

# ROLLING STOCK LEASING MARKET INVESTIGATION

## Entry and barriers to entry (and exit) working paper

### Summary

1. This working paper puts forward the view that:
  - (a) ROSCOs have not sold any significant items of used rolling stock to potential new leasing competitors.
  - (b) Although a number of firms have shown an interest in entering leasing of new rolling stock, the only example of actual entry is Voyager Leasing, which was a transaction-specific arrangement.
  - (c) The relative incentives of ROSCOs and potential purchasers make the likelihood of sale of used rolling stock to a potential (or existing) competitor appear very low indeed.
  - (d) Many of the factors that might deter entry into leasing of rolling stock could probably be overcome by large financial institutions. However, the incumbent ROSCOs appear to have an advantage in understanding and managing asset re-lease and political risks more effectively than the potential entrants. The combination of the effect of perceived asset re-lease and political risks, portfolio benefits and economies of scale, access to finance, tax capacity, and industry and technical expertise appears to have deterred entry other than that of Voyager Leasing.
  - (e) Self-supply by franchised TOCs is limited to less than 1 per cent of the rolling stock lessors' rolling stock used for franchised passenger services and comprises primarily older rolling stock. It is therefore not a significant competitive constraint on ROSCOs. The extent of self-supply is unlikely to change as it appears to be a commercially unattractive option for TOCs.
  - (f) Alternative funding structures may create opportunities for potential competitors to supply new rolling stock through means other than the traditional ROSCO leasing model. However, the timing and probability of existing proposals (for

example, the Intercity Express Programme (IEP), Transport Scotland and Welsh Assemblies) remain uncertain. At present, we have not seen any evidence of the extension of alternative funding structures to other rolling stock and its competitive effect on the ROSCOs' traditional leasing model therefore remains speculative.

## **Introduction**

2. When considering entry, it is usual to have some preconception of market definition. Our Substitutability working paper sets out two separate working definitions for consideration:
  - (a) leasing of used rolling stock to TOCs (which may be as narrow as each fleet of rolling stock or may include alternative similar classes of rolling stock as constrained by its availability at the time it is required; and
  - (b) leasing of each fleet of new rolling stock to TOCs.
  
3. We have not considered entry into the provision of maintenance services<sup>1</sup> in this working paper. We have noted in the Maintenance working paper that the only alternative to provision of maintenance services by the ROSCO is self-provision by the TOC (ie a dry lease). We consider the extent to which TOCs are able to provide their own maintenance services in the Maintenance working paper.
  
4. We should distinguish entry from simple changes in ownership. Entry is about changing the structure of the market, ie increasing the number of competitors and changing industry concentration. It is not about a ROSCO being acquired by one company from another (eg Porterbrook being sold by Stagecoach to Abbey), as some main parties have suggested in their submissions. However, entry may involve

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<sup>1</sup>By 'provision' we are referring to the ROSCOs procuring and managing maintenance services. ROSCOs themselves do not actually carry out the maintenance of vehicles; this is done by third party maintainers.

a different firm buying *some* of the used rolling stock from a ROSCO, and so creating an additional competitor in the market.

5. The three ROSCOs were sold on to banks soon after privatization. None of these sales has led to a change in industry concentration (ie they were simple changes of ownership with the assets remaining in the market). Since these transactions, there have been no exits from the leasing of used rolling stock, but:

[✂]

6. This working paper is structured as follows:
  - (a) first, we consider the evidence of entry since privatization; and
  - (b) second, we assess barriers to entry (and exit).
7. In Annexes 1 and 2 we consider (a) the extent of self-supply<sup>2</sup> and (b) the use of alternative funding structures (ie different from the traditional ROSCO model).<sup>3</sup> We set out why we consider these alternative methods of providing rolling stock to TOCs do not form a significant part of our considerations for the leasing of rolling stock.

## **Entry since privatization**

8. In this section we set out a summary of the extent of entry since privatization into (a) leasing of used rolling stock and (b) leasing of new rolling stock,<sup>4</sup> in each case following the traditional ROSCO model. We then consider the views of potential entrants.

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<sup>2</sup>Although in practice the difference between self-supply and leasing can sometimes be blurred. For example, Eurostar self-supplied rolling stock, but also leased some out to GNER for the period until the Channel Tunnel Rail Link was completed.

<sup>3</sup>By alternative funding structures, we mean ways in which TOCs may be supplied with rolling stock through mechanisms other than the traditional operating lease model used by the three ROSCOs.

<sup>4</sup>We have defined used and new rolling stock in the Substitutability working paper. Used rolling stock is stock that has been previously leased.

### ***Purchasing used rolling stock and leasing to TOCs***

9. Since privatization, there have been no examples of new entrants purchasing used rolling stock and leasing to TOCs. Angel and HSBC stated that since privatization there have been no formal offers by potential new entrants made to purchase existing rolling stock. Porterbrook noted that it had had a large quantity of Intercity coaches for sale for some time, but with interest only from abroad.<sup>5</sup> We consider why no vehicles have been purchased in the barriers to entry section below. We consider the sale of small amounts of rolling stock to TOCs for self-supply in Annex 1.

### ***Purchasing new rolling stock and leasing to TOCs***

10. Voyager Leasing<sup>6</sup> is the only example of a firm that has entered into the leasing of new rolling stock since privatization.

### ***GL Railease (Voyager Leasing)***

11. When Virgin secured the Cross Country franchise in January 1997 it sought a financier to fund investment in a new fleet of rolling stock, to be built by Bombardier.<sup>7</sup> NatWest<sup>8</sup> and GATX, operating through Lombard Leasing Contracts Limited, provided finance for the investment. These trains were purchased and leased to Lombard, a subsidiary of NatWest, which became the operating lessor of the rolling stock to Virgin.<sup>9</sup> Residual value risk was shared between [REDACTED].
12. In July 2000, Lombard's interest as operating lessor was transferred to Voyager Leasing.<sup>10</sup> Voyager Leasing is a limited recourse special purpose vehicle,<sup>11</sup> with

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<sup>5</sup>Note that an exception is that, at the request of GNER, Porterbrook sold ten HSTs to Angel Trains for £[REDACTED] per vehicle in September 2002.

<sup>6</sup>Voyager Leasing Limited.

<sup>7</sup>A competition was initially run to find the train manufacturer, followed by a competition for the financier.

<sup>8</sup>National Westminster Bank plc.

<sup>9</sup>GL Trains Limited (a NatWest group company) subsequently purchased the rolling stock and leased the vehicles to Lombard Leasing Contracts, a subsidiary of NatWest.

<sup>10</sup>At this time half of the fleet was sold to another lessor. Half the fleet was sold to Halifax Leasing (September) Limited (now part of Halifax Bank of Scotland). Halifax and Lombard, each owning half the fleet, then entered into head lease arrangements with Voyager Leasing.

Lombard managing the transaction. During 2000, NatWest was acquired by RBS,<sup>12</sup> which also owns Angel.

13. Voyager Leasing leases 78 train sets comprising 352 vehicles. These vehicles were leased to Virgin for use on the Cross Country franchise.<sup>13</sup> The rolling stock used by Virgin was the Class 220 Voyager and the Class 221 Super Voyager:
  - (a) The Class 220 Voyager is a class of Diesel Electric Multiple Unit (DEMU) rolling stock. Voyager Leasing leases 34 of these train sets, comprising 136 vehicles.
  - (b) The Class 221 Super Voyager is also a DEMU train similar to the Class 220, but is built with a tilting mechanism to allow faster speeds on curved tracks. Voyager Leasing leases 44 of these train sets, comprising 216 vehicles.
  
14. The financial structure of Voyager Leasing is different from the structure of the three ROSCOs in the following ways:
  - (a) Voyager Leasing leases no other rolling stock and its leasing of rolling stock is transaction-specific (ie the financing structure relates only to the Voyager trains).  
[✂]
  - (b) In contrast to the three ROSCOs, Voyager Leasing contains no dedicated day-to-day management structure in terms of employees. [✂]
  - (c) The Virgin Cross Country franchise was a 15-year franchise (until 2012) and so different from most franchises, which tend to be around seven years in length. This franchise length was one factor that allowed the transaction to be realized.
  
15. The DfT questioned the independence of Voyager Leasing from Angel due to the common ownership of both businesses by RBS. Angel stated that its business was run as an entirely separate business from Voyager Leasing—[✂] Voyager Leasing

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<sup>11</sup>A special purpose vehicle is a legal entity created for a limited purpose, usually for the acquisition and/or financing of a project. Limited recourse refers to the fact that the head lessee's claims on Voyager Leasing are limited to the amounts Voyager Leasing receives from the sub-lessee of the rolling stock (ie Virgin)

<sup>12</sup>Royal Bank of Scotland plc.

suggested that it competed with Angel for the provision of rolling stock to the New Cross Country franchise.

### ***Conclusion on Voyager Leasing as a new entrant/competitor***

16. Although the Voyager Leasing example shows that entry into leasing of new rolling stock is possible, it is the only example since privatization. Any future competition provided by Voyager Leasing is limited to the franchises on which the Voyager rolling stock is currently used or other franchises on which it could be used. Given the absence of evidence that Voyager Leasing will finance further rolling stock and the limited likelihood of a TOC being able to run the procurement of new trains in the same way that Virgin did, Voyager Leasing is unlikely to be seen as a significant competitor to any of the ROSCOs beyond the competition provided by its existing stock.

### ***Views of other potential entrants***

17. The ROSCOs listed a number of potential entrants in their submissions to the CC. We contacted these parties in order to understand each potential entrants' view on entry into leasing of new rolling stock.
18. Third parties' responses revealed that potential entrants are largely limited to financial institutions with five companies [REDACTED] out of the 13 that responded showing or having showed interest in leasing passenger franchised rolling stock. We are aware that Lloyds TSB and [REDACTED] have made previous bids to finance new rolling stock. Two non-financial institutions have also considered entry into leasing of used and new rolling stock:

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<sup>13</sup>This franchise was re-tendered in 2007 and won by Arriva. The Voyager rolling stock is now divided between the New Cross Country franchise and Virgin West Coast franchise.

- (a) EWS—however, its role in passenger franchised rolling stock is very marginal and we do not consider it a likely potential entrant on a much greater scale than at present.
- (b) Sovereign Trains—through links with CSRE Limited, it is trying to gain a foothold in new rolling stock leasing opportunities. However, it is currently in the very early stages of development.<sup>14</sup>

### **Summary of entry since privatization**

- 19. Our analysis has established that:
  - (a) ROSCOs have not sold any significant items of used rolling stock to potential new leasing competitors; and
  - (b) although a number of firms have shown an interest in entering leasing of new rolling stock, the only example of actual entry is Voyager Leasing, which was a transaction-specific arrangement.
  
- 20. The three ROSCOs each submitted that this lack of entry was caused by returns which have not been matched by the levels of risk in the market and reflected the levels of competition between the three ROSCOs.<sup>15</sup> In the next section, we consider whether the presence of barriers to entry is a plausible explanation for the limited amount of entry since privatization.

### **Barriers to entry (and exit)**

- 21. Barriers to entry (and exit) are features that may prevent or restrict firms from exploiting profitable opportunities in a market.<sup>16</sup> We consider first specific reasons for the limited amount of entry into the leasing of used rolling stock and then other

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<sup>14</sup>Sovereign Trains is leasing rolling stock to Grand Central, an open access operator as explained in Annex 1 Table 2).

<sup>15</sup>We will consider profitability, risk and the extent of competition after Emerging Thinking.

<sup>16</sup>See *CC Guidelines on market investigation references*, CC3, June 2003, paragraphs 3.22–3.35.

barriers to entry (and exit) which may deter entry into leasing both used and new rolling stock.

### ***Reasons for a lack of entry into leasing of used rolling stock***

22. Each ROSCO will ordinarily have an incentive to sell rolling stock which could gainfully be deployed on the rail network if the price offered for the stock values the asset at a level which exceeds the seller's valuation of its revenue-earning potential. This might occur if either a potential entrant places a higher value on the rolling stock because it has a different view as to how the market will develop, or if it believes it could realize cost savings by buying the assets.
  
23. The lack of any significant entry into used rolling stock could be explained by:
  - (a) difficulties for potential entrants in valuing the rolling stock; or
  - (b) a fear of the potential entrant increasing competition against the ROSCO's other rolling stock.

### ***Difficulties in valuation***

24. The lack of offers for used rolling stock (see paragraph 9) suggests that potential new entrants have not been interested in purchasing rolling stock from the ROSCOs. This may be explained by potential purchasers being less able than the owner to understand what value to place on the rolling stock. This may be caused by information asymmetries such that potential purchasers lack the ability to evaluate issues such as asset re-lease risk and the quality of the vehicles.

### ***Fear of increased competition***

25. An alternative explanation is a reluctance of the ROSCOs to sell their rolling stock. Porterbrook stated that 'it is not clear why any ROSCO would sell existing rolling stock to a new entrant', but identifies those occasions on which it had sold existing

rolling stock, and the circumstances in which it did so. HSBC, on the other hand, stated that it would be prepared to sell its assets to any suitable counterparty (including other ROSCOs) if acceptable terms were agreed.

26. In selling to a potential competitor, a ROSCO may consider that it has a market position it wishes to protect. It would therefore take into account that selling rolling stock may assist a potential entrant and/or increase competition against its own rolling stock (if the rolling stock sold is substitutable for some of that ROSCO's remaining rolling stock). This would decrease the overall potential profitability of a sale. To compensate for this, a ROSCO might place a higher required sale price on rolling stock because it would try to recover any potential lost profits expected from other substitute rolling stock which it retains. Any potential competitor would therefore only meet a ROSCO's asking price if it felt it was able to manage the rolling stock better than the current owner and that this additional valuation compensated for any lost profits elsewhere.
27. The combination of these two factors appears to have made the likelihood of sale of used rolling stock to a potential (or existing) competitor very low indeed.

***Factors deterring entry into leasing of rolling stock***

28. There appear to be a number of other factors that may deter entry into leasing of used and new rolling stock:
  - (a) perception of asset re-lease and political risks;
  - (b) portfolio benefits and economies of scale;
  - (c) financial barriers;
  - (d) industry and technical expertise;
  - (e) reputation; and
  - (f) costs of exit.

29. We consider each of these in turn.

*Perception of asset re-lease and political risks*

30. Both HSBC and Porterbrook told us that the extent of residual value (asset re-lease risk)<sup>17</sup> and, particularly, political risk<sup>18</sup> (for example, changing franchise lengths) has been and remains the main deterrent to entry.

31. To demonstrate the ease of entering leasing of rolling stock, Porterbrook cited its own experience in entering the European market. However, the underlying asset re-lease and political risks in Continental Europe are different from Great Britain because:

(a) The European market does not operate under a franchise system and rolling stock tends to be in public ownership.

(b) The British market is relatively small in size compared with the European market and tends to have small specialized fleets. This means rolling stock may be less interoperable than in Continental Europe, such that asset re-lease risk may be higher in Great Britain.

32. The ORR considered<sup>19</sup> that residual value (asset re-lease) and political risks might have deterred entry. For example, it noted that in the Mark I slam door replacement programme, all bidders outside of the three ROSCOs dropped out when the SRA asked bidders to offer prices for leases of fewer than 20 years, rather than the 20 years proposed initially. Angel submitted that this withdrawal of bidders was caused by residual value (asset re-lease) and political risks, noting that other factors may also have contributed.

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<sup>17</sup>This risk is created by the asset life being 30 to 35 years and the franchise terms being only seven years long.

<sup>18</sup>Porterbrook referred to 'ever-changing policy approaches'

<sup>19</sup>The ORR's reasons for making a market investigation reference to the Competition Commission, 26 April 2007, paragraph 4.24.

33. We have considered the nature and extent of asset re-lease and political risks in more detail in the Risk working paper. Here, we note that the perception of asset re-lease and political risks by potential entrants is likely to be very different from the understanding that the incumbent ROSCOs have developed over time. Incumbents may have an advantage in understanding and managing these risks effectively (and may also benefit from portfolio diversification—see below). This means that potential competitors are less able than the incumbent ROSCOs to provide a competitive rental to the TOCs. For example, Laing submitted that when considering bids for new rolling stock on the Chiltern franchise, [X] quoted a price which ‘was, from memory, 20 to 30 per cent higher than ROSCOs because they failed to understand how to mitigate risks’.

*Portfolio benefits and economies of scale*

34. In this section we consider two further advantages that incumbent ROSCOs may have over potential new entrants:
- (a) economies of scale; and
  - (b) portfolio benefits (diversification of risk).
35. HSBC recognized that both economies of scale and diversification of risk are important factors for any new entrant to the market.
36. *Economies of scale* may be important because the larger the rolling stock fleet, the more fixed overheads (eg management costs) can be spread over different rolling stock, thereby lowering unit costs. Porterbrook disagreed that economies of scale would be a material barrier to entry. It cited evidence of starting its own business in other European countries with one to five orders and a recent bid from [X] for the Transport for London (TfL) concession (see Annex 2).

37. *Portfolio benefits* allow the ROSCO to spread different types of risk across a well-diversified portfolio of rolling stock. For example, a ROSCO with only one type of rolling stock fleet will be less able to spread asset re-lease risk should that fleet be off-lease than would a ROSCO with many different types of rolling stock should one of its fleets be off-lease. These portfolio benefits are likely to be particularly advantageous when spreading the potential risks associated with investing in expensive new rolling stock, for example operating risk (unforeseen maintenance costs) or delivery risk (not delivered on time or to budget).
38. Third parties also cited portfolio benefits as a barrier to entry:
- (a) First submitted that the main reason for its lack of success in encouraging new entrants was ‘the risks of holding a small number of vehicles which does not allow any portfolio benefits; problems of realising the residual value risk at the end of the lease and the specialized nature of the business’.
  - (b) Stagecoach, National Express, HSH Nordbank and Babcock & Brown each noted the disadvantage of not holding a portfolio of rolling stock as an important reason for the lack of competitiveness of new entrants.
  - (c) Quasar<sup>20</sup> noted that it can take considerable time to build a portfolio of rolling stock because of the intermittent nature of new rolling stock opportunities. However, Quasar also considered that recent interest in new rolling stock opportunities suggested that portfolio issues and economies of scale may be less significant.
39. The extent of advantage created by portfolio benefits depends on whether the rolling stock leasing company is viewed in a stand-alone context or as part of a wider portfolio of assets. In the former case, portfolio benefits will be relevant because the

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<sup>20</sup>Quasar Associates is a consultancy that advises TOCs on franchise bid submissions to the DfT.

portfolio of assets is limited to the rolling stock. However, in the latter case, rolling stock is seen as one asset among other assets and so the risks are more easily diversified. This would be the case particularly where a financial institution owns the rolling stock.

40. As it is possible to enter with a single fleet accompanied by a maintenance arrangement with the manufacturer (as in the case of Voyager Leasing), we considered that economies of scale and portfolio benefits do not create a high barrier to entry.

### *Financial barriers*

41. There appear to be three ways in which financial issues may act as a barrier to entry: (a) access to finance, (b) delay in reaching profitability, and (c) tax capacity.

#### *Access to finance*

42. The DfT submitted that access to very large amounts of competitively-priced funding is required in order to operate as a ROSCO. HSBC also considered that access to finance and risk equity were key requirements for a company to enter leasing of rolling stock. We consider that access to capital at low cost is not likely to act as a significant barrier to entry to financial institutions, which can access finance easily.

#### *Delay in reaching profitability*

43. HSBC considered that accounting depreciation methods might act as a disincentive to some new entrants because straight line depreciation effectively prevents any profits being earned on new rolling stock until at least five years after they have been leased. When combined with a three-year building period this creates an eight-year period where no accounting profit is earned. HSBC further stated that a new entrant would require a business plan to be implemented over a significant period of years in order to build up the required critical mass. Given that rolling stock typically has an

asset life of 30 to 35 years, an investor would need to be prepared to invest for the long term.

44. An HSBC internal document stated that:

there has not been a full 'assault' on this market by new entrants primarily due to the very specialist nature of this business, the need for full engineering support, and the often extremely long lead in times that are required before any deal can be consummated. It can take up to 5 years following marketing, negotiation and build period before a relationship becomes income earning. This is seen as a major barrier to entry for any new competitors to this market, given the carrying costs that a business holds.

45. In contrast to new entrants, all three ROSCOs avoided the costs that need to be invested when entering because they took over a portfolio of rolling stock, the vast majority of which was mid-life, on-lease and income-earning from day one.

*Tax capacity*

46. ROSCOs' rolling stock leases are presently classified as operating leases for accounting purposes, such that the leased asset appears as an asset on its balance sheet and the ROSCO claims a capital allowance. Under the current UK tax regime, entrants need to have UK operations with taxable profits in order to take advantage of such capital allowances. Babcock & Brown, HSH Nordbank and National Express stated that tax capacity was a key barrier to entry because few companies had a large enough tax capacity to be able to offset the capital allowances efficiently. Babcock & Brown suggested that these few companies were, in its opinion, limited to the major UK banking institutions, ie the existing three ROSCO owners and perhaps

Lloyds TSB, HBoS and Barclays.<sup>21</sup> DVB Bank AG also noted that non-UK banking institutions, although they might be able to overcome other financial barriers, would suffer from a lack of UK tax capacity.

#### *Assessment of financial barriers*

47. We consider that these financial factors do not create high barriers to entry for large UK-based financial institutions, which have good access to finance, can cope with delays to reaching profitability and have the tax capacity to take advantage of capital allowances. However, these financial barriers are likely to act as a deterrent to other types of entrants, such as non-UK based financial institutions or manufacturers.

#### *Industry and technical expertise*

48. All three ROSCOs stated that access to industry and technical expertise is an important prerequisite for entry. Each ROSCO has teams of staff that have considerable experience in dealing with the engineering and maintenance of rolling stock. Seven out of eight TOCs [X] listed industry knowledge as being a vital requirement when considering entry. Knowledge of rolling stock maintenance is also important in managing customer relationships, managing risk and ensuring the asset remains attractive over the entire asset life.
49. The ORR noted that a lack of these skills might not be an insurmountable obstacle to entry because staff could be recruited or, in the shorter term, consultancies are able to offer such expertise. Voyager Leasing took the route of partnering with a third party to access technical skills. New financiers have also proposed to work with technical consultants when putting in bids for new rolling stock (see the discussion on the IEP in Annex 2). Porterbrook agreed that such expertise can be sourced from consultants and from recruitment, but noted that engineering expertise might be

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<sup>21</sup>Babcock & Brown considered that these three financial houses had not entered because of the significant economies of scale

costly as it is in short supply. HSBC also considered that the required technical and commercial expertise is available for a prospective ROSCO.

50. Industry and technical expertise may therefore generate a competitive advantage for the incumbent ROSCOs over new entrants, particularly in relation to the accumulation of experience in evaluating risks and maintaining the assets. However, it is not clear that expertise acts as a major barrier to entry because these skills may be sourced from consultants or recruitment. .

### *Reputation*

51. Given the importance of safety and reliability of rolling stock, a ROSCO may obtain some competitive advantage from having a good safety and reliability record (ie rolling stock not being involved in accidents or breaking down). A new entrant would not benefit from such a reputation and it would take considerable time to acquire one. This is unlikely to be a sufficient reason on its own for an entrant to decide against entering.

### *Costs of exit*

52. Any entrant will want to know it can exit the business if it wishes at some point in the future. Exit from this industry requires a buyer for the rolling stock assets, such that asset disposal is effectively a business sale. It is not clear that there are many sunk costs which may prevent such an 'exit' from the market. However, we note that:
  - (a) Porterbrook cited political risk as a major factor in deterring interest when trying to sell its business, and [X].
  - (b) In December 2005, a tax law was introduced that meant that upon the sale of a leasing business any deferred tax liability crystallized, requiring significant tax capacity in the purchaser to offset it. It was announced in the October 2007 Comprehensive Spending Review that this tax law is to be changed, thereby

removing this potential barrier to exit. However, this change is extremely unlikely to have any affect on ROSCOs.

***Conclusion on barriers to entry***

53. The relative incentives of ROSCOs and potential purchasers make the likelihood of sale of used rolling stock to a potential (or existing) competitor appear very low indeed.
  
54. Many of the factors that might deter entry into leasing of rolling stock could probably be overcome by large financial institutions. However, the incumbent ROSCOs appear to have an advantage in understanding and managing asset re-lease and political risks more effectively than potential entrants. The combination of the effect of perceived asset re-lease and political risks, portfolio benefits and economies of scale, access to finance, tax capacity, and industry and technical expertise appears to have deterred entry other than that of Voyager Leasing.

## Self-supply

1. In this annex we assess the extent to which TOCs have circumvented the ROSCOs by self-supplying rolling stock either by (a) purchasing used rolling stock or (b) purchasing new rolling stock.<sup>1</sup> We also consider the reasons for the current levels of self-supply. Table 1 sets out the rolling stock which franchised passenger TOCs currently own and self-supply.

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<sup>1</sup>By self-supply, we include situations within a group of companies where one company within the group owns the rolling stock and leases to another company within the group. For example, Sovereign Trains owns and leases rolling stock to Grand Central.

TABLE 1 Rolling stock owned by franchised TOCs

TOC	Rolling stock owned	Number of vehicles	Age of vehicles at date of purchase (years)	Purchased from (date)	Cost of fleet	Reason for purchase
Arriva Trains Wales	Mk II coaches	22 coaches	c30	HSBC 2006		Purchased for special events at the Cardiff Millennium Stadium.
Arriva Trains Wales	Class 121	1 vehicle	46	HSBC 2006		Purchased for a low-mileage route (Cardiff Queen Street to Cardiff Bay) in recently restructured timetable.
First Group	HSTs	54 vehicles (5 sets—12 power cars and 42 trailer cars)	28	Porterbrook September 2004		Used initially in unsuccessful bid for ICEC then for successful bid on Greater Western franchise. These additional sets were needed to allow the withdrawal of the Class 180 fleet on the First Great Western franchise. The acquisition and refurbishment was funded by First at a group level and the vehicles are leased to the TOC in a manner similar to that used by the ROSCOs.
First Group	Class 143	6 vehicles (3 x 2-car sets)	21	Wessex Trains April 2006		Acquired from Wessex at the start of the First Great Western franchise (the purchase was a requirement of the handover of the old franchise from Wessex which had purchased the stock from a local authority).
Stagecoach	Class 483	12 vehicles (6 x 2-car units)	69	HSBC 2007		Purchased to run on Island Line, which operates a ten-year franchise on the Isle of Wight.

Source: Responses to the CC's questionnaires

\*[redacted]

2. Table 1 does not include a small number of one or two vehicles bought for a nominal sum by TOCs and used for stock balancing movements or on heritage lines, and therefore having no effect on that TOC's negotiating strength.<sup>1</sup> Table 1 shows a total of 95 vehicles currently being self-supplied by franchised TOCs. This amounts to less than 1 per cent of the vehicles owned by the rolling stock lessors.<sup>2</sup> Table 1 also shows that only three franchisees (Arriva Trains Wales, First Great Western and Stagecoach's South West Trains) own more than a few vehicles. With the exception of First's Class 143s and HSTs, all these vehicles are very close to or past the end of their useful economic lives, and only First's purchase of 54 HST vehicles could be considered a significant purchase for regular use on the network.
  
3. In addition to Table 1, we are aware of three previous cases of self-supply for passenger franchised services:
  - (a) Connex Leasing Limited purchased rolling stock for the Connex franchises. These were subsequently purchased and leased by HSBC;
  - (b) Wiltshire Leasing was a subsidiary of Great Western Holdings,<sup>3</sup> set up to finance the new Class 175s (Coradias) for the Northern franchise and the new Class 180s (Adelantes) for Great Western. These vehicles were subsequently purchased and leased by Angel.<sup>4</sup>
  - (c) GNER previously owned one Class 89 locomotive and ten unserviceable Mk 3 sleeper coaches. These have all now been sold as alternative rolling stock became available.

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<sup>1</sup>These include Stagecoach's purchase of a Class 73 loco, a Class 121 DMU, two Cig EMUs and one Vep EMU, and Laing's purchase of a Class 121 DMU from Network Rail [⌘].

<sup>2</sup>See the Capacity working paper. Note that the 11,604 vehicles of which this is a percentage does not include the self-supplied rolling stock or vehicles leased to Hull Trains.

<sup>3</sup>At the time Wiltshire was set up, Great Western Holdings was only owned 25 per cent by First Group. It acquired the remaining 75 per cent at a later date.

<sup>4</sup>Effectively, Angel Trains purchased these fleets from Alstom pursuant to production contracts novated from Wiltshire Leasing.

4. In contrast to passenger franchised services, Table 2 shows that self-supply by open access operators<sup>5</sup> (BAA, Grand Central and WSMR) is higher (132 vehicles) than for franchised TOCs. This is particularly striking given the small proportion of overall UK rolling stock operated by open access operators.<sup>6</sup>

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<sup>5</sup>Note that these are outside our terms of reference so we consider them for comparison purposes only.

<sup>6</sup>Hull Trains is the fourth open access operator but does not own any rolling stock.

TABLE 2 Rolling stock owned by open access operators

TOC	Rolling stock owned	Number of vehicles	Age of vehicles at date of purchase (years)	Purchased from (date)	Cost of fleet	Reason for purchase
BAA	Class 332	61 vehicles (14 sets)	Built in 1998	New rolling stock		To operate the Heathrow Express, for which BAA has a 25-year track access agreement from 1998 to 2023.
BAA	Class 360/2	25 vehicles (5 sets)	Built in 2005	New rolling stock		To operate a stopping service on the Heathrow line in conjunction with First Great Western (Heathrow Connect), with a term coincident with the First Great Western franchise.
Sovereign Trains/Grand Central†	HSTs and Mk 3 vehicles	30 vehicles (6 x Class 43 power cars and 24 Mk 3 trailers)	25 to 30	Porterbrook, February 2007		Used on open access routes for which Grand Central has 5-year track access contract. Unable to reach agreement on leasing.
Wrexham, Shropshire & Marylebone Railway Company (WSMR)§	Class 67 locos and Mk 3 coaches	16 vehicles (4 driving trailers and 12 coaches)		Porterbrook, 2007		WSMR has agreed outline terms to sell 12 coaches and 4 driving trailers to operate with diesel locomotives which WSMR will acquire from another source.  WSMR plans to run up to five trains per day between Wrexham and London but is not due to begin operation until 2008.

Source: Responses to the CC's questionnaires

\*.  
 †The vehicles were sold to Lynfield Leasing, which was a short-term intermediary in the purchase of rolling stock for Sovereign Trains. Sovereign Trains leases the rolling stock to Grand Central.  
 ‡[3<]  
 §WSMR is a joint venture (50/50) between Renaissance Trains and Laing Rail.

5. Table 2 also does not include the 38 Eurostar train sets, which are owned by Eurostar (UK) Limited. 27 of these trains run on the Eurostar routes under the English channel. Nine sets are used by SNCF in France. However, up to three of these sets were leased by Eurostar (UK) Limited to GNER for use on its London–Leeds service until December 2005. This is the only time that we are aware of a TOC owning and leasing trains to another TOC.

### ***Purchasing and self-supplying used rolling stock***

6. Table 1 shows that all purchases of rolling stock by franchise TOCs have been from used rolling stock. Table 1 also shows that Angel has not sold any rolling stock to TOCs and HSBC has only sold 70-year old Island Line trains and old Mk 2 coaches to Arriva Trains Wales.<sup>1</sup> Porterbrook has sold HSTs to Grand Central and First.
7. Two of the ROSCOs submitted that some franchisees had also expressed an interest in buying further rolling stock. However, none of these expressions of interest led to actual purchases of rolling stock:
- (a) [X] and [X] were both interested in Angel's HST fleet;
  - (b) [X] was offered a sale price by Angel for the Class [X] as part of its bespoke term sheet for the [X] franchise bid, but did not pursue the offer; and
  - (c) [X] However, HSBC noted that it did not receive a firm offer.
8. As in our discussion in relation to selling rolling stock to potential new entrants, the ROSCOs would only have an incentive to sell rolling stock to the TOC if the price offered valued the asset at a level which exceeded the ROSCO's perception of its revenue-earning potential (and any potential lost profits on other substitute rolling stock).

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<sup>1</sup>HSBC has also sold older (fully written-off) rolling stock for nominal sums.

9. In relation to First's acquisition of HSTs (the largest acquisition of used rolling stock by a franchised operator), Porterbrook stated that it sold these vehicles because [X]
10. First submitted that the HSTs were bought in a poor condition and required considerable refurbishment work. It further added that the 'purchase was only possible because the vehicles were not immediately needed for service and were in a condition reflected in the purchase price. Normally, ROSCOs will not sell their used rolling stock[s], preferring to continue leasing them at current levels'. Although we noted above that the incentive to sell depends on the price offered and the existing market position, the evidence of a lack of sales to TOCs highlights the low likelihood of a TOC using self-supply of used rolling stock.
11. Angel and Porterbrook both stated that First Group's ability to self-supply HSTs affected negotiations on certain franchises. [X] We consider the extent to which self-supply by First Group has enabled it to gain any form of negotiating power in the Customer behaviour working paper.

### ***Purchasing and self-supplying new rolling stock***

12. Given the ROSCOs' lack of incentive to sell used rolling stock, the alternative (and, perhaps, more straightforward) way to self-supply is to purchase new rolling stock.
13. Tables 1 and 2 show that the only example since privatization of self-supply of new rolling stock is BAA's purchase of new trains on the Heathrow Express and its sister stopping service, Heathrow Connect. However, BAA's situation is unique:
  - (a) BAA is an open access operator—the Heathrow Express operation has a 25-year agreement and the Heathrow Connect service (which is coincident with the First Great Western franchise) has an overarching agreement to operate until the introduction of Cross Rail services to Heathrow.

(b) BAA submitted that it considered leasing rolling stock when it commenced the Heathrow Connect service but found this was not commercially favourable given the cost of capital available to BAA.

14. We consider that BAA's rolling stock is unlikely to exert any competitive constraint on any of the ROSCOs' rolling stock. Indeed, both HSBC and Porterbrook stated that BAA's rolling stock currently runs on dedicated airport lines and so at this stage does not act as a competitive constraint.
15. We are aware of one other example of self-supply of new rolling stock that has been considered since privatization. GNER submitted that its parent company, Sea Containers, had proposed acting as the ROSCO for the leasing of rolling stock for its bid for the proposed 20-year ICEC franchise. The plan was to procure a small fleet of new Class 380 Advanced Tilting Trains but was aborted when the 20-year franchise option was removed. The prospect of a shorter franchise period appears to have adversely affected the viability of self-supply as an option.

### ***Reasons for lack of self-supply***

16. We asked the TOCs for their views on self-supply. Only three TOCs [redacted] had considered self-supply as a possible option, with all three stating that further purchases are not presently viable. There appear to be a number of key reasons for self-supply being commercially unattractive:
  - (a) A franchisee is unlikely to want to assume the residual value risk at the end of a franchise period, which is usually short and often rotated to another TOC. Two TOCs [redacted] specifically cited residual value risk and six TOCs [redacted] noted that franchise terms were too short to consider self-supply. The importance of the franchise term can be seen by the extent to which some open access operators

with longer terms (BAA 25 years, WSMR ten years) engage in self-supply more than franchised TOCs.<sup>2</sup>

- (b) TOCs are primarily involved in running train services and are thinly capitalized. TUPE<sup>3</sup> arrangements at the end of a franchise make exit costs relatively low when franchises are lost. Owning and managing rolling stock is a completely different business model requiring extensive capital investment and with higher exit costs due to the lack of a second-hand market for rolling stock.
- (c) A TOC looking to self-supply new rolling stock would face barriers to entry similar to those facing a new entrant to the rolling stock leasing business. These include
- (i) the potential unattractiveness of holding assets on balance sheet, and
  - (ii) possible difficulties in obtaining full benefit from the capital allowances available to owners of rolling stock assets. In relation to (ii), we note that some of the larger transport companies, such as First Group, National Express, Arriva and Stagecoach may have such tax capacity, and that this barrier may be lowered as new tax rules require less tax capacity (see the barriers to entry section of this working paper).

### ***Conclusion on self-supply***

17. Self-supply by franchised TOCs is limited to less than 1 per cent of the rolling stock lessors' rolling stock used by franchise passenger services, and comprises primarily older rolling stock. It is therefore not a significant competitive constraint on ROSCOs. The extent of self-supply is unlikely to change as it appears to be a commercially unattractive option for TOCs.

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<sup>2</sup>Hull Trains, an open access operator, noted that it was unlikely to consider purchasing rolling stock because the asset life was 25 to 30 years, far greater than the access rights it was likely to be able to acquire. The residual value risk is therefore too great.

<sup>3</sup>The Transfer of Undertakings (Protection of Employment) Regulations (TUPE).

### Alternative funding structures

1. In this annex we consider a number of alternative approaches to leasing of rolling stock. By alternative funding approaches, we mean financing through arrangements other than the traditional leasing model used by the ROSCOs. These alternative approaches are mostly in the early stages of being considered by the relevant authorities.<sup>1</sup>
2. The main challenge for using an alternative funding structure is whether it is considered acceptable for the rolling stock assets to be recorded on the financier's balance sheet, or whether steps need to be taken to take the assets 'off balance sheet' to be funded by a third party (similar to the ROSCOs' traditional leasing model).
3. We are aware of, and the main parties cited, three initiatives that may present opportunities for using alternative funding structures in supplying rolling stock, some in relation to passenger franchised services:
  - (a) TfL's plans for the North London and East London lines;
  - (b) the DfT's HST replacement programme—the IEP; and
  - (c) the Welsh Assembly's and Transport Scotland's consideration of alternative ways to procure rolling stock in Wales and Scotland.
4. We consider each of these in turn.

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<sup>1</sup>We note that alternative funding structures fall outside our terms of reference but consider them for comparison purposes and to reflect possible future developments.

## ***Transport for London***

5. From November 2007, TfL assumed responsibility for London Overground services. These services comprise the North London Railway<sup>2</sup> and the new East London Railway<sup>3</sup> (together, the London Rail Concession). In June 2007, the successful bidder for the London Rail Concession was announced as London Overground Railway Ltd (LOROL, formerly MTR Laing).<sup>4</sup> The London Rail Concession is not a rail franchise, as it will be expressly exempted from designation as a franchise under section 23(1) of the Railways Act 1993. It therefore falls outside our terms of reference. However, we consider it in order to compare franchised services with non-franchised passenger services.
  
6. TfL submitted that under the terms of the Concession, it retained responsibility for procuring rolling stock<sup>5</sup> which would be leased<sup>6</sup> to LOROL for day-to-day operation. TfL is different from the DfT and Transport Scotland and the Welsh Assembly in that it has powers which allow it to borrow provided (a) it is for capital expenditure, (b) it is repaying the sum within the asset life, and (c) it is prudent to do so.
  
7. In August 2006, TfL signed a £223 million contract with Bombardier to manufacture 44 class 378 Electrostars.<sup>7</sup> In July 2007, it further announced<sup>8</sup> that it had placed an additional £36 million order for an extra 36 rail carriages to be built by Bombardier. Although the operating lease for these trains will at first be between TfL and LOROL, TfL is investigating the possibility of refinancing the trains to improve cost effectiveness. TfL told us that it had approached the three ROSCOs and other financial institutions. [✂]

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<sup>2</sup>Previously run by Silverlink Metro.

<sup>3</sup>The East London line with its extension reopens in 2009/10.

<sup>4</sup>A 50/50 joint venture between MTR Corporation and Laing Rail.

<sup>5</sup>TfL will also be responsible for setting fares and deciding service levels. It will therefore take on revenue risk.

8. The new TfL rolling stock will displace some existing ROSCO-owned rolling stock on the North London line,<sup>9</sup> but will be specifically designed for use on the London Rail Concession. As a result, the new rolling stock will not act as a competitive constraint on other rolling stock on other franchises, although it may displace used rolling stock to be used elsewhere.

### ***DfT***

9. The DfT currently has two major new rolling stock procurements which it is looking to undertake:
- (a) the IEP; and
  - (b) new vehicles in the DfT's High Level Output Specification (HLOS).

### ***The Intercity Express Programme***

10. The DfT's IEP will replace the current HST fleet with a new train to 'deliver [the] flexibility, performance and carrying capacity the railways will need through to 2040 and beyond'. The IEP is likely to cover a minimum core order of around 1,000 new vehicles. The DfT noted that the IEP was different from previous train procurements due to there being a single procurement for a bundled manufacturer, maintainer and financier, which would take the delivery risk. This risk allocation follows Private Finance Initiative (PFI) precedent. Under PFI/PPP deals the finance provider specifies, procures and maintains the asset. This is very different from the GB rail market where the asset is often specified and procured by others (the TOC or the DfT) and the asset re-lease risk is not within the control of the rolling stock owner.

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<sup>6</sup>Leased through an operating lease at nominal cost. There would be no benefit to TfL in leasing the rolling stock to the concessionaire at anything more than a nominal amount as any financing costs would simply be passed back to TfL as increased concession payments.

<sup>7</sup>[www.tfl.gov.uk/corporate/media/newscentre/3489.aspx](http://www.tfl.gov.uk/corporate/media/newscentre/3489.aspx). 24 dual voltage 3-car trains will be used on the North London Railway from 2009 and 20 4-car trains will be used on the East London Railway when it opens in 2010. This is a total of 152 vehicles.

<sup>8</sup>[www.tfl.gov.uk/corporate/media/newscentre/5432.aspx](http://www.tfl.gov.uk/corporate/media/newscentre/5432.aspx)

<sup>9</sup>In the interim period before the new rolling stock is ready, LOROL will lease 12 Angel Class 150s, 69 HSBC Class 313s and 9 Angel Class 508s, which are currently in operation on the London Overground lines.

11. DfT expects to provide a section 54 undertaking<sup>10</sup> for around two-thirds (20 to 25 years) of the asset life and expects that 'there may be little realistic competition to the IEP' through the asset life of the rolling stock. The DfT submitted that the terms of the section 54 undertaking will allow the trains to be used on any route rather than being constrained to a particular franchise. The DfT told us that the new rolling stock will not alter the existing balance between supply and demand but will replace life-expired rolling stock and address anticipated future demand for rail services.
12. On 16 August 2007, the DfT announced that three applicants had been shortlisted for the IEP.<sup>11</sup> The aim is to produce a pre-series batch of trains on the East Coast Main Line from 2013 with trains entering full service in 2015.<sup>12</sup>

### *HLOS vehicles*

13. In addition to the IEP and as part of its HLOS, the DfT plans to introduce 1,300 other vehicles across the network between 2009 and 2014. The DfT told us that the strategy for delivering the 1,300 new HLOS vehicles was still being developed. We note that these vehicles are additional vehicles and are not intended to displace any existing rolling stock. As the carriages are augmenting existing ROSCO fleets we consider it likely that funding will be provided by the ROSCOs.

### ***Transport Scotland and the Welsh Assembly***

14. Following the Railways Act 2005, the Welsh Assembly Government's Rail Unit and Transport Scotland were assigned responsibility for managing the Wales and Border and ScotRail passenger rail franchises respectively. Neither party ran the respective

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<sup>10</sup>See the glossary for an explanation.

<sup>11</sup>Alstom/Barclays Rail Group. Express Rail Alliance (a consortium of Bombardier, Siemens, Angel Trains and Babcock & Brown) and Hitachi Europe. Neither Porterbrook nor HSBC has any involvement in the IEP process at this stage but this does not preclude them from becoming involved as financiers at a later stage.

<sup>12</sup>[www.gnn.gov.uk/environment/fullDetail.asp?ReleaseID=307937&NewsAreaID=2&NavigatedFromDepartment=False](http://www.gnn.gov.uk/environment/fullDetail.asp?ReleaseID=307937&NewsAreaID=2&NavigatedFromDepartment=False).

franchise re-let processes but each is now investigating what alternative funding structures are available for rolling stock procurement.

### *Transport Scotland*

15. The main parties indicated that it is possible that Transport Scotland could start considering alternative procurement plans in the future. Although no commitments were made in Transport Scotland's High Level Output Specification released on 13 July 2007, Transport Scotland stated that it is at the start of a process to procure 219 additional new rolling stock vehicles by 2011 to support the delivery of its plans for the railway in Scotland. It stated that there will be two phases:
- (a) a first phase procured through First Scotrail on a MOLA-type lease arrangement; and
  - (b) a second phase which would assess alternative procurement options. This phase remains at the 'embryonic stage'. Transport Scotland provided an overview of its high-level initial analysis of six procurement options, including a number of options which do not follow the traditional ROSCO leasing model.

### *Welsh Assembly*

16. The Welsh Assembly told us that as the opportunities for cascades had run out it was now beginning to look at procurement options. However, it was in the very early stages of going through a similar process to Transport Scotland.
17. Arriva commented on the possibility of investment by the Welsh Assembly Government: 'If new build is taken forward it is possible that this may be funded by means of outright purchase by the Welsh Assembly Government or by Arriva'. Arriva further submitted that it had previously explored new rolling stock and possible funding arrangements with the Welsh Assembly and it was of the view that Class 142 and 143 units (of which there are 52 vehicles in use) would need replacing during the

present franchise. It noted that Arriva was better placed than other franchisees in purchasing rolling stock due to a relatively long franchise term (15 years) and the willingness of the Welsh Assembly to finance long-term investment.

### ***Interest in alternative funding structures***

18. The ROSCOs listed a number of potential competitors in their submissions to the CC. We contacted as many of these as possible in order to understand each third party's view on alternative funding structures. Twelve out of 18 third parties that responded expressed an interest in alternative funding structures and specifically the IEP, which requires manufacturers and financiers to come together in partnership (through manufacturer-led consortia).

### ***Conclusion on alternative funding structures***

19. Alternative funding structures may create opportunities for potential competitors to supply new rolling stock through means other than the traditional ROSCO model. However, at present, the London Concession (which is not a franchised passenger service) consists of only 152 vehicles, the IEP covers 1,000 new vehicles, and plans for Transport Scotland and the Welsh Assembly amount to only 219 vehicles and 52 vehicles respectively. This amounts to a total of 1,423 vehicles (12 per cent of used franchised passenger rolling stock capacity) that might be procured through alternative funding structures. However, the timing and certainty of these proposals remain uncertain. At present, we have not seen any evidence of the extension of alternative funding structures to other rolling stock and its competitive effect on the ROSCOs traditional leasing model therefore remains speculative.