Off-lease rolling stock

Introduction

1. In this appendix we examine the extent and composition of off-lease rolling stock between privatization and the end of 2008, and the costs of holding rolling stock off-lease.

2. 'Off-lease' rolling stock is rolling stock that is not leased to a TOC at any given point in time and is consequently being stored by a ROSCO, with the prospect of being returned to service at a future date. The amount of off-lease rolling stock is therefore an indicator of the extent of spare capacity for each class or type of rolling stock.

3. Off-lease rolling stock typically consists of rolling stock which has not yet exceeded its originally estimated useful economic life of 30 to 35 years. A ROSCO may, however, hold rolling stock off-lease, in the hope of re-lease, even if it has already exceeded its originally anticipated useful economic life. A good example of such rolling stock, as discussed in paragraph 12, is HSBC's Mark II rolling stock.

Extent and composition of off-lease rolling stock

4. During the course of our inquiry, the DfT submitted several revised estimates of the extent of off-lease rolling stock, ranging from slightly less than 1 per cent to nearly 2 per cent of total rolling stock. The ROSCOs also informed us of the amount of rolling stock that each had off-lease. The extent and composition of off-lease rolling stock can change over time as new franchises are let or additional rolling stock is required. We therefore looked at a series of 'snapshots' of rolling stock off-lease at the end of each year since privatization up to the end of 2008.[1]

5. We recognize that this snapshot approach does not identify rolling stock that was temporarily off-lease for a period during a year (ie going off-lease after 1 January and then leased again before the end of the year). Such temporarily off-lease rolling stock may have been relevant to the competitive pressures in existence at the time of a particular lease negotiation.[2] In our competitive analysis of each lease negotiation we considered whether or not alternative used rolling stock was off-lease. This appendix therefore serves as an indicator of the extent and composition of off-lease rolling stock since privatization.

Our analysis

6. Each of the ROSCOs provided us with data on the extent and composition of rolling stock that was off-lease at the end of each year between privatization and the end of 2008. We adjusted these figures to take account of our definition of off-lease rolling stock.[3]

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[1]We have not analysed off-lease rolling stock between the start of 2009 and the date of our final report because of the need to have a sensible cut-off point in data gathering. However, we have considered possible future developments in the amount of off-lease rolling stock at paragraph 14.

[2]For example, we note that the totals do not include 63 vehicles of HSBC's new Class 222 Meridians, which were off-lease for nearly a year prior to introduction, or Porterbrook's Class 458s which spent some time off-lease in 2006.

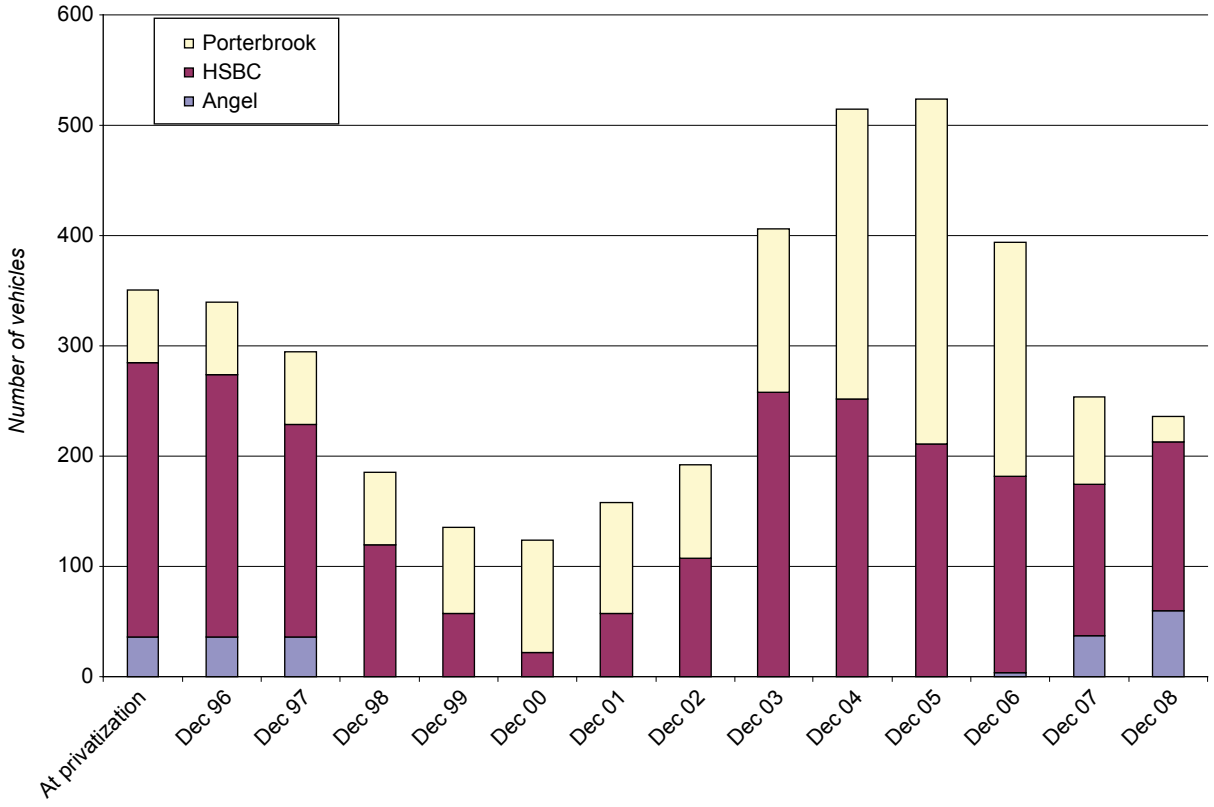
[3]In their responses some of the ROSCOs included off-lease rolling stock that was withdrawn prior to privatization or withdrawn from service for legislative reasons (principally vehicles withdrawn as part of the Mark I replacement programme which were required to be withdrawn under the Railway Safety Regulations 1999) such that it would legally no longer be able to return to service without fundamental modifications. We disregarded this rolling stock for the purpose of our analysis and also four Class 365 vehicles off-lease since 2003 which were written off following the Potters Bar crash.

Extent of off-lease vehicles

7. After making these adjustments, Figure 1 shows the extent of off-lease rolling stock by ROSCO since privatization.

FIGURE 1

Off-lease rolling stock by ROSCO, privatization to December 2008



Source: CC analysis.

8. Figure 1 shows that the amount of off-lease rolling stock decreased until 2000 and then increased until 2005. It has since quite rapidly declined. The increase in off-lease rolling stock between 2000 and 2005 was the result of displacement of rolling stock caused by franchise re-lets and new rolling stock introductions (notably the displacement of locomotives and carriages by new rolling stock introduced on Virgin Cross Country and Virgin West Coast).

9. Since privatization, the extent of off-lease vehicles at the end of each year has ranged from around 100 to around 500 vehicles. This amounts to between 1.2 and 4.5 per cent of total rolling stock at the end of each year. Figure 1 shows that HSBC's and Porterbrook's rolling stock has formed the majority of off-lease rolling stock since privatization.[4] We noted that examining overall levels of off-lease rolling stock does not inform us about the competitive pressures facing each type of rolling stock. We therefore consider which type of rolling stock has been off-lease in the next section.

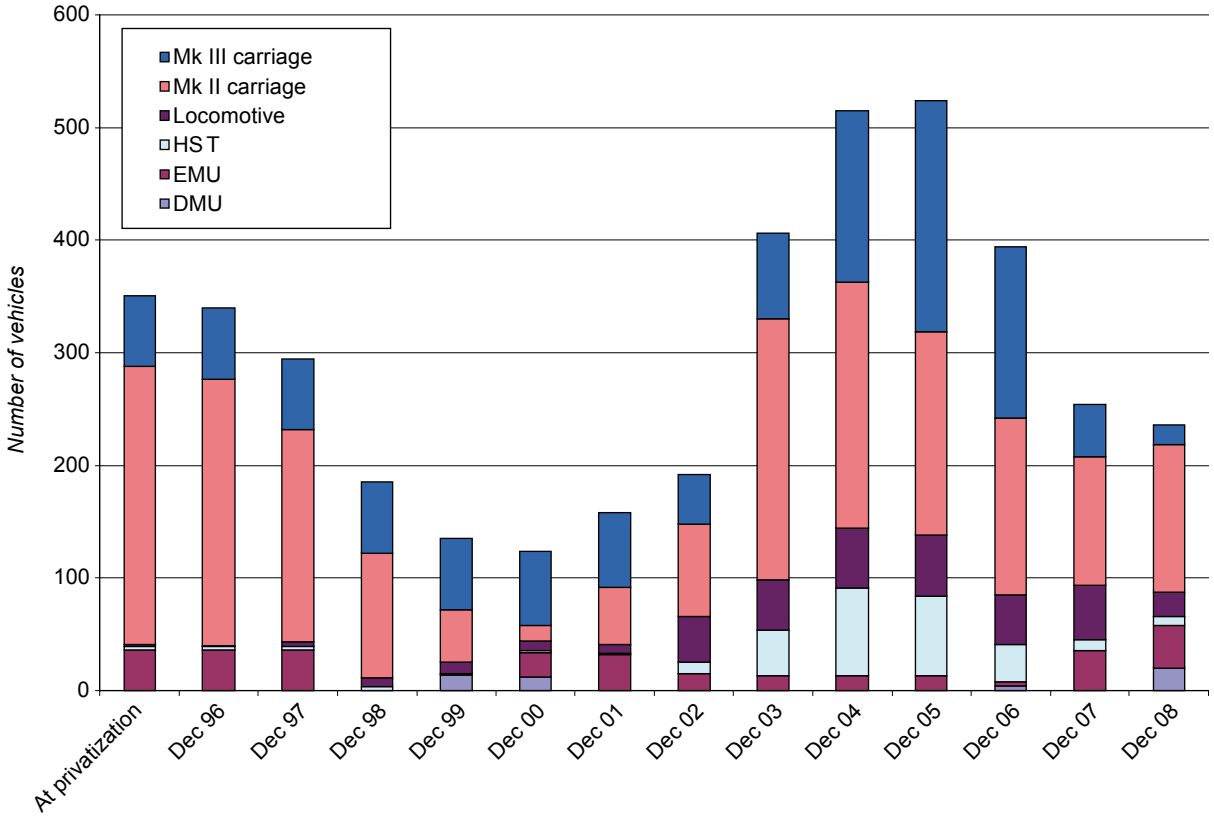
[4]We explain why in paragraphs 12 and 13.

Composition of off-lease vehicles

10. In this section we have assessed the composition of off-lease vehicles since privatization, as shown in Figure 2.

FIGURE 2

Composition of off-lease rolling stock, privatization to December 2008



Source: CC analysis.

11. Table 1 provides some detail on the classes of rolling stock that have been off-lease since privatization.[5]

[5]Angel also mentioned its Class 142s and 508s which are on lease with TOCs but warm stored. We have not considered these in our assessment because we understand that Angel is receiving a lease rental for the rolling stock.

TABLE 1 **Details of composition of rolling stock off-lease, from since privatization to December 2008**

ROSCO	*Class*	*Upper limit of number of vehicles off-lease*	*Comments*
DMUs			
Porterbrook	141	14	Off-lease in 1999 and 2000. These Pacers were built in 1984 so were only 15 years old at the time. All have subsequently been withdrawn due to reliability problems and most were sold to Iran. No Class 141 vehicles are now in service.
Angel	153	4	Off-lease in 2006 from First Great Western. These vehicles are 20 years old. These vehicles have now been returned to service on the East Midlands franchise.
Angel	180	55	Fifty-five of Angel's 70-vehicle fleet of seven-year-old Class 180 Adelantes were returned by First Great Western following replacement by HSTs—20 of these vehicles have been subsequently placed with Hull Trains and 25 have been leased to National Express East Coast (15 of which have been temporarily subleased to Northern Rail). [✂] The 15 that are still with First Great Western will be returned on 31 March 2009 and will then be off-lease unless a new lessee is found.
EMUs and new EMUs			
Angel	442	120	All 120 vehicles were off-lease by February 2007 when they were displaced from South West Trains and were put into warm storage at Eastleigh. Angel had been actively marketing these vehicles to TOCs and to potential buyers abroad. 85 of these vehicles were introduced on to Southern's London–Brighton route from December 2008. 35 vehicles remained off-lease at the end of 2008. These vehicles are currently 19 years old.
Angel	508	36	36 Class 508 vehicles were off-lease in 1996 and 1997 whilst awaiting a suitable lessee. Three vehicles came off-lease in 2008 having been returned by LOROL.
Porterbrook	488/9	32	Off-lease between 2000 and 2006. These vehicles were built in 1973/74 so were 27 years old when off-lease. They were used on the Gatwick Express route but were replaced by Class 460s. The vehicles were sold to Network Rail and First GB Railfreight and the remainder were scrapped or given to preserved railways.
Locos and loco-hauled stock			
Porterbrook	Class 43 and HST coaches	78	Off-lease primarily since 2002. Porterbrook has sold some of its HSTs to First and Sovereign Trains. The coaching stock and Class 43s are 26 years old.
Porterbrook	47	16	Off-lease between 2000 and 2006. These locomotives are 41 years old.
Porterbrook	73	3	Off-lease between 2003 and 2005. These locomotives are 41 years old.
HSBC	86	33	Off-lease to varying degrees since privatization. These locomotives are 42 years old. There were 21 Class 86 vehicles off-lease at the end of 2008.
Porterbrook	87	24	Off-lease since 2003. The locos are 33 years old. Porterbrook told us that it sold all of these vehicles rather than storing them off-lease because there was no realistic opportunity of future leasing.
HSBC	Mark II coaches	247	Off-lease to varying degrees since privatization. This stock is between 34 and 44 years old (with an average age of 37 years old) and [✂] with some still on-lease on the ScotRail franchise.
Porterbrook	Mark III coaches and DVTs	205	With the exception of sleepers off-lease since privatization, this rolling stock has been off-lease to varying degrees since 2003. Porterbrook has sold some of its Mark III coaches to Sovereign Trains and some were also sold to various other OAOs, freight and tour operators. Some have returned on-lease leaving only 17 vehicles (16 DVTs and one sleeper coach) off-lease at the end of 2008.The coaching stock is 23 years old and the DVTs are 18 years old.

Source: CC analysis.

Note: Ages expressed are minimum ages at the end of 2008 based on the last year built. Number of vehicles shows the upper limit of vehicles off-lease between privatization and the end of 2008. Changes in off-lease rolling stock between the start of 2009 and publication of our report are not necessarily reflected in this table.

12. Figure 2 and Table 1 demonstrate that a large majority of off-lease vehicles since privatization have comprised HSBC's Mark II and Porterbrook's Mark III rolling stock with accompanying locomotives. On average at the end of each year, 76 per cent of off-lease vehicles related to the Mark II and Mark III rolling stock:

(a) The HSBC Mark II coaches were built between 1965 and 1974. Although some of these coaches were already 30 years old at privatization, around 50 coaches were reintroduced from storage to the Greater Anglia, Greater Western and ScotRail franchises. HSBC told us that only the ScotRail vehicles remained on lease at the end of 2008 as the others were withdrawn as new rolling stock was introduced. [✂]

(b) Porterbrook's Mark III rolling stock came off-lease from Virgin West Coast when it was replaced by the Class 390 Pendolinos. Some of these have now been sold to Sovereign Trains[6] (for use by Grand Central) and to various other OAOs, freight and tour operators. Some are due to be leased to National Express East Coast in 2010.

13. In addition, we made the following observations regarding rolling stock off-lease since privatization:

(a) There have been very few off-lease DMUs since privatization. Porterbrook told us that the Class 141 Pacers suffered from continuous reliability problems and were withdrawn as a result. The four Class 153 vehicles that were off-lease for a short period have now returned to service with East Midlands Trains. Angel's Class 180s, returned by First Great Western, are being progressively returned to service, with only ten vehicles remaining off-lease at the end of 2008.

(b) There have only been small amounts of EMUs intermittently off-lease:

(i) Angel's Class 442 fleet came off-lease in February 2007. Eighty-five of the 120-vehicle fleet have been leased to Southern until 2015 and are being introduced onto the London–Brighton route, although 35 vehicles remained off-lease at the end of 2008.

(ii) Angel's Class 508s were off-lease at privatization but were eventually leased to Merseyrail and Southeastern. Three vehicles were returned by LOROL in 2008.

(iii) Porterbrook's Class 488/9s were specifically reconfigured for the Gatwick Express route before being displaced and then sold to Network Rail and the freight company First GB Railfreight or scrapped.

(c) There have been a large number of Porterbrook's HSTs off-lease since 2002. Many of these have now been returned to service on the Greater Western, New Cross Country and East Midlands franchises and some have been sold to First and Sovereign Trains (for use by Grand Central).

14. The ROSCOs told us that the DfT's plans for introducing new rolling stock through the Rolling Stock Plan, the IEP and Thameslink Programme would mean that the amount of off-lease rolling stock would be expected to increase in the future. One ROSCO [✂], in particular, told us that the Thameslink procurement plans could lead to up to approximately [500–850] EMU units ([✂]) being displaced by 2015 when Key Output stage 2 (KO2) of the Thameslink Programme commences, [✂]. The DfT told us that [✂].

[6]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.

Summary of extent and composition of off-lease rolling stock

15. Our analysis of year-end off-lease rolling stock between privatization and the end of 2008 shows that:

(a) since privatization rolling stock that has been off-lease but was able to return to service has on average been running at between 1.2 and 4.5 per cent (around 100 to 500 vehicles) of total rolling stock at the end of each year;

(b) the large majority of this off-lease rolling stock has comprised Mark II and Mark III coaches and accompanying locomotives, of which many of the Mark II coaches were over 30 years old at privatization;

(c) the main other class that has been off-lease since privatization has been Porterbrook's HSTs, many of which have now been redeployed or sold;

(d) most other rolling stock that has been off-lease since privatization has not remained off-lease for a period of more than one or two years (for example, Angel's Class 153s and 508s); and

(e) at the end of 2008, there were 236 vehicles off-lease, of which Mark II and Mark III rolling stock accounted for 149 vehicles (63 per cent).

Costs of holding rolling stock off-lease

16. In this section we examine the costs of holding rolling stock off-lease so as to understand the impact on ROSCOs. The ROSCOs highlighted the financial impact of rolling stock going off-lease:

(a) Angel submitted that the threat of having even a small amount of rolling stock off-lease creates a significant financial disadvantage.

(b) HSBC told us that it could not risk any of its rolling stock being off-lease and sitting in sidings.

(c) Porterbrook submitted that the financial impact of even a small amount of rolling stock off-lease could be considerable.

17. We considered opportunity costs and physical costs associated with off-lease rolling stock.

Opportunity costs

18. The main cost of holding rolling stock off-lease is the opportunity cost of not leasing the vehicles (ie the lost rental income). If the ROSCO cannot find a lessee or buyer for the off-lease rolling stock, then it will ultimately make an impairment charge to account for the expected loss of rental income.[7]

[7]Accounting impairments reflect the materialization of anticipated reductions in future cash flows triggered by known events. A provision is recorded to reduce the accounting net book value of the assets to the value of the discounted cash flows. As an example, [✂]. An impairment charge does not necessarily signify that the rolling stock will remain off-lease. Indeed, when the rolling stock has been subsequently leased, the ROSCOs have generally re-valued rolling stock that has previously been impaired to reflect the revised anticipated cash flows. The extent of impairment charges made by the ROSCOs is examined in Appendix 6.7.

19. The timing of any off-lease period can have important financial consequences. A period off-lease early in a rolling stock's life will reduce the whole-life return by more than a similar period off-lease later in the life of the asset. This is because of the effect of the time value of money.

Physical costs of holding stock off-lease

20. Holding rolling stock off-lease also leads to physical storage costs and associated movement costs[8] being incurred by the ROSCO. There are two types of storage:

(a) cold storage—storing rolling stock in a warehouse or sidings; and

(b) warm storage—storing rolling stock in a warehouse but with the rolling stock being charged up on a regular basis to ensure that it can be easily restored to service.

Cold storage

21. Porterbrook stated that it had signed a [✂] lease costing approximately £[✂] a year for a warehouse and sidings (ie cold storage) to store [✂] in the warehouse and [✂] in sidings.[9]

22. Cold-stored rolling stock can only re-enter service if a number of maintenance examinations are carried out. Porterbrook submitted that when its Mark III vehicles came off-lease from Virgin West Coast and were cold-stored, maintenance expenditure of £[✂] to £[✂] per vehicle was required before they were re-leased. However, these vehicles were off-lease for a long period and underwent substantial refurbishment before being returned to use, and so were atypical. Maintenance costs may be lower where there are shorter periods off-lease and/or a less extensive programme of refurbishment.

Warm storage

23. During warm storage the rolling stock receives some maintenance. Warm storage is usually outsourced by the ROSCO. Ongoing maintenance means that costs are therefore higher than for cold storage. Two examples we were given illustrated the range of costs involved:

(a) Angel stated that for its Class 442 fleet (of which the whole fleet was in warm storage at the Eastleigh depot in Hampshire between February 2007 and December 2008), the storage and maintenance cost was £[✂] per vehicle per month. For the 120-vehicle fleet, this amounted to a monthly cost of £[✂] for the period that the whole fleet was off-lease.

(b) Porterbrook submitted that it had entered into an arrangement with South West Trains and had paid South West Trains £[✂] per EMU per day (ie £[✂] per EMU per month) to warm store its Class 458 vehicles (as part of a 'pay-as-you-use' lease[10]).

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[8] These are the costs of moving the rolling stock into storage.

[9] [✂]

[10] Under these lease terms, South West Trains agreed to lease the fleet on the basis of lease rentals calculated by references to the timetabled operations and mileage that the fleet actually ran (ie it only paid for the vehicles as it used them).

24. Angel suggested that these physical storage costs led to 'a situation where, conceptually, the marginal costs of leasing a piece of rolling stock can be regarded as being negative'. Using the [✂] as an example, Angel submitted that the additional cost of not leasing (the negative marginal cost of leasing) would be around £[✂] per vehicle per day (£[✂] per month for the fleet) for warm storage.

Additional physical costs

25. In addition, Angel submitted that the following costs could also arise from holding rolling stock off-lease:

(a) accelerated physical deterioration when assets are stored open to the elements leading to increased engineering risks; and

(b) increased risk of vandalism.

Off-lease storage and movement costs incurred by ROSCOs, 2002 to 2006

26. Table 2 sets out the costs incurred by each ROSCO for off-lease rolling stock between 2002 and 2006. These charges consist primarily of storage and associated movement costs and do not take into account opportunity costs.

TABLE 2 **Costs incurred for off-lease rolling stock, 2002 to 2006**

£'000

	2002	*2003*	*2004*	*2005*	*2006*
Angel	[✂]	[✂]	[✂]	[✂]	[✂]
HSBC*	[✂]	[✂]	[✂]	[✂]	[✂]
Porterbrook	[✂]	[✂]	[✂]	[✂]	[✂]
Total	764	1,385	1,033	849	1,186

Source: CC analysis based on data supplied by the ROSCOs.

*[✂]

27. Table 2 shows that the costs of holding rolling stock off-lease between 2002 and 2006 has amounted to a total of around £1 million across all three ROSCOs each year.