incumbent stock. Nonetheless, it provides

a useful preliminary indicator and starting point for the more detailed discussion that follows in the remainder of this chapter.

- 4.30 Before turning to a discussion 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.

### *Questions*

Q2 Do you agree with our view that the absence of new entry in these markets arises from a number of factors including the relatively competitive nature of the leasing of new build stock?

## **Choices faced by bidders at franchise replacement**

### *Introduction*

- 4.31 The focus of this section, and indeed of most of the remainder of this chapter, is on 'incumbent' stock as explained earlier. 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. Whilst a number of the leases on stock introduced into the network after privatisation have been recently renewed, we do not consider that the available body of evidence in relation to such renewals is yet sufficient for us to make strong conclusions about the future prospects for competition facing this stock.
- 4.32 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:
- 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; or
  - commissioning new rolling stock (new build).

- 4.33 We discuss each of these options below.
- 4.34 The key argument made by the DfT in its submission was that, at the time of franchise renewal, bidders rarely have any real choice other than 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.
- 4.35 In contrast to the DfT's position, all three ROSCOs 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.
- 4.36 TOCs 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.
- 4.37 In the light of the arguments made to us by all stakeholders, the main part of this chapter considers the extent of the competitive constraints imposed on the ROSCOs' incumbent stock by existing and new build rolling stock.

#### *Lease length*

- 4.38 Much of the remainder of this chapter assumes that most rolling stock leases will usually span the duration of an entire franchise. As will be seen later, our analysis of the competitiveness of these markets includes a discussion of the extent to which competition problems are caused by:
- the fact that franchises are typically not coterminous; and
  - lead times for new build relative to franchise length.
- 4.39 The problems associated with both of these factors might be mitigated to various extents if it were commonplace for TOCs to obtain short leases with a view to introducing an existing or new build alternative within a year or two of franchise commencement.
- 4.40 The DfT, however, advised us that it is established practice 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 ITT terms and the desire to ensure deliverability of required service specifications.

- 4.41 The ROSCOs, on the other hand, 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 at paragraph 4.38 can be substantially mitigated. All the ROSCOs told us that short-term leases attract a price premium, but suggested that these were only set at a level that was reasonable to compensate them for the greater risks and costs associated with offering short-term leases.
- 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. The main exception to this rule within the DfT's case studies (which covered over 3000 incumbent vehicles) was [redacted]. We note that the threat of service reductions on this franchise at the time of franchising made it something of an unusual case. Outside of its case studies, 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. In other words, the risk of stock not being re-leased at the end of the current lease has rarely materialised in practice.
- 4.44 In the light of the factors listed above, whilst we recognise that short-term leases may be a relevant consideration in some cases, they do not appear to be common. 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.

## Constraints on incumbent stock from existing rolling stock

### *Introduction*

4.45 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 in the network but which is close to or at the end of its current lease. Such stock might potentially be moved ('cascaded') between franchises.

4.46 We consider each of these types of stock in the analysis below.

### *Stock that is currently surplus*

4.47 Given the storage and opportunity costs associated with having off-lease stock, it seems clear that any ROSCOs owning stock that is currently surplus have a strong incentive to find an alternative use for it in the near future. The ROSCOs can be exposed to impairment charges if stock is off-lease for a sustained period. A sufficiently large pool of readily transferable surplus stock would therefore impose strong competitive pressures on the incumbent ROSCOs.

4.48 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 the surpluses that are available represent a commercially attractive proposition for TOCs in fulfilling their franchise requirements.

4.49 We collected data from all of three incumbent ROSCOs in order to identify the type and quantity of rolling stock that is currently off-lease, and also investigated the short-term prospects for further stock that is likely to come off-lease. The table below provides a brief summary of the total number of vehicles that were off-lease as of June 2006.

**Figure 4 – Off-lease vehicles as of June 2006**

ROSCO	Number of off-lease vehicles as at June 2006	Number of off-lease vehicles as a proportion of that ROSCO's total
HSBC	488	12.4%

Porterbrook	229	5.9%
Angel	6	0.1%
<b>Total</b>	<b>723</b>	<b>6.1%</b>

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

4.51 The largest fleets within HSBC's total of 488 vehicles are:

- 126 slam-door vehicles (withdrawn from use for legislative reasons); and
- 318 Mk2 loco-hauled coaches that are near to or at life expiry.

4.52 Porterbrook's 229 off-lease vehicles are HST/Mk3 stock, which do have the potential to go back into service (although we understand that there is a high probability that a number of these vehicles will not be released within the UK franchise network).

4.53 In summary:

- 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 suitable for operation in the future.

#### *ROSCOs' views*

4.54 The ROSCOs told us that they do not currently hold any material quantities of surplus stock that is suitable for re-leasing. Furthermore they agree with the DfT's position that there is currently a tight balance between supply and demand that will continue for the time being, with the current supply of stock being very close to the level that is sufficient to meet the needs of the railway with no surplus (although, as discussed later in this chapter, they argued that alternatives are available elsewhere).

4.55 However, some of the ROSCOs argued that, notwithstanding the impact of continued passenger growth, there is a risk that the amount of surplus stock will increase in the coming years as a result of various future new build programs.

- 4.56 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;
  - Transport for London'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.

*Conclusion on surplus stock*

- 4.57 It is clear that the quantity and type of stock that is currently surplus are such that it will only act as constraint in a small number of cases.
- 4.58 We agree that future new build has the potential to create a larger usable surplus, 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, rather than scrapped, by the ROSCOs, and that is still able to be put into use (for example it satisfies 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.
- 4.59 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 stock<sup>17</sup>.

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<sup>17</sup> 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.

- 4.60 Based on our dialogue with the DfT and our own understanding of rolling stock markets, 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 (discussed further below).

### *Questions*

- Q3 Do you agree with our view that the limited availability of a pool of surplus stock of viable existing vehicles frequently limits the choice faced by TOCs at franchise renewal?

### *Cascades*

#### *Introduction*

- 4.61 Rolling stock cascades can be triggered by the introduction of new rolling stock displacing other stock, which then replaces older/poorer quality stock elsewhere on the network. This process continues until some surplus stock is used either to increase capacity or else 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 subsection 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.
- 4.62 All of the ROSCOs (notably in their comments on the DfT's case studies) told us the threat of stock being cascaded between franchises frequently imposes a substantial competitive constraint on the pricing of their incumbent fleets.
- 4.63 Prior to privatisation, cascades occurred periodically under B R<sup>18</sup>, 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

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<sup>18</sup> There are currently fewer opportunities for cascades than under BR since more regional services are provided using specialised multiple units, rather than loco-hauled, stock.

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.

#### *The ROSCOs' views*

4.64 The ROSCOs told us that cascades (or at least the threat of stock being cascaded) involving MOLA stock have been a significant feature of the franchise renewals that have taken place since privatisation. For example, Porterbrook told us that:

- 10 out of the 12 re-franchises that have taken place since privatisation involved cascades of stock, either as part of a re-franchise itself or as a strategic mid-franchise re-structure; and
- around 10%<sup>19</sup> of its vehicle fleet had been involved in cascades in 2004-2006.

4.65 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.

#### *TOCs' views*

4.66 TOCs told us that, at most franchise awards, their choice of available stock at the time of re-franchising tends, for a number of reasons, to be limited to the incumbent stock, although some of them did mention the possibility of additional vehicles becoming available through cascades, largely as a result of new build, given sufficient lead time, or involving swaps.

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<sup>19</sup> This is based on the sum of all Porterbrook's vehicles cascaded as a percentage of its current fleet. Porterbrook has had more vehicles involved in cascades than either of the other ROSCOS, notably because of its exposure to the introduction of Virgin's new Pendolino and Voyager stock.

4.67 Some TOCs commented on the current existence of barriers that 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; and
- another TOC thought that the scope for cascading would be increased if the DfT made more frequent use of call options in order to encourage new build.

#### *Our view on cascades*

4.68 Our assessment of the impact of cascades on competitive outcomes focuses on the extent to which cascading has actually taken place since privatisation.

4.69 To facilitate our assessment of implications of cascading, we have classified cascades into the following broad categories:

- ‘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.

4.70 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 traffic by offering faster journeys and enhanced comfort); and
- service reductions.

#### *Extent of cascades*

4.71 The historic extent of cascades is an obvious starting point in assessing its impact on competition. We are not aware of a 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.

4.72 In total we identified 25 cascades involving 864 vehicles in the period since privatisation. 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.

4.73 The table below breaks these totals down 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 2007**

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 (including forecasts for 2007)

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

- the commercially motivated replacement of Mk2 and Mk3 stock with new Pendolino stock by Virgin on its WCML route;
- the commercially motivated replacement of HST and Mk2 loco-hauled coaching stock with new Voyagers by Virgin on its Cross Country routes; and

- replacement of Mk1 rolling stock as a result of the 1999 Railway Safety Regulations.
- 4.75 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.
- 4.76 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.
- 4.77 Further, our interpretation of the available information is that about 170 of the vehicles were used to supply demand for increased volumes of rolling stock resulting from volume growth.

### *Conclusion*

- 4.78 The incidence of cascades since privatisation has been limited.
- 4.79 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.
- 4.80 The threat of cascading is clearly more difficult to observe than the extent of actual cascading. Whilst we accept that such threats may 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 the respect of the majority of incumbent fleets. In any event, the arguments put forward by the ROSCOs on this issue have not been adequate to remove our grounds to suspect that cascades have not provided a material constraint as suggested by the historic extent of actual cascading.
- 4.81 Our dialogue with the DfT, TOCs, and the ROSCOs suggests that there are a number of factors that limit the scope for widespread switching of stock between franchises. The next section of this chapter discusses some of these factors.

*Factors preventing competition from existing stock*

- 4.82 The previous subsection explained that the extent of stock being cascaded between franchises has historically been very limited.
- 4.83 The remainder of this section discusses what appear to be the most important factors. These factors are:
- switching costs;
  - specificity of ITTs;
  - section 54 undertakings;
  - different franchise offer/reward dates with limited instances of coterminous franchises; and
  - the size of core incumbent fleets.
- 4.84 The role played by these factors should be considered as being additional barriers to substitutability that exacerbate the stock interchangeability issues discussed in our market definition chapter.

*Switching costs*

- 4.85 If the costs of switching between ROSCO suppliers were high then, other things being equal, this would tend to dampen price competition between the ROSCOs. 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"*.
- 4.86 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 between routes mean that doing so is often not a cost-effective option for TOCs.
- 4.87 The DfT identified and arrived at quantified estimates of a number of up-front costs that have to be incurred in order for rolling stock to be transferred between franchises. Some of these costs would be directly incurred by TOCs

(such as staff training), whilst others would be incurred by the ROSCOs. They are summarised in the table below.

**Figure 6 - DFT's estimates of switching costs**

<b>Modification</b>	<b>Typical cost</b>	<b>Approximate time taken</b>
Livery change	£12,000 to £15,000 per vehicle	3 to 4 days
Small scale modifications (such as installing DOO equipment)	c. £50,000 per vehicle	12 months (dependent on total fleet size)
Reliability upgrade	Entirely dependent on vehicle and required upgrade. For example [X]	One to two years (depending on total fleet size)
Extensive interior change	£100,000 per vehicle	One to two years dependent on total fleet size
Conversion of DC EMUs to dual-voltage	£100,000 - £175,000 per vehicle depending on whether original design facilitates this	12 months (dependent on total fleet size)
Provision of maintenance and servicing support facilities	Very dependent on scale of work required	Very dependent on scale of work required – much can be upgraded within one year or at least temporary solutions adopted
Maintenance and servicing staff training	Dependent on scale of switching	Up to six months depending on scale. Training lead times will probably diminish as stock becomes standardised between manufacturers
Train crew staff clearance	Dependent on scale of switching	Up to 12 months, depending on scale of switching

<b>Modification</b>	<b>Typical cost</b>	<b>Approximate time taken</b>
Route clearance	Costs can be significant	12 months maximum (Network Rail)

*The ROSCOs' views on switching costs*

4.88 We supplied the ROSCOs with the DfT's discussion of switching costs, and received a number of comments from the ROSCOs in response, which can be categorised as follows:

- particular quantified estimates, with some estimates being higher, and others lower, than the figures suggested by the DfT;
- comments on the 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); and
- comments on the extent to which all of the costs listed above should be classified as 'essential' or 'desirable' from a TOC's point of view. For example, one of the ROSCOs argued that TOCs were able to delay reliability upgrades until the next maintenance overhaul. ROSCOs also argued that costs such as small-scale modifications and livery change, whilst desirable in many cases, should not be classified as being essential.

*TOCs' views*

4.89 TOCs highlighted the difficulties inherent in making generalisations about switching costs, since these depended on the franchise and types of stock to be involved in any potential switch. TOCs provided a number of examples:

- GNER described a wide variation in switching costs, for example:
  - it told us about some switching that had been carried out with no modifications or other work necessary, with re-branding sometimes left until a scheduled overhaul; and

- in other cases, extensive refurbishment, overhaul and life extension programmes have been undertaken, with costs having been in the region of £200,000 per trailer car and £1m per locomotive.
- National Express Group (NEG) told us:
  - it is often not necessary for any modifications or technical changes to be undertaken when a fleet is transferred from one franchise to another;
  - it is more common that re-branding of the vehicle represents the highest cost element of transferring a vehicle and these costs can be as high as £10,000 per vehicle; and
  - route clearance costs can range from about £20,000 to over £100,000.
- Arriva Trains Wales told us that refurbishment costs can vary between £50,000 to £100,000 per vehicle.

#### *Switching costs – our view*

4.90 Our dialogue with stakeholders suggested that some fairly substantial costs are incurred by TOCs when considering switching from the incumbent rolling stock fleet to alternative (existing) rolling stock. We do not consider it necessary for us to arrive at precise estimates of these costs, but it does seem likely that switching costs play a role in the decisions made by TOCs, for example:

- the cost of converting DC EMUs to dual-voltage will in many cases be too prohibitively high for DC stock to impose a constraint on incumbent 25kv or dual-voltage vehicles; and
- more generally, certain other costs such as re-branding (livery changes), route clearance, staff training and extensive interior changes may play some part in dissuading TOCs from switching.

4.91 We have not drawn firm conclusions as to the extent to which the sorts of costs described in this subsection have acted as a barrier to switching. It seems likely, though, that where costs are towards the higher end of the range outlined above, this will deter anything other than a strong and

compelling business case for transfer of fleets between franchises. In other cases, it appears likely that they will play a smaller part.

### Questions

Q4 Do you agree with our view that switching costs play a role in the decisions made by TOCs as to whether to remain with the incumbent stock?

### *DfT restrictions/ specificity of ITTs*

4.92 Our analysis of the DfT's case studies and dialogue with stakeholders made it clear that there are instances in which DfT's franchise requirements may provide TOCs with disincentives to switch away from incumbent stock that go beyond commercial imperatives that might exist even if franchise requirements were relatively loosely specified.

4.93 DfT told us<sup>20</sup> that ITT documents normally specify

- the number of services on each route;
- minimum capacity of services;
- journey times; and
- stopping patterns.

4.94 ITT documents may also include restrictions on types of alternative rolling stock and in some instances may specify individual rolling stock to be used, for example in circumstances where there is a section 54 undertaking in place. 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 impression based on dialogue with TOCs is 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 deliverability criteria are implemented.

4.95 Six out of eight of the TOC owner groups to whom we sent questionnaires told us that franchise specifications were highly prescriptive with regard to rolling

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<sup>20</sup> Paragraph 3.10 of DfT's submission.

stock requirements, of which five felt that there had been a move towards more detailed specification in recent years.

- 4.96 HSBC told us that DfT's franchise specifications have become increasingly specific 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"*.

### Questions

- |    |  |
|----|--|
| Q5 | Do you agree with our view that, in many cases, the DfT's ITT for a franchise in practice limits bidders' choice to the incumbent stock? |
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### Section 54 undertakings

- 4.97 Section 54 of the RA93, which is designed to encourage investment in the railways, enables the DfT to give undertakings regarding the use of rolling stock. These undertakings can specify that the DfT will require subsequent operators of a franchise to use the rolling stock. Section 54 undertakings are used to provide assurances to companies funding the purchase of new build rolling stock.
- 4.98 In addition to having a positive impact on incentives to invest, section 54 undertakings can have the effect of preventing bidders from sourcing alternative rolling stock. Recent examples of franchise renewals being affected by the use of section 54 undertakings include the recent Intercity East Coast ('ICEC') and South West Trains ('SWT') franchise renewals.

### Non coterminous franchises

- 4.99 Most passenger franchises are not coterminous, since:
- the DfT currently aims to award up to three franchises in a single calendar year;
  - there are currently 21 rail passenger franchises in GB; and
  - franchises typically last for periods of 7-10 years.

- 4.100 This situation restricts opportunities for substitution between incumbent fleets and other existing rolling stock.
- 4.101 We have not considered what the impact of increasing the proportion of franchises that are coterminous would be. It might well be the case that such a change 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*

- 4.102 The DfT's case studies reveal that, whilst it is not uncommon for there to be some possibly substitutable off-lease or soon-to-be off-lease stock available to potentially displace incumbent stock at franchise renewal, the volume that is available is often insufficient for anything other than a partial replacement.
- 4.103 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.
- 4.104 The higher risk of displacement faced by smaller fleets was 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.
- 4.105 Angel additionally argued 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 opportunity and storage costs associated with having stock off-lease.
- 4.106 Whilst we agree that, other things being equal, these factors would tend to tilt the balance of bargaining strengths between the ROSCOs and TOCs in the direction of the TOCs to some extent, based on the evidence available to us

we consider it unlikely that they are sufficient to ensure competitive outcomes, given the number of other factors that work in the ROSCOs' favour as discussed in this chapter.

*Conclusions on constraints from existing stock*

4.107 All of the eight<sup>21</sup> TOC owner groups that we talked to considered that a range of factors restrict their choice of rolling stock and supplier of rolling stock. The factors that they mentioned as restricting their choice of rolling stock included:

- 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.

4.108 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.

4.109 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.

4.110 It seems clear that certain fleets of incumbent rolling stock do on occasion face constraints from existing rolling stock, but the evidence available suggests that such situations are relatively rare. As will be described at the end of this chapter, switching rates away from incumbent ROSCOs are low, which is consistent with competitive threats from all sources being limited.

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<sup>21</sup> Arriva Trains Wales, First Group, GNER, Chiltern, GOVIA, National Express Group, Stagecoach and Serco.

## Constraints on incumbent stock from new build

4.111 All three ROSCOs told us that their incumbent fleets frequently face a threat of displacement from new build. In this section, we assess the frequency with which the potential for introducing new build stock has the potential to impose such constraints.

### *Drivers of new build*

4.112 Since privatisation, over 4,000 new vehicles have been bought on behalf of the franchised passenger TOCs, at a cost of just over £4bn.

4.113 To help understand the drivers for new build, we have divided this investment into the following broad categories:

- 'replacement' - replacement of life-expired<sup>22</sup> 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).

4.114 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.

4.115 The main drivers of this new build have been:

- replacement - the single largest cause of new build has resulted from the Railway Safety Regulations 1999 which required the withdrawal of unmodified Mk1 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 example Midland Mainline introduced new Turbostar DMUs on new

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<sup>22</sup> Here we use the term to include stock withdrawn for legislative (including safety) reasons.

'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 the product to attract new patronage.

*DfT acting as the driver for introducing new stock*

4.116 The evidence supplied to us by stakeholders confirmed 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"*.

*New build lead times and DfT's franchising timetable*

4.117 The lag between new build stock being ordered and it being ready for use on the network can be significant. This factor, together with the tight franchise replacement timetable described in chapter 3, restricts the ability of new build to provide a constraint on incumbent fleets.

4.118 Both ROSCOs and TOCs agreed that the lead times associated with new build are typically substantial. Lead times can vary substantially depending on the extent to which past production can be used as a template, for example at two extremes:

- 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.

4.119 The main arguments 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.

*DfT use of call options*

4.120 In the discussion of the franchise context in chapter 2 above we explained that the DfT enters into 'direct agreements' with the ROSCOs. Contained within these agreements are 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.

4.121 All three ROSCOs 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.

4.122 The DfT told us 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. DfT told us that it sees either of these conditions as being too high a threshold.

4.123 We note in conclusion that the DfT has not used the call option, and that the extent to which it has provided a significant competitive constraint on incumbent rolling stock fleets can only be speculated at.

*Lack of speculative purchase by ROSCOs*

4.124 Speculative purchase of new rolling stock by the ROSCOs would have the potential to enable TOCs to circumvent the problems associated with long new build lease times.

4.125 The DfT told us that, of the 4,700 new build vehicles since privatisation, only 158 have been purchased by a ROSCO without a firm order.

4.126 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 us that it had made speculative purchases of new stock amounting to some 567 vehicles since 2000.

4.127 The available evidence suggests to us that it is likely that most, if not quite all, of the new stock ordered since privatisation has not been bought on a 'fully speculative' basis, and has been bought instead in response to particular franchise requirements and/or observed or anticipated growth in rolling stock requirements. This is consistent with the low level of surplus stock described earlier in this chapter.

*The commercial case for introducing new build stock*

4.128 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).

4.129 These factors are offset to varying extents by higher maintenance or refurbishment costs associated with some of the older MOLA stock. On franchises that include a significant amount of discretionary<sup>23</sup> travel, the introduction of new build stock may also provide TOCs with improved revenue-generating capabilities.

4.130 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

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<sup>23</sup> 'Essential' travel such as commuter services would fall outside of this category.

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”.

4.131 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 MOLA stock.

4.132 In any event, TOCs told us that, where new build is not specifically instructed (by the DfT), it is rarely viable in a commercial sense. For example:

- 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”.*
- Another 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.”*

- A different 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.”*

4.133 There were some exceptions to this 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*

4.134 Both the DfT and the TOCs 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. We believe that the evidence available suggests that the constraints imposed on incumbent ROSCO stock by new build stock are frequently limited by factors such as:

- new build lead times; and
- the commercial attractiveness of retaining incumbent stock rather than a new build alternative.

4.135 It seems fairly clear that certain fleets of incumbent rolling stock do on occasion face constraints from 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.

## **Questions**

Q6	Do you agree with our view that the commercial case for new build stock (without specific Government backing or direction) is generally not sufficiently compelling to enable new build stock to constrain the price of existing/incumbent fleet?
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- Q7 Do you agree with our view that franchise duration has an impact on the attractiveness of new build as an option, with the long-lead times for bringing new stock onto the network being a factor in this?
- Q8 Do you agree with our view that the DfT's focus on deliverability favours existing or even incumbent stock?
- Q9 Do you agree with our view that the limited use of short-term leases and call options has an impact on market outcomes?
- Q10 Do you agree with our view that the central role played by the DfT in the procurement of new-build stock restricts competition between new build and old stock?

## Buyer incentives and Buyer Power

### *Introduction*

- 4.136 Both the DfT and the ROSCOs devoted fairly substantial parts of their submissions 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.
- 4.137 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, TOCs will be indifferent to the level of rolling stock charges 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 successful<sup>24</sup>.
- 4.138 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. We also discuss the

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<sup>24</sup> 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.

arguments made by the ROSCOs to the effect that some of the TOCs and/or the DfT are in a position of countervailing buyer power.

*Similarity of terms offered to TOCs and the impact of the codes of practice*

- 4.139 Soon after receiving an ITT, short listed bidders will each (individually) approach the ROSCOs for quotations for the incumbent rolling stock. TOCs aim to have signed heads of terms agreements 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.
- 4.140 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.
- 4.141 The ROSCOs confirmed 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 did, however, go 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. The ROSCOs also outlined that, once the DfT has identified a preferred bidder, the winner will recommence negotiations on rolling stock leases in order to finalise the terms and conditions with regard to their specific bids.

*Buyer Power*

- 4.142 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 one or more of the following conditions are satisfied:
- 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.

4.143 The ROSCOs argued that the size of the larger TOC groups and/or the DfT were such that the ROSCOs faced significant countervailing buyer power. For example:

- Angel argued that: *“franchise bidders have considerable buyer power”*, arguing 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 had 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.

4.144 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 DfT’s case studies. 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).

4.145 The ability of a buyer to compare prices, contrary to Porterbrook’s argument, 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, 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*

4.146 The majority of TOCs agreed with the DfT's argument 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.

4.147 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 a 'normal' market. This means what, whilst the scope for differentiation around the base case offers means that it would clearly be inaccurate to describe TOCs as being indifferent towards prices, we consider that it is appropriate for TOC incentives to be considered as a further factor dampening price competition from either existing or new build stock.

4.148 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.

*Questions*

Q11 Do you agree with our view that TOCs have limited incentive to negotiate on the capital element of the leasing charge?
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**Other indicators of the level of competition**

4.149 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.

4.150 We present the results of our analysis of profitability and switching rates. During the course of our pre-consultation dialogue with the ROSCOs, we discussed the possibility of incorporating information on price trends into our analysis. We have not, however, presented any results of such an analysis because the dialogue which we had with the ROSCOs suggested that it would be prohibitively difficult for us to strip out the extent to which the current prices

of MOLA stock reflect investment made by the ROSCOs subsequent to privatisation.

### *Profitability*

4.151 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 Phase 1<sup>25</sup> 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 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.

4.152 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 including a discussion of the usefulness of profitability analysis in this study, are described at Annex C.

4.153 A high-level outline of the various results that we put weight on is provided in the figure below (note that, of the ROSCOs, only Angel supplied us with substantial details of a profitability assessment that it had carried out).

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<sup>25</sup> We use this term to denote a pre-CC investigation such as those carried out by the OFT.

Figure 7 – Summary of profitability estimates<sup>26</sup>

Method/ Source	Stock	Time period	Asset valuation methodology	Value <sup>27</sup>
Competitive benchmark (ORR)	n/a	n/a	n/a	6-8%
Forecast IRR (DfT)	MOLA	2005	Depreciated privatisation price	[<del>X</del>] – [<del>X</del>]%
	MOLA	2005	Depreciated purchase price	[<del>X</del>] – [<del>X</del>] %
ROCE (ORR)	MOLA	2003 - 05	Vesting values	[<del>X</del>] – [<del>X</del>]%
	MOLA	2003 - 05	Revalued assets	[<del>X</del>] – [<del>X</del>]%
ROCE (Angel)	MOLA + non- MOLA	2003 – 05	Revalued assets	[<del>X</del>] – [<del>X</del>]%
IRR (Angel)	MOLA + non- MOLA	2005 -	Revalued assets	[<del>X</del>] – [<del>X</del>]%

4.154 The results in the table above show that:

- both our results and those of the DfT show returns that are:
  - some way above our estimate of a competitive level when measured on a privatisation value basis; but
  - only marginally (if at all) higher than our benchmark range when current book values are used.
- the ROSCOs' profitability estimates are fairly close to our estimated range of a competitive level of returns.

<sup>26</sup> Ranges in this table reflect the difference between the two ROSCOs with the highest and lowest returns.

<sup>27</sup> All of these figures are calculated in nominal, pre-tax terms.

- 4.155 We consider that it would be inappropriate for us to place a significant amount of weight on the estimates supplied by Angel, principally because they have been calculated at a 'whole company' level, making it difficult to use them to test the hypothesis that competition problems particularly affect the leasing of incumbent stock.
- 4.156 Our view is that both our results and those of the DfT represent useful sources of evidence, and that, taken together, they are consistent with, albeit not necessarily determinative of, the current leases on MOLA stock having been set under conditions of weak competition. Both sets of results are very sensitive to the chosen asset valuation methodology. This issue is discussed in more detail in Annex C.
- 4.157 We should add that, of the number of approaches that have been suggested for profitability analysis, not all of them suggest excess profits. It is significant, however, that nonetheless 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.

### *Questions*

Q12 Do you agree with our views on the profitability of the ROSCOs?
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### *Switching rates*

- 4.158 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.
- 4.159 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.
- 4.160 All of the ROSCOs agreed that switching rates are low. 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.
- HSBC told us that, of the 8 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.<sup>28</sup>
- 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.

4.161 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.

4.162 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.

#### *Other indicators – summary*

4.163 The section above has set out information on two further indicators of competition. Of these, we consider that our analysis of profitability and, in particular, switching rates, are consistent with the ROSCOs enjoying a position of market power with regard to incumbent stock.

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<sup>28</sup> This example refers to a relatively small [redacted] number of vehicles previously owned by [redacted].

## Maintenance contract terms

4.164 The terms and conditions covering the supply of maintenance services offered by the ROSCOs is another area of potential concern about the competitiveness of rolling stock leasing. The 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 to better incentivise them to manage performance risk from poor maintenance and/or lack of availability of rolling stock.

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

4.166 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
- '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.

4.167 ROSCOs also sometimes offer maintenance packages that lie somewhere in between these two extremes, namely where maintenance is shared in some combination between the ROSCO and TOC.<sup>29</sup> Such arrangements are sometimes referred to as 'semi-wet' or 'soggy' leases.

### *Maintenance reserve*

4.168 The maintenance reserve is the non-capital element of the train lease accumulated by a ROSCO in order to procure the heavy maintenance the ROSCO provides as part of the lease contract. The concern expressed by TOCs is that the way in which the maintenance reserve is calculated restricts

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<sup>29</sup> 'Maintenance' in this respect refers to heavy maintenance; the majority of TOCs carry out routine overnight 'light' maintenance themselves.

their ability to move from a semi-wet to dry lease for mid-life MOLA stock. It does so in two ways.

- 4.169 Firstly, there is an overall lack of transparency over the level of the maintenance reserve specific to a train lease. This is because, in general, it 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...”*
- 4.170 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 maintenance reserve offered to be repaid 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.
- 4.171 TOCs told us that they did not consider that the ROSCOs provided them with a high degree of transparency regarding this shortfall. TOCs told us that they would expect to make savings through dry leases due to the lack of a margin payable to the ROSCOs. The TOCs told us that, as a result, it is often not commercially viable for them to move to dry leases. GNER, for example, told us 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.
- 4.172 The impact of the maintenance reserve is different in relation to new trains, where all maintenance, both heavy and light, is typically provided by manufacturers on a transparent basis.

#### *Performance/penalties/service level agreements*

- 4.173 A number of TOCs also raised concerns over the apparent unwillingness of ROSCOs to negotiate back-to-back performance regimes and service level agreements (‘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 service level agreements, where the risks associated with poor performance are shared between TOCs and ROSCOs, would strengthen the incentive on ROSCOs to offer higher maintenance standards.

*Bundling-flexibility - dry/wet leases*

4.174 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 somewhat depending on the exact combination of buyer and seller involved.

*Questions*

Q13 Do you agree with our views on the problems associated with maintenance contract terms?
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## **Competition assessment - summary and conclusions**

*Summary*

4.175 The key findings outlined in this chapter are that:

- 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 factors restricting competition from existing stock, including:
  - switching costs;
  - franchises terminating at different dates;
  - specificity within DfT ITTs; and
  - section 54 undertakings, where they exist, directing the use of incumbent stock.

- there are factors restricting competition from new build, including:
  - the limited commercial case for introducing new build stock;
  - 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 have a position of countervailing buyer power. Indeed, buyer incentives to obtain low prices appear to be relatively weak.

4.176 We have additionally identified a number of issues concerning maintenance provision, service level agreements, and the maintenance reserve.



## 5. Conclusions

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### Introduction

- 5.1 This chapter summarises our preliminary conclusions on market definition and the level of competition within the markets for the leasing of rolling stock for franchised passenger services. It also identifies those features which, 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 also provide our initial thoughts on possible remedies to address the features we have identified and the detriment arising. This preliminary discussion does not reflect the full range of options that may be open to the CC following a referral. The remedies fall into the two broad categories of market based or behavioural. We also include within this chapter our assessment of why, in the balance of ORR's statutory duties,<sup>30</sup> ORR considers that a decision to refer these markets to the CC would be an appropriate exercise of the discretion provided to us under section 131 of EA02.
- 5.3 We welcome views on any of our analysis and conclusions but, for convenience, we identify issues on which we would particularly welcome comments at chapter 6 of this document.

### Market Definition

**Feature 1 - 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.**

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<sup>30</sup> ORR's statutory duties as laid out in section 4 of the Railways Act 1993 (as amended).

- 5.4 Our view is that the leasing of rolling stock for franchised passenger services is almost certainly 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.

## **Assessment of competition**

### *The distribution of shares of the supply of rolling stock between firms*

- 5.5 The three major incumbent suppliers collectively own 96% of all rolling stock, 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 in assessing the competitiveness of the markets for the leasing of rolling stock for franchised passenger services.

### *Factors relating to new entry*

- 5.6 A set of markets such as the ones for the leasing of rolling stock for franchised passenger services, 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. 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 all rolling stock, despite the opportunities for entry provided by the many new build vehicles that have been introduced since privatisation. However, our view is that the failure of new entrants to capture a substantial share of this new build stock could also partly stem from the relatively competitive nature of the leasing of new build stock (at least compared to the leasing of MOLA stock).

*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 in terms of alternatives to incumbent fleet at franchise renewal are extremely limited. The available evidence suggests that there is a tight relationship between supply and demand in these markets.

*Existing stock*

**Feature 2 - The limited availability of a pool of surplus stock of viable, alternative vehicles restricts the choices available to the TOCs.**

**Feature 3 - Different franchise offer/award dates limit the amount of liquidity during the bidding phase for a franchise.**

5.8 We have observed that there is very little surplus stock available. The significant numbers of new vehicles introduced since privatisation have not created a large, viable surplus since new stock has 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 The Government 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 franchises.

*Switching costs*

**Feature 4 - The costs of transferring stock between franchises act as a barrier to TOCs switching between ROSCOs.**

5.10 Our dialogue with stakeholders highlighted a number of costs which are incurred by TOCs when considering switching from the incumbent rolling stock fleet to alternative (existing) stock. We do not arrive at a precise estimate of these costs or definitively conclude on their precise impact, but it

seems likely to us that such costs play a role in the decisions made by TOCs in their choice of rolling stock in some circumstances.

*Restrictions within invitations to tender for franchises*

**Feature 5 - The specificity within some ITTs can restrict the choices available to TOCs.**

**Feature 6 - Section 54 undertakings, where they exist, can direct use of the incumbent stock.**

5.11 The DfT's submission, our analysis of case studies, and dialogue with stakeholders have indicated that in many cases the franchise specification developed by Government constrains the bidders' choice of rolling stock. This can arise either, firstly, directly where, for example, a section 54 undertaking exists and the DfT specifies use of the existing stock or, secondly, indirectly by specifying the number of services on each route, together with the minimum capacity, journey times and stopping patterns, which, in practice, restricts the types of alternative rolling stock which can be used.

*New build*

**Feature 7 - The commercial case for introducing new build stock is limited by its high cash costs.**

**Feature 8 - The time limited nature of railway franchises relative to new build lead times disincentivises new build.**

**Feature 9 - The DfT's deliverability criteria in the franchise process encourages TOCs to lease stock for the entire duration of franchises.**

**Feature 10 - 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.**

**Feature 11 - New build activity is limited in the absence of Government support.**

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 poses a competitive constraint on incumbent fleets is limited by a number of factors. These factors include the higher capital costs for new build and the lead times for new build relative to franchise length.

- 5.13 We have also been advised by TOCs that the inherent operational risk of introducing new stock onto the network makes it difficult for bids incorporating new build to meet DfT's franchise deliverability requirements. This focus provides 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 told us 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 review<sup>31</sup> took a similar view (see paragraph 5.56). 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 in fact attempted to exercise it.
- 5.16 DfT has told us that it considers new build, in many cases, to provide poor value for money, 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 only where it has a specific replacement purpose. 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.

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<sup>31</sup> *Review of the Rolling Stock Market – Report to the Deputy Prime Minister, May 1998.*

*Buyer incentives and the extent of buyer power*

**Feature 12 - Buyers (TOCs) have limited incentives to negotiate over lease terms given that rolling stock costs are passed through into subsidy or premium payments.**

5.17 The majority of TOCs agreed with the DfT in saying 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 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 TOCs. We consider that these factors limit the incentive on a TOC, at outset, to try to negotiate the capital rentals downwards.

**Indicators of a market not working effectively**

5.18 We have identified also a number of indicators of the ROSCOs' ability to exercise a degree of market power in negotiations which are not compatible with a market working effectively. 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 where the provider faces competition).

*Profitability*

5.19 Both our estimates and those of the DfT of the profitability of the ROSCOs suggest that the ROSCOs earn returns on their MOLA stock that are some way above our estimate of a competitive level when assets are valued according to the prices paid by the ROSCOs at privatisation, but are only marginally (if at all) higher when the ROSCOs' current (revalued) book values are used. The ROSCOs' own estimates of their profitability are fairly close to our estimate of a competitive level of return.

5.20 Of the number of possible approaches that we might adopt with regard to profitability analysis, not all of them suggest excess profits. We consider it significant, however, that plausible estimation methods from within the range we have considered are consistent with excess profits being earned. This means that the signals from our profitability analysis, whilst not conclusive in themselves, support our suspicion that there is an inadequate degree of competition.

#### *Switching rates*

5.21 Other things being equal, evidence of buyers switching frequently may be suggestive of suppliers facing competition, 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 and all three ROSCOs agree that switching rates are low.

#### *Maintenance and service provision*

5.22 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<sup>32</sup> 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.

### **Referral to the CC**

5.23 In order to make a market investigation reference we must have: “*reasonable grounds for suspecting that any feature or combination of features, of a*

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<sup>32</sup> An account, into which the TOCs pay, to cover future maintenance expenses.

*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**

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

## **Discretion to make a reference**

5.25 Section 67(2) of the Railways Act 1993 provides for concurrent functions of the OFT and ORR under Part 4 of the Enterprise Act so far as they relate to the supply of services relating to railways. Our statutory duties under section 4 of the Railways Act apply to the exercise of functions assigned or transferred to us under Part 1 of the Railways Act.

5.26 We 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)).

5.27 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 tax-payers. 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. The markets for passenger rolling stock leasing have been reviewed several times since privatisation. A reference to the CC for a thorough review of the issues is likely to introduce more certainty and stability for the future.

- 5.28 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 £1 billion per year from the ROSCOs, this representing a significant cost to Government and the taxpayer. Competition problems within markets of this size have the potential to create substantial consumer detriment. The scale of detriment estimated by the DfT, which we consider to be a plausible estimate, suggests that the benefits of remedying any adverse effects are likely to outweigh the costs of the reference.

### **Availability of remedies**

- 5.29 We have also considered the likelihood that remedies that would meet the competition concerns 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. Where appropriate, we have made comments about the possible implications of those remedies, but have not, for example carried out an impact assessment for any of them. For the avoidance of doubt, our thoughts on remedies are preliminary and do not bind the CC should a reference be made.
- 5.30 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 subsections (1) to (3) of section 4 of the

Railways Act 1993. It is also possible that the CC may address the concerns regarding the franchise process by way of recommendations to Government.

## **Market based remedies**

- 5.31 Our first group of potential remedies represent incremental improvements to the franchising process and may provide sufficient liquidity at the margins to give TOCs more leverage than is currently the position. Each remedy may, however, be insufficient in itself and it may be that most if not all would need to be put in place. For example, TOCs will be more likely to be innovative in their bids if the franchise for which they are bidding is of sufficient length to encourage a higher level of spending (this is as relevant to switching stock between franchises as it is to new build). It would, therefore, be inappropriate for us to rank them in terms of impact and/or suitability.
- 5.32 Our second group of suggested remedies may have wider implications outside rolling stock that would need careful cost/benefit evaluation. We recognise that the way in which 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.

### *Group A*

- Planning of the franchise programme in a way which facilitates a larger pool of rolling stock to be available to bidders through greater alignment of franchise offer and start dates;
- Encouraging TOCs to come forward with more innovative solutions to rolling stock provision (either by switching stock between franchises or by new purchase), for instance by providing less specificity within ITTs;
- Ensuring that 'deliverability' criteria do not create an unnecessary disincentive against changes in the mix of stock (new or switched) during the course of the franchise. Creating a climate where such proposals are

considered on the merits, where there is an economic case for it, rather than deterred at the outset; and/or

- Agreement between the parties to the call option as to the circumstances in which it will be used, which may require modification to the existing terms.

#### *Group B*

- A major rethink of the franchising model, allowing TOCs to take their commercial decisions for new rolling stock procurement based purely on their own assessment of future revenue and the needs of the passenger;
- Reassessing the balance between operating and finance leases (which would appear on TOCs' balance sheets), thus rebalancing the incentive structure between stakeholders;
- Longer franchise lengths to encourage TOCs to consider the possibility of new build; and/or
- Government sponsored new build to introduce some surplus into the market.

### **Behavioural remedies**

5.33 The overall case for such changes being made would, of course, depend critically on the costs associated with a number of them, and wider implications on the franchise process. Significantly, the benefits associated with any of these changes would take some time to take effect. Accordingly, at the very least in the short-term, there might be the need for supplementary behavioural remedies to tackle issues such as pricing and the provision of maintenance.

#### *Price remedies*

5.34 Any price setting or price control remedy for the ROSCOs would be complicated by a number of factors including the following:

- the ROSCOs have differing levels of market power at each transaction. For example they typically face effective competition in the case of new build stock but significantly variable strength of competition in the case of the renewal of MOLA leases. This means that an intervention to be applied to all of the ROSCOs' stock might not be appropriate;
- setting a uniform 'fair' price for stock of a certain type might not be appropriate, since even within a given type, the stock of the ROSCOs has been subject to varying states of wear and tear and post-purchase investment; and
- calculating asset values is difficult in the case of assets that have not been individually sold on the open market for, in some cases, a number of years.

5.35 Nonetheless, price controls have been devised to address complex situations for other markets/industries and our view is that, if it were to consider price remedies appropriate, the CC should be able to devise an appropriate remedy for the particular circumstances of these markets.

#### *Other remedies*

5.36 It is possible that the concerns relating to maintenance provision could be tackled by specific and detailed obligations within a code of practice, with a need for ongoing monitoring to enforce them effectively.

5.37 An undertaking from the ROSCOs as to the terms of short-term leases, providing at the very least transparency as to how costs vary depending on the length of the contract.

5.38 Modification to the existing codes of practice to, for example, ensure that they are not used to distort the negotiation of the 'base' price at bidding stage.

#### *Divestment*

5.39 Whilst divestment powers are available to the CC, we do not think that a divestment would be an effective remedy within these markets given that the competition problems associated with an underlying problem of a lack of

liquidity would be highly likely to persist, even following such a divestment. Measures intended to increase the number of competitors *might* be effective if introduced together with other measures aimed at introducing more liquidity. For example, it is likely that most franchise renewals would be subject to effective competition if a sizeable volume of readily transferable, surplus stock, to be owned by a fourth major ROSCO, were to be introduced, (although it seems very unlikely that such a measure would provide value for money).

- 5.40 In conclusion, we believe that there are remedies available to the CC in relation to the concerns we have identified and, with regard to changes to the franchise process, we can see merit in recommendations to DfT being made with the benefit of a detailed report by the CC to assist DfT to evaluate the changes in the light of their wider implications.

#### *Questions*

Q14 Do you agree with our initial thoughts on the remedies that are potentially available to the CC?
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### **Alternative powers**

- 5.41 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 identified.
- 5.42 We have considered whether the concerns about pricing could be shown to constitute abuse of a dominant position under the Competition Act 1998, but consider that these markets exhibit features that arise from their operation and structure rather than the conduct of one or more players.

#### *Undertakings in lieu*

- 5.43 We have the power, in lieu of a reference<sup>33</sup> from the ROSCOs. However, we note that such undertakings would not bring

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<sup>33</sup> Section 154 of EA02.

about changes to the underlying market features that we have identified, and are moreover dependent on the co-operation of all three parties.

- 5.44 Our statutory responsibility, in respect of undertakings, is also higher than 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*”.
- 5.45 At this point parties have not submitted undertakings. However, we consider our statutory duty to be a high burden to discharge in the light of the features that we have identified to date.

### **Terms of reference**

- 5.46 The draft Terms of Reference are contained in Annex A to this document.

## 6. Next steps and consultation questions

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6.1 This document sets out our draft conclusions based on the evidence we have received from interested parties at meetings and in writing, and our own analysis. We now want to hear the views of those interested parties on our decision that we are minded to refer the leasing of rolling stock for franchised passenger services to the CC.

### Consultation Questions

6.2 For ease of reference our consultation questions are grouped together here: Consultees are invited to comment on any aspect of our preliminary findings. However, we draw attention to a number of key issues, as listed below.

6.3 Consultees should substantiate their comments with any supporting reasoning and/or evidence, including drawing our attention to evidence previously supplied, if relevant.

6.4 Please provide comments on our preliminary findings as summarised in the questions below.

- |    |  |
|----|--|
| Q1 | Do you agree with our view that the technical and operational characteristics of rolling stock within Great Britain, have a negative impact on the interchangeability of different types of rolling stock? |
| Q2 | Do you agree with our view that the absence of new entry in these markets arises from a number of factors including the relatively competitive nature of the leasing of new build stock?                   |
| Q3 | Do you agree with our view that the limited availability of a pool of surplus stock of viable existing vehicles frequently limits the choice faced by TOCs at franchise renewal?                           |
| Q4 | Do you agree with our view that switching costs play a role in the decisions made by TOCs as to whether to remain with the incumbent stock?  |
| Q5 | Do you agree with our view that, in many cases, the DfT's ITT for a franchise in practice limits bidders' choice to the incumbent stock?   |

- Q6 Do you agree with our view that the commercial case for new build stock (without specific Government backing or direction) is generally not sufficiently compelling to enable new build stock to constrain the price of the existing/incumbent fleet?
- Q7 Do you agree with our view that franchise duration has an impact on the attractiveness of new build as an option, with the long-lead times for bringing new stock onto the network being a factor in this?
- Q8 Do you agree with our view that the DfT's focus on deliverability favours existing or even incumbent stock?
- Q9 Do you agree with our view that the limited use of short-term leases and call options has an impact on market outcomes?
- Q10 Do you agree with our view that the central role played by the DfT in the procurement of new-build stock restricts competition between new-build and old stock?
- Q11 Do you agree with our view that TOCs have limited incentive to negotiate on the capital element of the leasing charge?
- Q12 Do you agree with our views on the profitability of the ROSCOs?
- Q13 Do you agree with our views on the problems associated with maintenance contract terms?
- Q14 Do you agree with our initial thoughts on the remedies that are potentially available to the CC?
- Q15 Do you agree with the terms of the reference set out at Annex A?

### **During the consultation period**

- 6.5 Over the twelve-week consultation period until the end of February 2007, we propose to hold meetings with all key parties to seek views on our analysis and draft conclusions including potential remedies. These will be on a bilateral basis and, if we consider it appropriate following this, on a multi-lateral basis.
- 6.6 The responses that we receive (either during the course of meetings or via written responses) will help to refine our analysis. They will also help us to

develop our initial thinking on remedies so that we can advise on potential options if we decide to refer the markets to the CC.

### **After the consultation period**

- 6.7 Once we have received and analysed all the information and views collected during the consultation, we will issue our final conclusions. If our conclusions confirm our minded-to decision to refer, our work to date, including on potential remedies, would form part of our referral to the Competition Commission and our advice during its investigation.
- 6.8 We would expect to publish our final conclusions during April 2007.



## Annex A – Draft Reference

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### 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, hereby makes a reference to the Competition Commission for an investigation into the leasing of rolling stock for franchised passenger services and 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 the United Kingdom.
3. For the purposes of this reference:
  - "franchised passenger services" has the same meaning as in section 23 of the Railways Act 1993; and
  - "maintenance services" means the provision of maintenance and/or refurbishment services by or on behalf of a lessor of passenger rolling stock.



## Annex B – Case Studies

1. The DfT supplied us with 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, namely, as set out in the table below.

**Figure 8 – The DfT's case studies**

Franchise	Re-franchising date	Service types	Main stock types
ICEC	May 05	Intercity	HST; 225
'One'	April 04	Commuter, regional, rural	75-100 mph DMUs, EMUs and Mk2 coaches
Northern	Dec 04	Inter-urban, commuter, and rural	75-100 mph EMUs and DMUs
Thameslink <sup>34</sup>	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 vehicles types

<sup>34</sup> The successor to this franchise is referred to as 'Thameslink/First Capital Connect' in chapter 3 of this document.

offered by two or, in most cases, all three of the incumbent 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 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 60% 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. In the time and with the resources available to a Phase 1 study, we have not sought to reach definitive conclusions on these disagreements. We have, however, been able to reach some broad conclusions, which 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 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 document, including:
- the constraints that can be imposed on bidders' selection of stock by section 54 undertakings previously given by SRA/DfT (ICEC and SWT);
  - 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, Mk3 stock and class 158s, have been displaced by new build from Cross Country, West Coast and TPE

respectively, with some of this stock being surplus at present. Where this stock has been re-leased at all, 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 (principally in cases where they had invested in refurbishment and reliability improvement for existing stock<sup>35</sup> which was then leased at rates close to those on the previous franchise) offered to TOCs in the franchise bidding process. We did not consider these parts of the ROSCOs' submissions in great detail. We do not consider it possible for us to assess (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) the extent to which such investments and improvements are useful as an indicator of the level of competition. 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.

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<sup>35</sup> The best examples being ICEC, FGW, and Integrated Kent.

## Annex C – Profitability Analysis

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### Introduction

1. The DfT's submission included a detailed profitability analysis (details of which are set out in more detail later in this annex). The DfT used this analysis to, firstly, support its view of the competitiveness of the relevant markets and, secondly, arrive at an estimate of any 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:
  - 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); and
  - (where profits are calculated using accounting techniques) the influence of accounting policies, and changes to these over time.
3. These sorts of issues mean that the potential ambiguities in the nature of the relationship between market power and profitability are widely recognised by

competition authorities and regulators<sup>36</sup>. There is, however, 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 when assessing market power.

4. A brief discussion of the DfT's submission on profitability is provided later in this annex, as is a description of the analysis of our own. The results of our analysis, together with those of the DfT, are among the number of indicators that we have made use of in assessing the level of competition faced by the ROSCOs. A number of caveats apply to the inferences that we make from profitability data, including:
  - the sensitivity of our results (and those of the DfT) to the use of different asset valuation methodologies;
  - 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:
    - returns on any stock where the ROSCOs have a position of market power; and
    - returns in cases where the ROSCOs have faced effective competition.
  - the negotiations between the DfT and the ROSCOs that took place over the course of recent franchise renewals raise the possibility that the ROSCOs' pricing at recent rounds of lease renewals may have been constrained by the threat of a referral to ORR/the CC rather than by competition, meaning that profitability figures may understate the strength of the ROSCOs' market position.
5. We also note that the ROSCOs' current returns may be constrained to some extent by the existing codes of practice (although we think it likely that the constraints imposed by effective competition would be greater).

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<sup>36</sup> See, for example, paragraph 3.81-2 of *CC3 – Market Investigation References: Competition Commission Guidelines*.

6. 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.
7. The remainder of this annex provides a discussion of the following:
  - two methodological issues that are common to both our analysis and that of the DfT;
  - the appropriate benchmarks against which to measure the returns of the ROSCOs;
  - DfT's work on profitability;
  - the methodology and findings that we employed in assessing the profitability of the ROSCOs;
  - a short summary of the views of the ROSCOs on profitability to the extent that we have been supplied with these; and
  - our conclusion with regard to the profitability of the ROSCOs.

## **Methodological issues**

8. This section discusses key conceptual issues that underpin our analysis. This discussion is an important precursor to the estimates that we present later.

### *Relationship between our market analysis and profitability analysis*

9. As set out in chapter 4, we think that the key features of rolling stock leasing from a competition point of view relate to the lack of attractive alternatives to incumbent stock at the point of franchise renewal. These features have hitherto 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 supply this stock when it is new without being constrained by limited availability of surplus stock.

10. It might be argued that our profitability 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.
11. An analysis of this type would enable us to analyse both:
  - the absolute level of returns in the former cases; and
  - the relative magnitudes of returns in the two different categories.
12. We have decided, though, to group the returns into only two distinct categories, 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 timetable and resources available for this initial study, and, whilst it will not produce definitive findings, its output will be adequate given the reliance being placed on it in this study, namely to provide a cross-check against the concerns identified in chapter 4 and against the DfT's findings on profitability; and
  - the fact that the same categorisation was used by the DfT enables us to cross-check our results against those of the DfT.
13. In the remainder of our discussion of profitability we therefore draw a distinction between:
  - non-MOLA stock, which, as far as we can tell has so far been priced competitively in most cases (see chapter 4 for details); and
  - MOLA stock, for which we do not consider competitive conditions to be uniform, with the ROSCOs likely to have set prices based on holding a position of market power in a substantial proportion of, but certainly not all, cases.
14. We note that our current approach is a conservative one in that it would be expected to understate the extent to which the ROSCOs' returns in cases where they have a position of market power are above the competitive level,

since it averages such figures with the (presumably lower) profits associated with leases agreed under conditions of effective competition.

15. 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.

#### *Asset valuation*

16. Assets provide a business with the ability to generate income. Many commonly used methods of profitability analysis require estimates of asset values, for example:
  - in capital-intensive industries, depreciation charges are an important component of EBIT-based ratios (such as return on capital employed ('ROCE') and return on sales ('ROS'));
  - an estimate of capital employed is a key component of the denominator of ROCE calculations; and
  - opening and/or starting asset valuations are required in a truncated internal rate of return ('IRR') analysis.
17. 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 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.
18. MEA valuation is often cited as the most meaningful method of asset valuation to be used when using profitability data to make inferences about market power<sup>37</sup>.

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<sup>37</sup> See, for example, *Assessing profitability in competition policy analysis*, OFT, July 2003.

19. 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 are available though, including ones based on:
  - the asset values implied by the prices paid by the ROSCOs at privatisation;
  - the value of assets as they are currently recorded in the accounts of the ROSCOs; and
  - a measure of replacement cost (for example one based on MEA values).
20. 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 2000, whereas those of HSBC have not been revalued since 1997);
  - frequency of re-valuation (for example Porterbrook's assets have been revalued upwards three times since privatisation but Angel's have only been revalued once); and
  - methodology used (for example the revaluation carried out by Angel in 1999 adjusted the gross book value (GBV) of MOLA assets *down* by £153m whilst also reducing the value of accumulated depreciation by £397m, leading to an increase in net book value (NBV) of £244m, whilst Porterbrook's revaluations applied upward adjustments to both the gross and net book values of MOLA assets).
21. Our current view is that MEA values are likely to provide the best means of valuing the ROSCOs' MOLA assets. This is because such an approach would enable a comparison of the ROSCOs' prices with the prices that would be charged by a new entrant that was earning a normal return on a newly acquired set of assets that were equivalent to those of the ROSCOs.
22. However, an MEA valuation of all of the MOLA assets of the ROSCOs is not available to us and was not available to the DfT. The following bases of asset valuation were used by the DfT and us:

- 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 in relation to 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.
23. The first two asset valuation measures used by the DfT, whilst using an annuity, rather than straight-line, method of calculating depreciation, correspond closely to the two methods used in our accounting analysis.
24. Because profitability estimates for the whole of the ROSCOs' MOLA fleets are not available on a replacement cost basis, in terms of results presented, the remainder of this document focuses mainly on results calculated using the other two bases, our views regarding the usefulness of MEA asset valuations notwithstanding.
25. 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. We consider that carrying out our own MEA analysis would be inappropriate within this study given the weight that we are placing on profitability analysis generally. Of the other two measures, 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.

## Benchmark rates of return

### *Introduction*

26. Establishing an appropriate benchmark against which to compare actual returns is a key part of attempting to assess whether the profits earned by the ROSCOs on MOLA stock are above the level that would be expected if all or most of the markets for rolling stock leasing were subject to effective competition.
27. Of the profitability measures commonly employed by competition authorities and regulators, two of the most widely used ones, namely ROCE and IRR, measure the actual remuneration earned by firms on the total amount of capital that they have invested. The appropriate benchmark against which to assess these measures when carrying out a market power assessment might therefore reflect one or both of:
  - rates of return on capital actually achieved in markets that are as similar as possible to the one(s) under examination and that are recognised as being subject to effective competition; and
  - estimates of the rates of return on capital required by investors in return for investing in a company, namely its weighted average cost of capital ('WACC').
28. The DfT's submission compared forecasts of the rates of return to be earned by the ROSCOs on MOLA stock (see the next subsection of this annex for details) with a range of benchmarks, including:
  - *forecasts 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 demand, and costs;
  - bond yields in the rolling stock market – the DfT analysed historic yields on two bond issues that were made by Angel trains 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; and
  - achieved IRRs from a sample of PFI projects – the DfT summarised a 2002 study in this area carried out by PwC.
29. Based on all of these sources, the DfT concluded that an appropriate benchmark rate of return for rolling stock leasing was about 5.3-7.3%, which it presented as a ‘surplus’ (over a risk free rate of 4.3%) of 1% to 3%.

*Our approach*

30. Our preferred approach is to put weight on both of the first two methods used by the DfT.
31. Comparisons with non-MOLA rolling stock are attractive because:
- there are many similarities in the underlying characteristics of the leasing of non-MOLA and MOLA rolling stock; and
  - there is a degree of consensus behind the proposition that current rental charges for non-MOLA stock are the product of a reasonably competitive tendering process.
32. The main shortcomings of the use of comparisons between the returns on non-MOLA and MOLA stock are that:
- comparisons between accounting returns earned on non-MOLA and MOLA stock are likely to be distorted by the fact that, particularly in the case of data for 2003, accounting data for non-MOLA stock includes substantial depreciation charges and asset values that are associated with non-MOLA stock that had not yet started generating revenue, biasing profitability estimates down. Such comparisons may also be distorted by differences in the impact of capital allowances. ROCE comparisons may additionally be distorted by differences in the average ages of non-MOLA and MOLA stock. For these reasons, in making comparisons between the returns on non-MOLA and MOLA stock we have been obliged to rely on the DfT’s IRR forecasts for non-MOLA stock, which, as described below, we have not subjected to a high level of scrutiny;

- 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 latter case.
33. In the light of these factors:
- we place some weight on the DfT's estimates of forecast IRRs for non-MOLA stock as a benchmark for the competitive level of returns (although, as described below, this is not the only indicator that we use); and
  - we do not place any weight on comparisons between the relative accounting returns earned on non-MOLA and MOLA stock.
34. 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 firm-confidential information; and
  - is in widespread use by competition authorities and regulators.
35. The main disadvantage<sup>38</sup> of using a WACC estimate as a benchmark against which to assess the ROSCOs' returns from leasing MOLA stock is that our estimates of the firm-specific parameters in the cost of equity (equity beta) must rely on (in some cases fairly speculative) assertions about the risk characteristics of rolling stock leasing, since there are no 'pure play' listed comparators available<sup>39</sup>.
36. Based on all of these factors, our approach has been to put weight on both:
- 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%; and

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<sup>38</sup> 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.

<sup>39</sup> Limited information is available on the other firm-specific parameters required to make a WACC calculation via the returns on bonds issued by Angel and the views of DfT and the ROSCOs on an appropriate assumption for gearing.

- 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 at the end of this annex.
37. 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. We do not, however, consider that such an approach would be proportionate in the context of a Phase 1 study. The group structure of the ROSCOs might make such an analysis very complex. Figures at the upper end of the DfT's range of forecasts of returns on non-MOLA stock are based on figures that take the benefits of capital allowances into account.
38. The approach we have used to arrive at these benchmarks falls below the level of depth and rigour that might be expected in a Phase 2 investigation carried out by the CC in which the benchmark rate of return was an area of particular focus. In particular, we have not dedicated a significant amount of time to verifying the DfT's forecast IRRs for non-MOLA stock, or carried out a robust assessment of the cost of equity of the ROSCOs<sup>40</sup>. We consider, though, that our estimates do provide a useful guidance in support of the analysis set out in chapter 4, and that dedicating more time and resource to this issue would have been disproportionate.

## The DfT's profitability analysis

### *The DfT's approach*

39. DfT's submission included a detailed analysis of the profitability of the ROSCOs. Certain key aspects of the DfT's analysis are summarised in the table below.

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<sup>40</sup> 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 extent that they were in, for example, the CC's investigation of mobile call termination in 2003. So, 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 real pre-tax WACC would still be below 10%.

Figure 9 – The DfT’s profitability analysis

<b>Method</b>	<b>Comment/ detail</b>
Model used	<p>DfT used a truncated IRR approach.</p> <p>It constructed a cash flow forecast for the MOLA stock for each of the ROSCOs. These cash flow forecasts had two main components:</p> <ul style="list-style-type: none"> <li>• the value of MOLA assets (calculated using various measures of depreciated cost) as of 2005, which was treated as a cash outflow in year zero of the model; and</li> <li>• the net cash inflows forecast for the remainder of the lives of the MOLA stock.</li> </ul>
Time period covered	<p>The DfT’s discounted cash flow (DCF) analysis spanned a period from 2005 to the end of MOLA asset lives.</p>
Key variables	<p>Broadly speaking, the two key variables in the DfT’s approach were:</p> <ul style="list-style-type: none"> <li>• the value of assets as of 2005 – this was calculated using three alternative methods (see below); and</li> <li>• forecasts of ROSCOs’ future pricing, costs, and demand.</li> </ul>
Results	<p>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.</p>

Method	Comment/ detail
	<p>Briefly, the ROSCOs' forecast returns on MOLA stock look high when calculated using some asset valuation methods, but much more modest when calculated using others. See below for details.</p>

40. We have not carried out a detailed review of the DfT's analysis. Notably, in our dialogue with the ROSCOs 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 fall outside the appropriate level of analysis for a Phase 1 authority.
41. The steps that we 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 the DfT's calculations for any anomalous aspects including spreadsheet modelling errors.
42. Based on these checks, and subject to the caveats supplied 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 a more information and resource-intensive one 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 appropriate basis upon which to value the assets of the ROSCOs.
43. In our view, the main strengths of the DfT's approach is that, as a (truncated) IRR analysis it:
- covers a significant proportion of the lives of the assets under question;
  - and

- is (to some extent) free from the distortions usually associated with an accounting data based approach such as the one that we have used in our more simple assessment.
44. In our view, some other key features of the DfT's approach are that it:
- is not entirely free of accounting distortions, since its starting asset valuation, which is a key driver of its final results, is partly dependent on the choice of depreciation method used to arrive at a depreciated net privatisation price/ purchase price/ replacement cost valuation of the ROSCOs assets;
  - depends partly on (unverifiable) assumptions about future prices and costs; and
  - in some cases, uses input parameters (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.
45. In summary, we think that the DfT's results provide some useful information on 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 results*

46. 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):
- depreciated privatisation price:
    - Angel: [X] %;
    - HSBC: [X] %; and
    - Porterbrook: [X] %.
  - depreciated purchase price:
    - Angel: [X] %;

- HSBC: [X]%; and
  - Porterbrook: [X]%.
    - depreciated replacement cost – the DfT only carried out a financial analysis relating to a *sample* of the ROSCOs' MOLA fleets (covering about 10% of all stock). We have therefore not presented IRR figures obtained using this method. However, the DfT's calculations suggested that returns calculated on this basis were somewhat higher than those estimated using depreciated privatisation price basis, and well above the depreciated purchase price level.
47. 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.
48. The DfT's estimates of the annual value of consumer detriment arising from the ROSCOs' charging above the competitive level were:
- depreciated privatisation price - £157-£177m;
  - depreciated purchase price - £34-£70m; and
  - depreciated replacement cost (based on a sample fleet only accounting for a relatively small proportion of all MOLA stock) - £23-£25m.
49. 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 either a depreciated privatisation price or depreciated replacement cost basis, with fairly striking differences between forecast IRRs and its estimate of competitive returns; but
  - the gap between projected actual returns and projected competitive returns is much smaller when assets are valued on a depreciated purchase price basis.

50. As explained above, our view is it is appropriate for us to put a relatively small amount of weight on estimates calculated using a depreciated purchase price methodology. The implication of this is that the DfT's results appear to lend support to the idea that the ROSCOs are pricing the MOLA stock at a level that is some way above a competitive level.

## **Our profitability analysis**

### *Introduction*

51. 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 (beyond the high-level checks that we carried out as described above) its approach.
52. We carried out our own assessment of the profits of the ROSCOs, calculated using a combination of publicly available accounting data and further detailed accounting data supplied to us by the ROSCOs. Advantages of this approach from our perspective included:
- its consistency with the level of analysis typically undertaken by the OFT in Phase 1 enquiries;
  - the fact that accounting information and results are widely recognised and understood; and
  - as described below, our view that an accounting analysis had certain practical advantages in this specific context.

### *Our approach*

53. Our profitability analysis was based on accounting data collected from the ROSCOs in July – 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 value 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.

54. These steps were carried out on our behalf by our financial advisors Grant Thornton.

55. Certain key aspects of our analysis are set out in the table below.

**Figure 10 - Our profitability analysis**

<b>Method</b>	<b>Comment/ detail</b>
Model used	We calculate standard profitability ratios (ROCE, ROS) based on accounting data supplied to us by the ROSCOs.
Time period covered	We calculated ratios using three <sup>41</sup> 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. Details of our results are provided later in this subsection.</p> <p>In short:</p> <ul style="list-style-type: none"> <li>• estimates of the ROSCOs' ROCE on MOLA stock appear to be: <ul style="list-style-type: none"> <li>○ high when calculated using the</li> </ul> </li> </ul>

<sup>41</sup> 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.

Method	Comment/ detail
	<p style="text-align: center;">vesting value of assets; and</p> <ul style="list-style-type: none"> <li>○ much more modest when calculated using revalued asset values.</li> <li>• the ROSCOs' ROS on MOLA stock looks fairly high relative to the available benchmarks but given the difficulties inherent in arriving at an appropriate benchmark we are inclined to only put a modest amount of weight on these results.</li> </ul>

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

- 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 are able to attempt to get some sense of any trends in the profitability of the ROSCOs.

57. In our view, the key weaknesses of an accounting approach is that it:

- relies on accounting estimates of depreciation, which may be a poor proxy for economic depreciation, in other words changes in the economic value of the relevant asset base;
- 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 ten times this duration; and
- does not enable the calculation of profits using a replacement cost measure (unless a separate valuation exercise is carried out).

58. 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.
59. Our view, though, is that there are good reasons to think that the financial performance of the ROSCOs in the area of focus is unlikely to very unstable, 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 suggest that the level of asset re-lease risk faced by the ROSCOs is relatively low.

*Our results*

*ROCE estimates*

60. The four charts below set out the results of our accounting profitability calculations.

**Figure 11 - Return on capital employed (MOLA stock) – vesting value of assets**



**Figure 12 - Return on capital employed (MOLA stock) – revalued assets**



**Figure 13 - Return on sales (MOLA stock) – vesting value of assets**



**Figure 14 - Return on sales (MOLA stock) – revalued assets**



61. Some of the supporting calculations behind these results are summarised at the end of this annex.
62. Our ROCE analysis shows that, in relation to MOLA stock:

- when calculated using the vesting value of assets, ROCE estimates for the ROSCOs are consistently some way above our rate of return benchmark range of 6-8%;
  - when calculated on the basis of revalued assets, ROCE estimates for the ROSCOs are at a much more modest level, with only [X] results being arguably a significant way above our rate of return benchmark range of 6-8%; and
  - in both cases, there is no obvious trend of increasing or declining returns across our relatively short data window.
63. These findings are qualitatively fairly similar to the ones obtained by the DfT using IRR analysis.
64. In each of Figure 11 and Figure 12, results for two of the ROSCOs appear to be very close together, with the third set being an outlier, since:
- the vesting value results show the results of [X] and [X] being fairly close together, with [X] returns being somewhat lower; and
  - the revalued assets results show the results of [X] and [X] being fairly close together, with [X] returns being somewhat higher.
65. These differences may reflect genuine differences between the profitability of the three ROSCOs. There are a number of caveats to be borne in mind when making such comparisons, however. Some of the most important of these are provided below.

*Comments on vesting values ROCE estimates*

66. Taken at face value, our vesting value results appear to suggest that [X] is the least profitable of the ROSCOs. One possible explanation for this is that the difference is genuine, in other words that [X] underlying profitability for MOLA stock is less than that of the other ROSCOs for whatever reason. For example, it might be the case that, of the stock that the company acquired at privatisation, less of it is in the areas where supply is currently most tightly constrained. Alternatively, it could be the case that [X] is less efficient than the other ROSCOs as lessor of MOLA stock. However, none of our other investigations have suggested that either of these are true (although we have not attempted to formally test either theory), and on balance we think it more

likely that the relative magnitudes of the returns of the ROSCOs calculated on this basis have been determined by other factors.

67. A second candidate explanation can be derived from a detailed look at the ROCE estimates for each company. If the ROCE figures (calculated as the ratio of EBIT to capital employed) are re-expressed as the product of ROS (EBIT/ turnover) and asset turnover (turnover/ capital employed), it can be seen that, whilst both [X] ROS and its asset turnover are lower, the latter is the dominant factor in pushing [X] ROCE below that of the other two incumbent ROSCOs. A closer examination of the asset values supplied by the ROSCOs suggests that (when using the privatisation value of MOLA stock and, as set out above, a normalised straight-line approach to calculating accumulated depreciation) [X]. This factor may well explain the difference between the ROSCOs in our ROCE for MOLA stock when calculated on a privatisation value basis.
68. This exercise also highlights a well-known drawback of using ROCE as an indicator for competition analysis. The idea that, over the long-term, a firm's ROCE would equal its WACC in a competitive market does not preclude the possibility of unadjusted ROCE estimates being very low (high) at the end (beginning) of the lives of assets. ROCE figures calculated on mid-life asset values would therefore, other things being equal, be the most reliable. The implication of this is that our ROCE estimates for [X] and [X] may be inflated somewhat, with the one for [X] similarly deflated, and that estimates between the ones that we have obtained for [X] and the other two ROSCOs might provide the most useful guide to the underlying profitability of these activities.

*Comments on revalued assets ROCE estimates*

69. The assets of all of the three ROSCOs have been revalued since privatisation. As explained earlier in this annex, the timings, frequency, and methodologies employed in this regard by the ROSCOs varies fairly substantially between each of the three companies.
70. Because of these significant differences, we are reluctant to draw any strong inferences from differences between ROCE estimates for the MOLA stock of the ROSCOs when calculated on a revalued assets basis.

*ROS estimates*

71. Our ROS analysis is more difficult to interpret. Competition authorities sometimes place weight on ROS as an indicator in cases where asset valuation is particularly difficult, 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 for MOLA capital leasing. An additional difficulty common to the use of ROS analysis generally is that finding an appropriate benchmark is rarely straightforward.
72. The figures below benchmark both our ROS and ROCE estimates of the ROSCOs against those of a sample of three US Aircraft leasing companies. These comparators were identified by our advisors Grant Thornton based on their similarities to the ROSCOs in terms of size of operations and activity mix. The chosen comparators were (with data for the last five years in each case):
- GE Commercial Aviation;
  - Pembroke Capital; and
  - BAC Leasing Ltd.

**Figure 15 – ROSCO returns (vesting asset values) vs. aircraft leasing benchmarks**



**Figure 16 - ROSCO returns (revalued assets) vs. aircraft leasing benchmarks**



73. These figures above show that:
- regardless of the asset valuation methodology used, the ROS earned by the ROSCOs on MOLA stock tended to be towards the top of or above the range of ROS estimates provided by our comparator set; and
  - the ROS earned by the ROSCOs on MOLA stock is significantly higher than that earned on non-MOLA stock (although as explained above, we are not inclined to attach any significant weight to this comparison).

74. Our interpretation of these results is set out in the conclusion to this annex, which follows a brief discussion of the ROSCOs' views on profitability in the next subsection.

### **ROSCOs' views**

75. In our dialogue with the ROSCOs we made it clear that we did not consider it necessary or appropriate for us to carry out a very in-depth study of the ROSCOs' profitability. We set out the implications of this approach for the level of detail of our 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 detailed consultation on the DfT's methodology and results. These discussions have been reflected in the level of detail in which the ROSCOs have responded in this area, as set out below. We did, however, invite the ROSCOs to, in addition to supplying us with the specific items of accounting data that we needed to carry out our accounting analysis, share any views that they had on the role of profitability in our study.
76. The three ROSCOs responded to this suggestion in varying levels of detail, with the fullest submission being sent by Angel (see below). The other two ROSCOs did not explain their preferred estimation techniques in depth, but supplied us with the following details:
- HSBC told us that the return that it earned on its assets amounted to an average of [X]% (although it did not supply us with detail on how this figure had been calculated); and
  - Porterbrook provided us with an estimate of the IRR of the cash flows associated with MOLA stock from the date of the Abbey acquisition to the end of the economic life of the stock. Its central estimate of this figure was [X]% in pre-financing, pre-tax terms.
77. Angel sent us a short paper setting out its view on profitability. The key features of Angel's submission were that:
- financial performance was analysed at an aggregate level, in other words without a distinction between MOLA and non-MOLA stock (this approach is consistent with Angel's preferred approach to market definition); and

- assets were valued on the basis of revalued assets, rather than a measure of replacement cost or privatisation value.

78. Based on these two key principles (which it did not discuss in any great depth), Angel calculated both accounting (ROCE) figures for 2003-05 and forward looking IRR figures from 2006. These figures, other than the aggregation of MOLA and non-MOLA stock, were calculated using very similar methods to our estimates and the estimates submitted by the DfT respectively. Angel argued that, of the two methods that it presented, the forward-looking approach was the more appropriate.

79. Angel's results were clustered just above our benchmark range of 6-8%, with its preferred whole business forecast IRRs being, depending on the exact methodology used, equal to [X]- [X] %, with the results of its whole business ROCE analysis being somewhat lower, at [X]-[X] %.

## Conclusions

80. This annex discusses a wide range of estimates of the profitability of the ROSCOs' MOLA stock leasing. The most important of these are summarised in the table below. We have not presented the figures supplied to us by HSBC or Porterbrook because of the lack of transparency of estimates in the former case and significant differences in time period covered in the latter.

Figure 17 - Summary of key estimates

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	[X]-[X]%
			Depreciated purchase price	[X]-[X]%

Estimate	Stock	Time period	Asset valuation methodology	Value
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	[<]-[<]%

81. Our interpretation of the estimates set out above is that:

- the figures presented by Angel are the least useful, since they do not enable a distinction between MOLA and non-MOLA stock; and
- of the other estimates, both the DfT and ORR values have their own disadvantages (a reliance on uncertain forecasts in the former case and on an accounting snapshot in the latter). We consider that it is worth putting some weight on both sets of results.

82. Taken together, our interpretation of our results and those of the DfT, subject to the caveats outlined earlier in this annex, is that they are consistent with, albeit falling well short of proving the existence of, a position of market power in the leasing of a proportion of the MOLA stock on the part of the ROSCOs.

## Appendix (1) – Detailed results of our accounting analysis

83. The two tables below set out the results of our financial analysis in relation to MOLA and non-MOLA stock. A number of values in the table are presented twice, with the suffixes (1) and (2) indicating results calculated on a vesting valuation of assets and a revalued asset values basis respectively.

**Figure 18 – Detailed results of our financial analysis (MOLA stock)**

[✂]

**Figure 19 - Detailed results of our financial analysis (non-MOLA stock)**



## Appendix (2) – details of our WACC calculation

### *Introduction*

84. This section sets out our view on an appropriate estimate of the WACC of the ROSCOs for the purposes of a profitability assessment to be used to make inferences about market power. We have adopted a fairly simple, high-level approach, in keeping with what we consider to be the appropriate level of depth for a Phase 1 authority.
85. In line with most<sup>42</sup> recent regulatory precedent, we have based our estimates on the Capital Asset Pricing Model ('CAPM'). The CAPM is a single factor model that measures economy-wide influences through the risk of an individual asset relative to a market portfolio. WACC estimates are expressed as a weighted average of a company's cost of equity and its cost of debt. The remainder of this appendix sets out the constituent parameter estimates that we used to arrive at our central WACC estimate.

### *The risk-free rate*

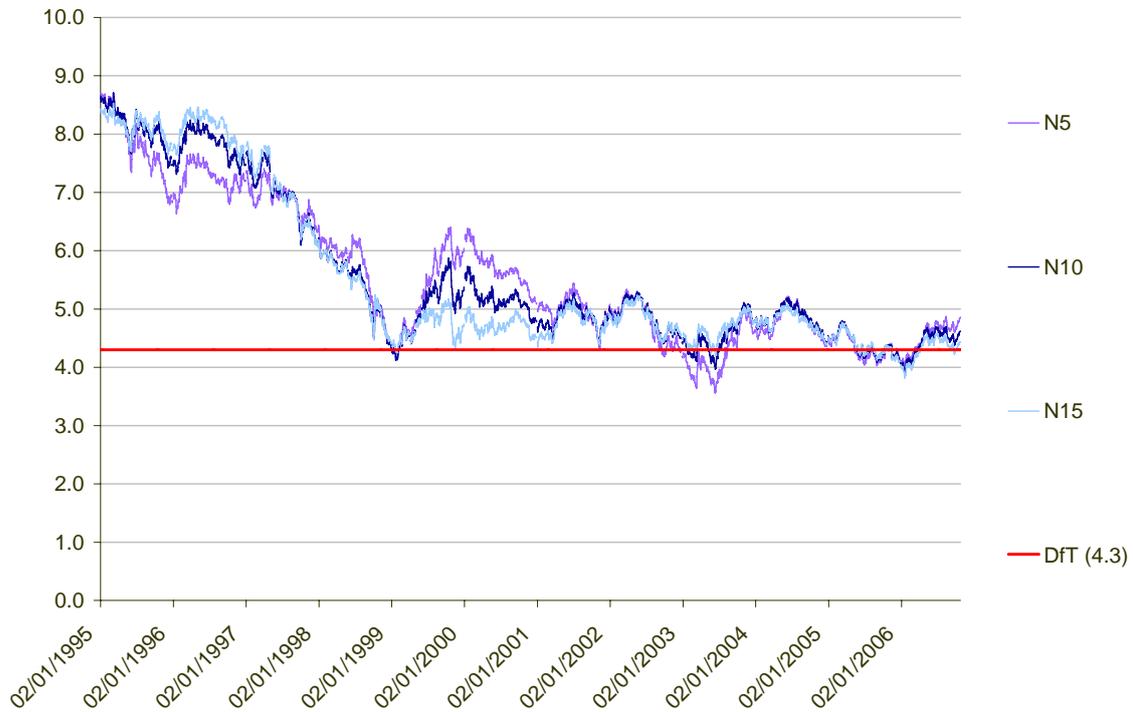
86. The risk-free rate is an input into the calculation of both the cost of debt and the cost of equity. In UK regulatory and competition policy, the risk free rate is often proxied by the yield to maturity on gilts, with index-linked gilts used in the case of the real risk free rate.
87. There is a 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, it could be argued that the appropriate maturity might correspond to:
- the average duration of leases in this industry (leases typically span the entire 7-10 year duration of a franchise); or
  - the average lifetime of the relevant assets (often 30 years or more).

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<sup>42</sup> But not all of them. For example in the CC's LPG enquiry, in making calculations using data for Calor Group, the CC also put some weight on results calculated using a Fama-French three factor model, in addition to using the CAPM. We do not think that such an approach would yield any additional insights in our assessment given that the ROSCOs are not separately listed companies.

88. It should be noted that the yield curve is not currently upward-sloping, meaning that using the yield on longer term gilts would not, as has often been the case historically, lead to higher estimates.
89. In the light of all of these factors, we have based our assessment of the risk free rate on the simple average of returns on 5, 10, and 15- year gilts.
90. Market values 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. These expectations will be formed based substantially, but not entirely, on market values at the time. The period over which the profitability assessments described in this section vary significantly:
- the forward-looking IRR estimates presented by the DfT assess profitability from 2005 to the end of the lives of the MOLA assets; and
  - our assessment of the ROSCOs' accounting profits is based on their financial performance in 2003-2005, which are reflective of a combination of pricing decisions made at franchise renewal period, and also, particularly in 2003, the original rentals set by the government at privatisation.
91. Recent trends in the returns on nominal gilts of 5-, 10-, and 15-year maturities in the period since privatisation are shown below, together with the value of 4.3% used by the DfT in its analysis.

Figure 20 – Recent gilt returns (nominal)



Source: Bank of England

92. This chart shows that estimates of the nominal risk free rate as proxied by current market returns on nominal gilts has fallen fairly substantially, and also been subject to a fairly significant degree of instability, in the period since privatisation. We have decided to base our estimate of the WACC of a hypothetical ROSCO on a nominal risk free rate of 5.0%. This level is broadly in line with recent market values, and is also consistent with the fairly widely used ‘rule of thumb’ assumptions of a 2.5% real risk free rate and a 2.5% rate of inflation.
93. This is not necessarily the value that we would advocate using if we were, for example, carrying out a forward-looking price controlling exercise, but we think that it is a sensible approach when assessing the rate of return earned on prices that were set at various times 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, with the DfT’s estimate being based primarily on current market yields at the time it was carrying out its analysis.

*Equity risk premium*

94. In the CAPM, the Equity Risk Premium ('ERP') reflects the extra return that investors require 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. Some of the main estimation techniques that are available can be broadly categorised into:

- *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.

95. Recent regulatory precedents suggest a range that is mostly centred around a range of 4-5%:

- Ofcom, consultation on mobile call termination, (September 2006): 4.5%;
- CC, LPG (June 2006): 3.0-5.0%;
- Ofwat, PR04 (2004): 4.0-5.0%; and
- Ofgem, DPCR04 (March 2004): 4.5%.

96. We think that the use of a range of 4-5% for the ERP is appropriate. We consider that such a range value strikes a reasonable balance between the various estimates that are available from using the above estimation

techniques. We have based the estimates at the end of this appendix on the midpoint of this range, i.e. 4.5%.

### *Equity beta*

97. A company's equity beta measures the correlation between the returns earned by shareholders from holding the stock of the company in question and the returns earned from holding stocks in the equity market.
98. Regulators and competition authorities often calculate betas by means of statistical regression analysis, particularly 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 the conditions listed in the previous sentence are not satisfied, is to base beta estimates on benchmarking a sample of betas that have been calculated for listed firms that are engaged in activities with similar risk characteristics.
99. None of the three ROSCOs are individually listed, being relatively small parts of much bigger parent groups, and 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 DfT on this issue, 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 the stock market. Our view is that sector-specific issues such as government policy are a much bigger source of both upside and downside risk for the ROSCOs.
100. As a Phase 1 authority and given the modest amount of weight that we have put on the results of our profitability analysis, we do not consider that it would be proportionate for us to expend significant amounts of resource into estimating an equity beta for rolling stock leasing. On this basis, we have based our WACC estimates on an equity beta of 1.0. Together with our assumption on gearing (see below), this implies an asset beta of 0.15.<sup>43</sup>

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<sup>43</sup> Assuming a debt beta of zero.

*Optimal gearing*

101. 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 arrived at our central WACC estimate on the basis of an assumed gearing of 85%.

*Debt premium*

102. 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 this parameter on information supplied by the DfT on the bonds issued by Angel since privatisation, with yields above nominal gilts having varied between about 1% and 2%, with more recent values being very much 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, of 2.0%.

*Central WACC estimate*

103. The table below shows our calculation of a central WACC figure of 8.0% calculated on a nominal, pre-tax basis.

**Figure 21 – WACC estimate for the leasing of rolling stock**

<b>Parameter</b>	<b>Estimate</b>
Risk-free rate	5.0
ERP	4.5
Asset beta	0.15
Equity beta	1.0
Cost of equity (post tax)	9.5
Debt premium	2.0
Cost of debt (pre tax)	7.0
Corporate tax rate	30%
Cost of debt (post tax)	4.9



## Annex D – List of stakeholders who responded to our pre-consultation questions

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- ROSCOs
  - Angel Trains Ltd.;
  - HSBC Rail; and
  - Porterbrook Leasing Company Ltd.
- TOCs
  - Centro;
  - First Group;
  - Grand Central;
  - GNER;
  - Heathrow Express;
  - National Express;
  - GOVIA;
  - Arriva Trains Wales;
  - SERCO;
  - Stagecoach; and
  - Virgin Rail Group.
- Other
  - DfT;
  - Association of Train Operating Companies;
  - Bank of Scotland;
  - CSRE (UK representative of the Chinese DMU manufacturer);
  - Rail Industry Association;
  - Babcock and Brown;
  - London Travelwatch;
  - Passenger Focus;
  - Travelwatch South West; and
  - Siemens.



## Annex E - Product market segmentation – views of stakeholders

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### The DfT's product market segmentations

**Figure 22- 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	142, 143, 144, 150, 153, 155, 156, 165
	Diesel 90/100 mph	158, 159, 165/1,166,168, 170, 171, 175, 185.
25kV AC	25kV AC 75 mph	314, 315, 320
	25 kV AC 90/100 mph	317,318,321,322,323,333, 334, 357, 360
	Dual-voltage 75 mph	313
	Dual-voltage 100 mph	319, 350, 365, 375/6, 377/2
750V DC	750V DC 75 mph	455, 456, 465, 466, 507, 508
	750V DC 90/100 mph	375, 376, 377, 442, 444, 450, 458, 460
	Dual-voltage 75 mph	313
	Dual-voltage 100 mph	319, 350, 365
Dual-voltage	Dual-voltage 75mph	313
	Dual-voltage 100 mph	319, 350, 365, 375/6, 377/2

**Figure 23 - Product market segmentation – inter-regional / outer suburban routes (speed requirement of 90/100mph)**

Route Power	Type of rolling stock meeting requirements	Classes of rolling stock meeting requirements
None	Diesel 90/100 mph	158, 159, 165/1, 166, 168, 170, 171, 175, 185
	Diesel 125 mph	180, 220, 221, 222, HST, Mk3 coaches
25kV AC	25kV AC 90/100 mph	317, 318, 321, 322, 323, 333, 334, 357, 360, Mk1/Mk2
	25kV AC 125 mph	373, 390, IC225, Mk3 coaches

Route Power	Type of rolling stock meeting requirements	Classes of rolling stock meeting requirements
	Dual-voltage 100 mph	319, 350, 365
750V DC	750V DC 90/100	375, 376, 377, 442, 444, 450, 458, 460
	Dual-voltage 100 mph	319, 350, 365, 375/6, 377/2
Dual-voltage	Dual-voltage 100 mph	319, 350, 365, 375/6, 377/2

**Figure 24 - Product market segmentation – inter-city (speed requirement of 125mph)**

Route Power	Type of rolling stock meeting requirements	Classes of rolling stock meeting requirements
None	Diesel 125 mph	180, 220, 221, 222, HST, Mk3 coaches
25kV AC	25 kV AC 125 mph	373,390, IC225, Mk3 coaches

## Product segmentations suggested in stakeholder responses

**Figure 25 - Product market segmentation – branch line/ inner suburban routes (speed requirement of 75mph)**

Route Power	Type of rolling stock meeting requirements	Class of Rolling Stock Meeting Requirements
None	Diesel 75 mph	142, 143 <sup>45</sup> , 144, 150 <sup>46</sup> , 153 <sup>47</sup> , 155, 156 <sup>48</sup> , 165,
	Diesel 90/100 mph <sup>44</sup>	158 <sup>49</sup> , 159, 165/1,166, 168, 170, 171, 175, 185.

<sup>44</sup> According to GNER, some modern 100mph units can reach speeds of up to 125mph.

<sup>45</sup> First Group stated that class143s can also be used on outer suburban services.

<sup>46</sup> Arriva Trains Wales told us that this class of vehicle could also be used on outer suburban services.

<sup>47</sup> Both Arriva Trains Wales and National Express Group told us that class 153s are unsuitable for inner suburban routes.

<sup>48</sup> National Express Group stated that class 156s are unsuited to inner suburban routes due to door configuration.

<sup>49</sup> National Express Group stated that class 158s are unsuited to inner suburban routes due to door configuration.

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25kV AC	25kV AC 75 mph	314, 315, 320 <sup>50</sup>
	25 kV AC 90/100 mph	317,318,321,322, 323, 333,334, 357, 360
	Dual-voltage 75 mph	313
	Dual-voltage 100 mph	319, 350, 365, 375/6,377/2
750V DC	750V DC 75 mph	455, 456, 465, 466, 507,
	750V DC 90/100 mph	508
	Dual-voltage 75 mph	375, 376, 377, <del>442, 444</del> <sup>51</sup> , 450, 458, 460 313
	Dual-voltage 100 mph	319, 350, 365
Dual-voltage	Dual-voltage 75mph	313
Dual-voltage	Dual-voltage 100 mph	319, 350, 365, 375/6,377/2

**Figure 26 - Product market segmentation – inter-regional / outer suburban routes (speed requirement of 90/100mph)**

Route Power	Type of rolling stock meeting requirements	Class of Rolling Stock Meeting Requirements
None	Diesel 90/100 mph <sup>52</sup>	(143) <sup>53</sup> , (150) <sup>54</sup> , 158, 159, 165/1, 166, 168, 170, 171, 185
	Diesel 125 mph	180, 220, 221, 222, HST <sup>55</sup> , Mk3 coaches
25kV AC	25kV AC 90/100 mph	317, 318, 321, 322, 323, 333, 334, 357, 360, Mk1/Mk2

<sup>50</sup> Serco told us that class 320s and 360s are designed for outer suburban routes only, although technically substitutable for branch line services.

<sup>51</sup> Stagecoach said that they doubt whether the interior configuration of class 442s or 444s are suitable for inner suburban routes.

<sup>52</sup> Porterbrook suggested that faster stock could operate on routes featuring slower trains.

<sup>53</sup> First Group stated that class 143s are also used on outer-suburban services.

<sup>54</sup> First Group stated that class 150s are also used on outer-suburban services.

<sup>55</sup> National Express Group stated that HSTs are unsuited to outer suburban routes due to door configuration.

Route Power	Type of rolling stock meeting requirements	Class of Rolling Stock Meeting Requirements
	25kV AC 125 mph	373 <sup>56</sup> , 390 <sup>57</sup> , IC225 Mk3 coaches
	Dual-voltage 100 mph	319, 350, 365
750V DC	750V DC 90/100	375, 376, 377, 442, 444, 450, 458, 460
	Dual-voltage 100 mph	319, 350, 365, 375/6 377/2
Dual-voltage	Dual-voltage 100 mph	319, 350, 365, 375/6 377/2

**Figure 27 - Product market segmentation – inter-city (speed requirement of 125mph)**

Route Power	Type of rolling stock meeting requirements	Class of Rolling Stock Meeting Requirements
None <sup>58</sup>	Diesel 125 mph	180, 220, 221, 222, HST, Mk3 coaches
25kV AC <sup>59</sup>	25 kV AC 125 mph	373, 390, IC225, Mk3 coaches, (Mk3 DVT), (90)

<sup>56</sup> National Express Group stated that class 373s are unsuited to outer suburban routes due to door configuration.

<sup>57</sup> National Express Group stated that 390s are unsuited to outer suburban routes due to door configuration.

<sup>58</sup> Porterbrook told us that commuter and inter-city stock are not realistically interchangeable because of conflicting customer requirements.

<sup>59</sup> Serco submitted that this sub-section should include Mk3 DVT and class 90s.