

Switching

Introduction

1. In our analysis in this appendix, a switch refers to a situation where a TOC leases alternative rolling stock on a franchise.¹ In the context of this inquiry, we consider that switching opportunities have arisen primarily at franchise re-lets.²

2. We use the following terms in this appendix:
 - (a) Incumbent rolling stock is used rolling stock that a TOC has on lease from a ROSCO prior to a franchise re-let.
 - (b) In the context of switching, alternative rolling stock means rolling stock that a TOC leases on a new/replacement franchise that was not leased on the previous franchise. Alternative rolling stock is either new rolling stock or used rolling stock that was previously off-lease or leased on another franchise.
 - (c) Displaced rolling stock refers to incumbent rolling stock that is replaced by alternative rolling stock or is otherwise moved to another franchise.

3. In this appendix we assess (a) switching since privatization,³ and (b) the costs of switching rolling stock.

¹We do not include in our definition of a switch the situation where rolling stock is moved from one franchise to another only in consequence of a franchise remapping. By way of example of a franchise remap, certain Voyager trains that were leased to the Cross Country franchise were moved to the West Coast franchise after services between Birmingham and the North West were transferred to the West Coast franchise. This is not a switch for the purpose of our definition.

²Switching in this industry is different from switching in most other industries. In this industry, the customer doing the switching may be different from the customer that previously used the rolling stock. This situation arises where an incoming TOC that has been awarded a new franchise chooses not to lease the same rolling stock as the previous franchisee. For our analysis we consider this as a switch because there is usually a close similarity between the service requirements on the old franchise and the new franchise. This means that the rolling stock on the previous franchise is usually the starting point for a bidder for the new franchise.

³Our switching analysis only tells us about the realization of competitive pressures, not the threat of switching. We have considered the threat of switching in our assessment of alternatives in Appendix 4.1.

Switching since privatization

4. In this section we examine switching from privatization to the end of 2007 and then from the start of 2008, including planned future switching.

Analysis of switching from privatization to the end of 2007

5. We conducted our analysis of switching in two ways by considering:
 - (a) the extent to which incumbent rolling stock has been leased at each franchise re-let; and
 - (b) the extent of switching generally as defined above in relation to used rolling stock only.

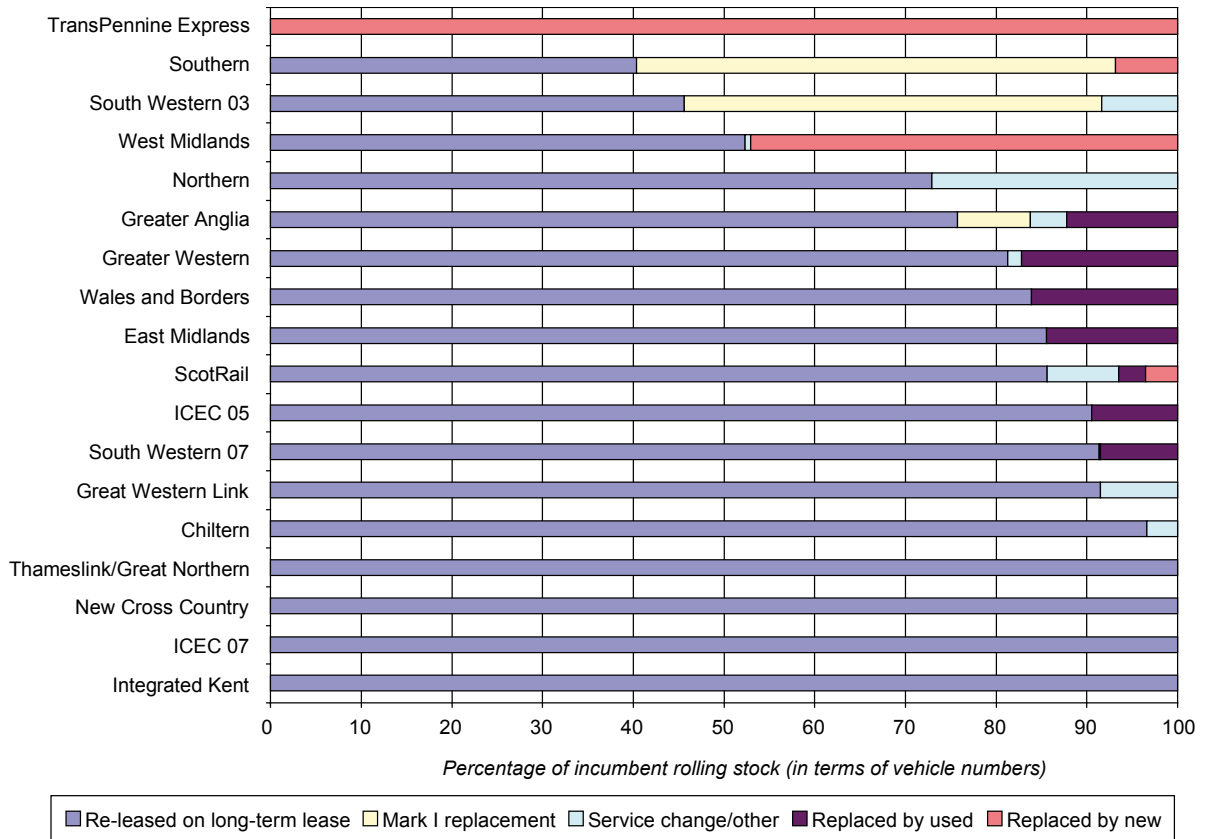
Incumbent rolling stock leased at each franchise re-let

6. Figure 1 shows the extent to which incumbent rolling stock has been leased on long-term leases for 18 franchise re-lets⁴ based on data submitted by the DfT.

⁴This did not include London Overground or Merseyrail.

FIGURE 1

Extent of incumbent rolling stock leased at franchise re-let



Source: CC analysis of DfT data.

Note: This does not include the two concessions (Merseyrail and London Overground) or the Virgin West Coast and C2C franchises (which have not been re-let).

- Figure 1 shows that the franchises where the most switching has taken place (TransPennine Express, Southern, South Western 2003 and West Midlands) have been the result of switching to new rolling stock. In two of these cases (Southern and South Western 2003), this was caused by the compulsory retirement of the Mark I 'slam-door' rolling stock affecting a large portion of the incumbent fleet. Figure 1 shows that non-compulsory switching to new rolling stock has occurred on four franchises and switching to used rolling stock on seven franchises.

8. Using the data behind Figure 1, we calculated that a weighted average⁵ of 77 per cent of incumbent vehicles have been leased at franchise re-let.⁶ Of the 23 per cent of vehicles that have not been leased for the length of the franchise, only 9 per cent relates to switching to alternative used or new rolling stock (5 per cent to alternative used and 4 per cent to alternative new rolling stock). The other 14 per cent relates to the compulsory retirement of the Mark I rolling stock (accounting for 11 per cent of vehicles) and service changes or other reasons which meant the rolling stock was no longer required (3 per cent).

9. The DfT also submitted an analysis of rolling stock substitutability based on the same 18 franchise re-lets, from which Table 1 is taken.

TABLE 1 Percentage of incumbent fleet re-leased at franchise re-let

	<i>per cent</i>
<i>Incumbent fleet re-leased for the full franchise term*</i>	81
<i>Incumbent fleet not re-leased for the full franchise term</i>	19
—Life expired	11
—Replaced by existing alternatives	2
—Replaced by new rolling stock	4
—Surplus not retained	1

Source: DfT calculations [⌘].

Note: Figures may not sum due to rounding.

*The DfT's analysis showed that 31 per cent of incumbent fleets were covered by Section 54 undertakings or were specified in the franchise ITT and so were leased for the full franchise term. We discuss this part of the DfT's analysis in appendix 4.1.

10. The DfT's analysis in Table 1 shows that at franchise re-let, only 6 per cent of incumbent rolling stock was not re-leased for the full franchise term because the TOC chose instead to lease alternative rolling stock (2 per cent of incumbent rolling stock was replaced by alternative used rolling stock and 4 per cent was replaced by new rolling stock).⁷ Angel commented that the DfT's analysis implied that 12 per cent of

⁵Weighted by the number of vehicles on each franchise.

⁶This figure for long-term leased vehicles includes 23 per cent of vehicles that have been subject to a section 54 undertaking or specified in the franchise ITT.

⁷The DfT's analysis produces lower figures for switching than our analysis because the DfT did not consider instances where parts of fleets have been switched.

incumbent rolling stock, which it considered was a significant proportion, was replaced when switching was not restricted by section 54 undertakings, franchise ITT specification or life-expired rolling stock.⁸

The extent of switching in relation to used rolling stock

11. As explained above, in this appendix we refer to a switch as including all instances where a TOC leases alternative rolling stock. Our analysis in this section considers switching where the franchisee obtains alternative *used* rolling stock from another franchise.⁹ We do not consider in this section the direct switching from incumbent rolling stock to alternative new rolling stock (including switching as part of the Mark I replacement programme, where used rolling stock was directly replaced and withdrawn from service). The purpose of this approach is to help us understand how much used rolling stock has been moved between franchises since privatization.
12. Our analysis is based on data compiled using information primarily from the ROSCOs, combined with data provided by the DfT and the TOCs.
13. We identified 76 instances¹⁰ of switching between privatization and the end of 2007.¹¹ This amounted to 1,469 vehicles over a period of 12 years. Although the number of vehicles switched in individual instances varied from 1 to 149 vehicles, the mean was only 19 vehicles, showing that switching tends to concern relatively small fleets or parts of fleets.

⁸12 per cent is calculated by taking the rolling stock not retained (7 per cent, which equals 2 plus 4 plus 1 per cent) divided by the rolling stock that was not restricted by a section 54 undertaking or life-expiry (58 per cent, which equals 100 less 31 less 11 per cent).

⁹We consider the extent of new rolling stock introduced since privatization in Section 5 of the main report.

¹⁰This analysis includes two switches that were a result of cascades from the Merseyrail concession.

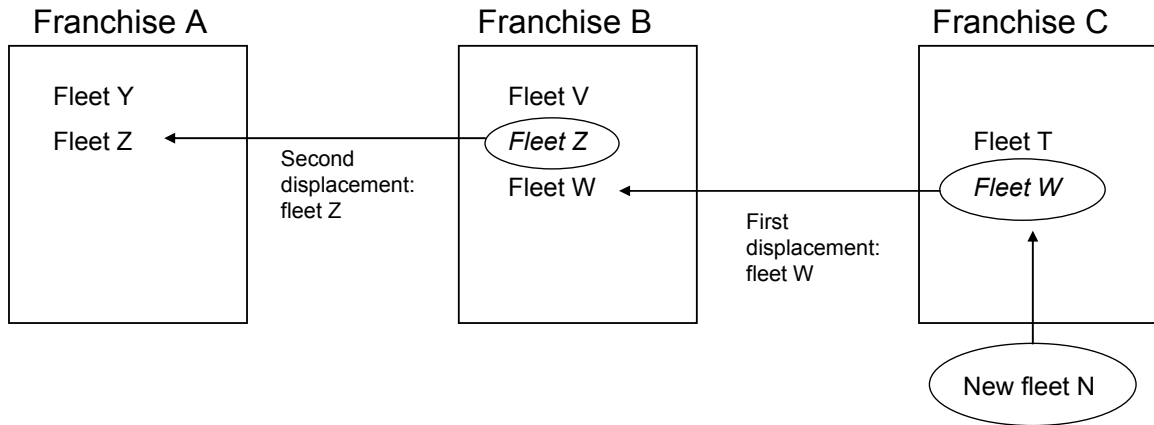
¹¹We consider switching since the start of 2008 in paragraphs 27 and 28.

14. Since privatization, switching of used rolling stock has primarily occurred through the introduction of new rolling stock leading to a cascade of rolling stock. Of the 76 instances of switching we identified between privatization and the end of 2007, 51 instances (covering 1,209 vehicles, 83 per cent of switched vehicles) were caused by the introduction of new rolling stock creating a cascade of used rolling stock. A cascade refers to the total movement of rolling stock between franchises that is brought about by the introduction of new rolling stock on one franchise. The possible impact of the introduction of new rolling stock, including the 'knock-on' displacements that may result, is illustrated in Figure 2. When new rolling stock is introduced on a franchise it may displace some incumbent rolling stock, which we refer to as a first displacement. For example, in Figure 2, the introduction of new fleet N to franchise C leads to fleet W being displaced and moving from franchise C to franchise B. Fleet W in turn displaces fleet Z to franchise A, which represents a second displacement. A cascade will continue until a movement of rolling stock does not trigger a displacement to another franchise because the rolling stock is required to increase service requirements on a franchise or is required to replace retired rolling stock.¹²

¹²Where rolling stock goes temporarily off-lease, the cascade is effectively still in progress. Given periods off-lease and franchise lengths, in some cases there may be several years between the first and last displacement in a cascade. For example, the Mark III rolling stock displaced on the Virgin West Coast and Virgin Cross Country franchises was off-lease for several years before moving to another franchise. This is discussed in more detail in Appendix 6.1.

FIGURE 2

Illustration of a cascade of rolling stock

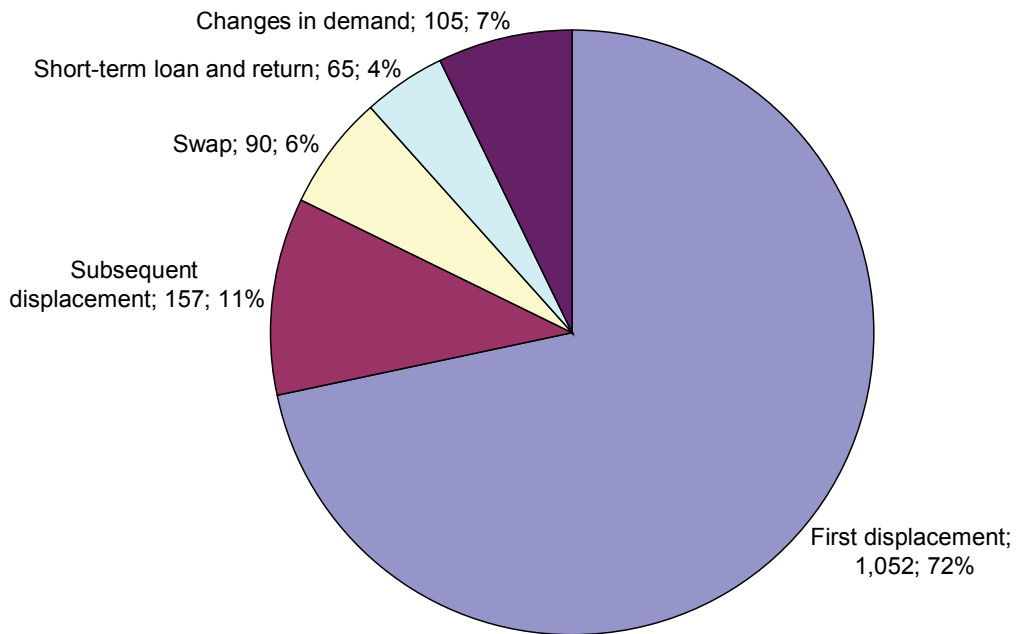


Source: CC analysis.

15. Figure 3 shows that most cascades have only involved one displacement of rolling stock. Subsequent displacements have occurred relatively rarely (covering only 157 vehicles). Figure 3 also provides a breakdown of the other reasons that rolling stock has moved.

FIGURE 3

Reasons for movements of rolling stock since privatization by number of vehicles



Source: CC analysis of ROSCO data.

Note: Labels are number of vehicles and then per cent of total switching.

16. The remaining 25 out of 76 instances (covering 260 vehicles or 17 per cent of switched vehicles, as shown in Figure 3) were other movements of rolling stock as part of swaps or to meet changes in demand and short-term requirements:¹³

(a) *Swaps*. A TOC may take rolling stock from another TOC's franchise and give some rolling stock from its own franchise in exchange. Swaps are relatively infrequent but typically occur because the rolling stock on another franchise may better meet a TOC's operational requirements. They require new lease agreements to be entered into between the relevant TOCs and ROSCOs.

(b) *Changes in demand*. Changes in timetabling requirements may lead to a change

¹³We note that swaps and short-term loans are not usually part of a strategic change in rolling stock requirements and may only be used as a short-term solution to relieve temporary bottlenecks in rolling stock supply.

in demand for rolling stock. As a result, rolling stock is transferred from one franchise to another to satisfy the changes in demand.¹⁴

(c) *Short-term loan and return.* Rolling stock leased to one TOC may be put on a short-term lease with a different TOC with an understanding that the rolling stock will be returned to the current lessee in the future.

17. As opportunities for switching arise at franchise re-let, Table 2 shows that most switching¹⁵ has taken place since 2004 because of the increase in the number of franchise re-lets since that date. Until 2004 the annual level of switching did not exceed 1 per cent of the total rolling stock capacity. Switching has since risen to 3.8 per cent in 2004 and 4.7 per cent in 2007. Figure 4 shows the relationship between the number of vehicles involved in franchise re-lets in each year and the number of vehicles switched in each year.¹⁶ We note that there are relatively few franchise re-lets due in 2008 and 2009.
18. Angel stated that the low level of switching could be explained by the bespoke nature of many fleets, the restraint upon switching created by section 54 undertakings, the large number of new rolling stock fleets which were procured with the aim of servicing one franchise for a considerable period of time, and the incumbent fleet doing its job correctly.

¹⁴As an example, in 2005, some Class 150 rolling stock was transferred from One, where it was not required, to Arriva Trains Wales, which was experiencing growth in demand.

¹⁵We can use Table 2 to calculate that 90 per cent of switching has taken place since 2004.

¹⁶We found that in 64 per cent of switches the physical movement of vehicles took place midway through a franchise. This was almost invariably due to a cascade occurring in consequence of a decision made at the start of the franchise period by the incoming TOC to switch rolling stock. The delay in the physical movement of rolling stock is caused by the time needed to introduce new rolling stock or to wait for alternative used rolling stock to become available.

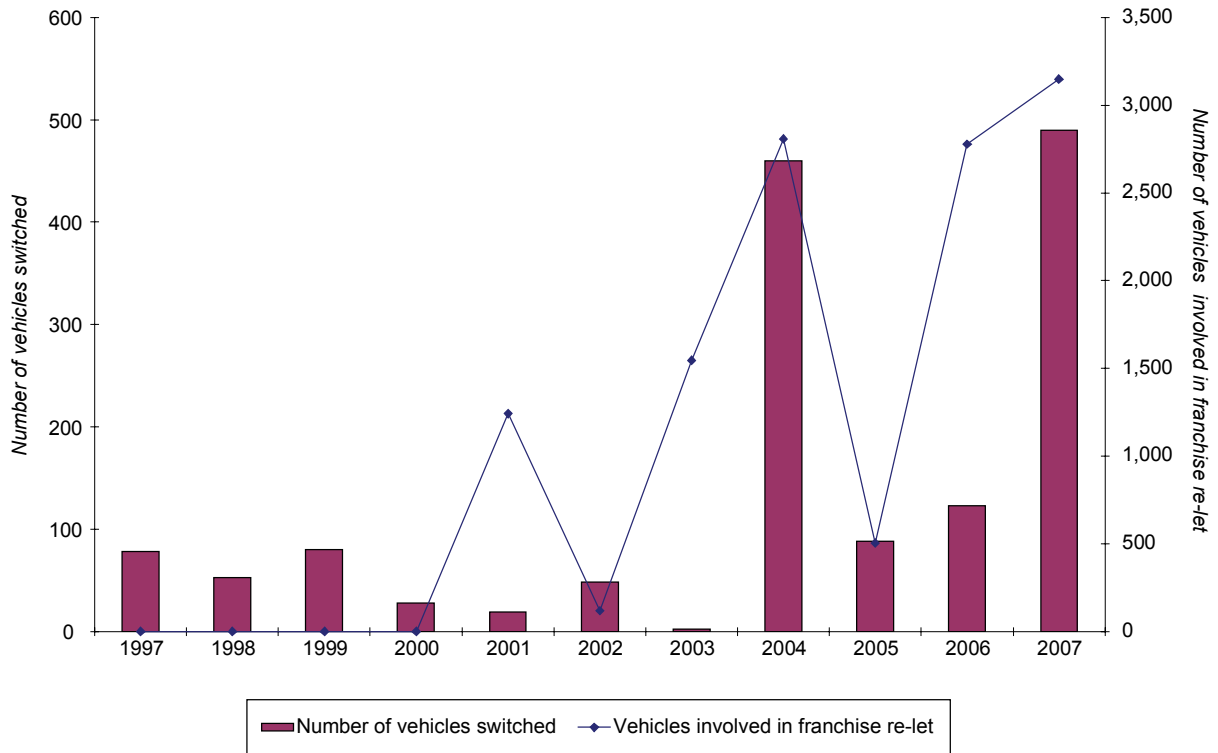
TABLE 2 **Switching between privatization and the end of 2007**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
<i>Instances of switching</i>												
Cascade	0	1	1	4	0	4	1	9	3	6	22	51
Other	<u>3</u>	<u>3</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>5</u>	<u>1</u>	<u>7</u>	<u>25</u>
Total instances of switching	3	4	3	4	2	5	1	10	8	7	29	76
<i>Switched vehicles</i>												
Cascade	0	39	40	28	0	39	2	446	40	115	460	1,209
Other	<u>78</u>	<u>14</u>	<u>40</u>	<u>0</u>	<u>19</u>	<u>9</u>	<u>0</u>	<u>14</u>	<u>48</u>	<u>8</u>	<u>30</u>	<u>260</u>
Total switched vehicles	78	53	80	28	19	48	2	460	88	123	490	1,469
Total capacity	10,718	10,583	10,557	10,517	10,857	11,382	11,800	12,123	11,703	11,725	11,602	
Per cent of total capacity	0.7	0.5	0.8	0.3	0.2	0.4	0.0	3.8	0.8	1.0	4.2	

Source: CC analysis.

FIGURE 4

Switching since privatization by number of vehicles and compared against the number of vehicles involved in franchise re-lets



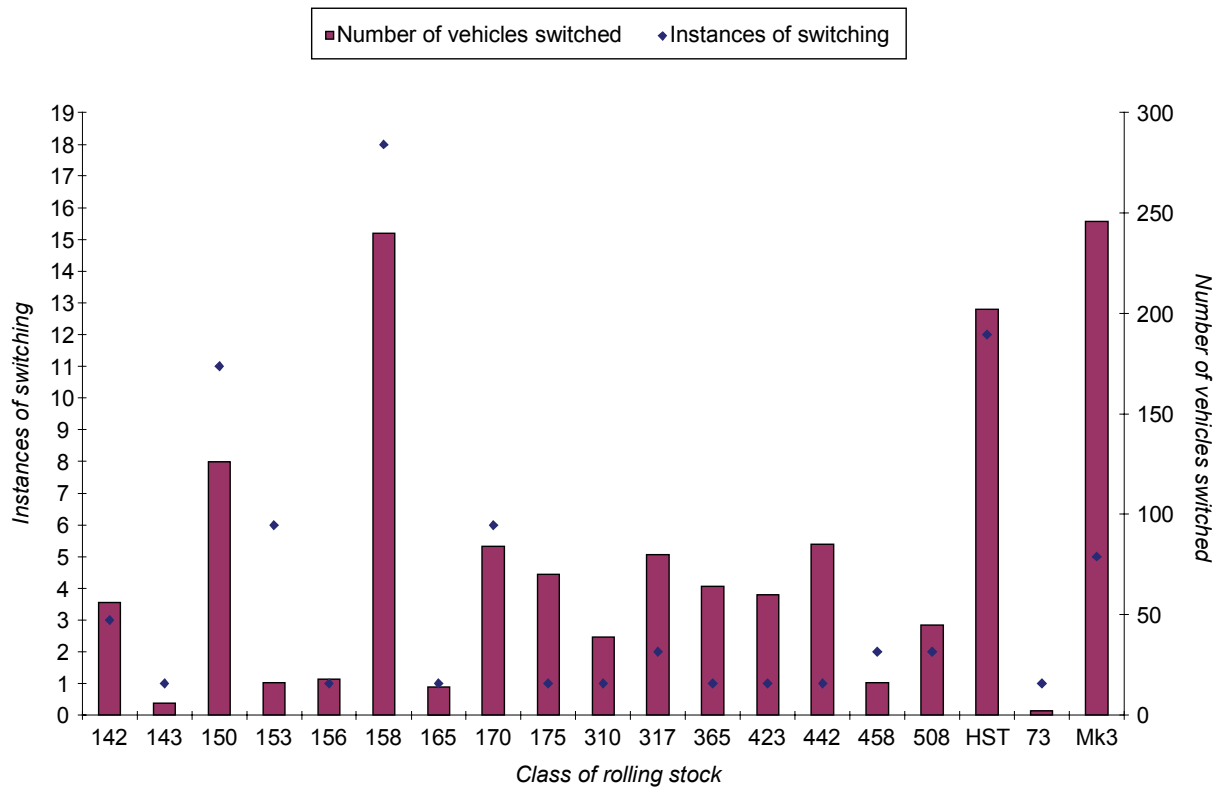
Source: CC analysis of ROSCO data.

Rolling stock classes being switched

19. Figure 5 shows both the instances of switching of each rolling stock class and the number of vehicles that have been switched since privatization.

FIGURE 5

Classes of rolling stock switched since privatization



Source: CC analysis of ROSCO data.

20. Figure 5 shows the 19 classes of used rolling stock involved in switching since privatization.¹⁷ Figure 5 shows that the four most common classes switched in terms of the number of vehicles were Classes 150, 158, HSTs and Mark III coaches. These four classes of rolling stock account for 61 per cent of the 76 instances of switching and 55 per cent in terms of the number of vehicles.

21. The largest displacements in a cascade have included:

- (a) displacement of Mark III coaching stock by Virgin Pendolinos (Class 390s);
- (b) displacement of HSTs by Virgin Voyagers (Class 220s and 221s); and

¹⁷Note that this does not include classes that have been displaced off-lease and not yet been re-leased.

(c) displacement of DMUs (notably Classes 150 and 158) by new Class 170 Turbostars and by Class 185s on TransPennine Express.

22. There has been a much lower level of switching of used EMU rolling stock than for DMUs and loco-hauled rolling stock. This is primarily attributable to the Mark I replacement programme whereby large parts of the EMU fleet have been directly replaced by new rolling stock to meet the requirements of safety legislation.

Switching between ROSCOs

23. Our definition of a switch includes situations where a TOC obtains alternative rolling stock which is owned by the same ROSCO that owned the incumbent rolling stock. We recognize that these switches are not directly relevant to our competitive assessment. Therefore we examined the extent to which switches caused TOCs to lease alternative rolling stock owned by a ROSCO different from the owner of the incumbent rolling stock.
24. Tables 3 and 4 show the extent of switching between ROSCOs. The rows in each table show the ROSCO that owned the rolling stock that was displaced to another franchise. The columns show the ROSCO that owned any incoming rolling stock. So, for example, where Angel's rolling stock has been moved from one franchise to another as a result of Porterbrook's new rolling stock, this appears in Table 3 as one instance of switching in the row for Angel and the column for Porterbrook. The instances of 'no displacement', where rolling stock was not displaced by any incoming rolling stock, relate to the movements caused by short-term loans and changes in demand.

TABLE 3 Instances of switching between ROSCOs since privatization

<i>Instances of switching</i>		<i>Owner of incoming rolling stock</i>					<i>Total</i>	<i>Total switching between ROSCOs</i>
<i>Owner of displaced rolling stock</i>	<i>Angel</i>	<i>HSBC</i>	<i>Porterbrook</i>	<i>Voyager</i>	<i>No displacement</i>	<i>Total</i>		
Angel	6	2	11	2	10	31	15	
HSBC	1	1	1	0	0	3	2	
Porterbrook	6	7	16	5	8	42	18	
Total	13	10	28	7	18	76	35	
Angel (%)	8	3	14	3	13	41		
HSBC (%)	1	1	1	0	0	4		
Porterbrook (%)	8	9	21	7	11	55		

Source: CC analysis.

TABLE 4 Number of vehicles switched between ROSCOs since privatization

<i>Number of vehicles</i>		<i>Owner of incoming rolling stock</i>					<i>Total</i>	<i>Vehicles owned at end 2007</i>	<i>Proportion of vehicles owned that have been switched %</i>
<i>Owner of displaced rolling stock</i>	<i>Angel</i>	<i>HSBC</i>	<i>Porterbrook</i>	<i>Voyager</i>	<i>No displacement</i>	<i>Total</i>			
Angel	86	76	209	23	143	537	4,122	13	
HSBC	60	64	39	0	0	163	3,468	5	
Porterbrook	266	188	147	141	27	769	3,660	21	
Total	412	328	395	164	170	1,469			
Angel (%)	6	5	14	2	10	37			
HSBC (%)	4	4	3	0	0	11			
Porterbrook (%)	18	13	10	10	2	52			

Source: CC analysis.

25. Tables 3 and 4 show that in terms of both number of instances and number of vehicles, Porterbrook has experienced the most displacement of its vehicles to another franchise, with HSBC the least.¹⁸ HSBC has been affected by only three instances of displacement of its used rolling stock to another franchise, compared with 31 for Angel and 42 for Porterbrook. We can set the number of vehicles displaced in the context of total vehicle numbers currently owned by each ROSCO.

¹⁸The extent of these percentages is to a large extent driven by the type of rolling stock that has been displaced by new rolling stock, which is the main reason why Angel and Porterbrook cover so many of the displaced vehicles relative to HSBC. The lesser involvement of HSBC in switching appears related to the fact that at privatization it owned no DMUs and its portfolio was much more heavily weighted towards EMUs, which were directly replaced as part of the Mark I replacement programme. If direct switching as part of the Mark I replacement programme was included here, this would create a different picture, with EMUs owned by HSBC being substantially affected.

Table 4 shows that displaced used rolling stock amounts to 13 per cent of Angel's end 2007 capacity, 5 per cent for HSBC and 21 per cent for Porterbrook.

26. We can use Table 4 to calculate that 23 instances¹⁹ (covering 297 vehicles) involved switching between rolling stock owned by the same ROSCO (for example, from Angel rolling stock to Angel rolling stock), and 18 instances have involved no displacement. Therefore only 35 instances (covering 1,002 vehicles) have involved a switch from one ROSCO to another.

Switching from the start of 2008

27. In addition to the switching set out above, we heard of the following switches that have been agreed since the start of 2008:
- (a) 55 of Angel's 70-vehicle fleet of seven-year old Class 180 Adelantes were returned by First Great Western in 2007 following replacement by HSTs—[redacted] of these vehicles will be displaced to [redacted], leaving [redacted] waiting to be leased.
- (b) Eight of Porterbrook's Class 158 vehicles on the East Midlands franchise have been displaced to Northern as they were surplus to requirements on East Midlands.
28. The DfT's Rolling Stock Plan published in January 2008 included examples of the displacements that it anticipated should take place as a result of the planned introduction of 1,300 additional vehicles to the network in order to meet the objectives of its HLOS. The DfT noted that development of the Rolling Stock Plan with the industry is continuing and that 'the final outcome could well be different'. The Rolling Stock Plan shows a high level of involvement of the DfT in the process of

¹⁹23 instances comprise 6 Angel to Angel, 1 HSBC to HSBC and 16 Porterbrook to Porterbrook.

orchestrating future cascades of rolling stock. In its HLOS Industry Seminar presentation in February 2008, the major cascades proposed were as follows:

- (a) HSBC's 148 Class 321 vehicles, to be displaced from West Midlands by new Class 350s, are proposed to be displaced to C2C, First Capital Connect and National Express East Anglia.
- (b) The introduction of new Class 172s on West Midlands will lead to 72 Class 150 vehicles coming off-lease from West Midlands. The Rolling Stock Plan proposes that these are displaced to First Great Western and Northern.
- (c) Class 323 units could be displaced from Northern to London Midland following a new rolling stock procurement on Northern.
- (d) Class 313 vehicles, to be displaced from London Overground by new Class 378s, are proposed to be moved to First Capital Connect.
- (e) The introduction of Class 172s on London Overground should lead to a number of Class 150 vehicles being displaced to Northern or First Greater Western.

Switching costs

29. In some markets, customers face obstacles to switching between suppliers. The existence of such switching costs can be one factor that affects the level of switching. Switching costs may decrease customers' incentives to search for, or switch to, alternatives that could meet their needs. In this section, we therefore consider the switching costs, by which we mean all of the extra incidental costs of obtaining alternative rolling stock (to replace incumbent rolling stock).

30. TOCs told us about a range of costs that may be incurred when leasing alternative rolling stock (in addition to the cost of the lease for the alternative rolling stock):²⁰
- (a) livery change;
 - (b) interior modifications;
 - (c) route acceptance;
 - (d) staff training;
 - (e) maintenance facilities;
 - (f) risk of introducing different rolling stock on a franchise; and
 - (g) short-term lease premia on incumbent rolling stock.
31. The DfT, TOCs and ROSCOs commented on and in some cases quantified the costs listed in paragraph 30. We identify the circumstances in which a TOC may incur such costs, for example, distinguishing between costs that occur when switching to alternative used and new rolling stock. We also identify which costs are not switching costs because they would be incurred irrespective of whether a franchisee is switching to alternative rolling stock.
32. In assessing switching costs, we noted that the franchise system means that in some cases the TOC that switches to alternative rolling stock may incur the switching cost in its entirety (particularly in the case of new rolling stock) even though future franchisees may benefit from the rolling stock having been moved to that franchise, (assuming that the rolling stock remains best suited to the operational requirements of the franchise).

²⁰We do not consider costs such as conversion to dual voltage as this is relevant for our consideration of substitutes. Here we focus on whether there is a cost to switching to technically and operationally suitable alternatives.

Livery change

33. At the start of a franchise the rolling stock that is used on the franchise will usually need to undergo a livery change in order to fit with the franchisee's branding. Livery changes include repaints or vinyls and changes in signage and logos.²¹ The cost of the livery change is borne by the TOC.
34. Estimates for the costs of livery changes provided by the parties and third parties varied slightly. Angel and HSBC submitted that indicative estimates for these costs were between £[REDACTED] and £[REDACTED] per vehicle and between £[REDACTED] and £[REDACTED] per vehicle respectively. Three TOCs [REDACTED] provided estimates of £2,000 to £12,000 per vehicle, with application of vinyls cheaper than repainting. The DfT stated that a livery change costs £10,000 to £12,000 per vehicle and would take three to four days.
35. Three TOCs [REDACTED] suggested that a livery change was desirable, not essential, and one TOC [REDACTED] stated a livery change may be essential if vehicles need to be coupled together. Angel, HSBC and Porterbrook all considered that this was not an essential switching cost.
36. Where there is a change of franchisee, livery changes are generally required irrespective of switching such that these costs are not unique to switching.²² In contrast, where an incumbent franchisee wins a new franchise the livery change needed for alternative rolling stock will be a switching cost.

²¹Repaints are often conducted as part of a planned maintenance examination in order to minimize the amount of time that the rolling stock is out of service.

²²This will not be the case if the incumbent franchisee wins the franchise re-let.

Interior modifications

37. When a TOC switches to alternative rolling stock it may also require some interior modifications to the alternative rolling stock so that it meets exactly its operational requirements.
38. Most interior modifications are small-scale and tend to include seat coverings, new flooring and internal painting—generally, non-engineering-based modifications that improve the interior of the train and adapt the interior of the train to the TOC's branding.²³
39. Three TOCs ([REDACTED]) submitted costs and these ranged widely from £2,000 to £75,000 per vehicle. HSBC submitted that interior modifications can cost around £[REDACTED] per unit depending on the specification, and Porterbrook gave a cost estimate of £[REDACTED] per vehicle. The DfT stated that small-scale modifications amounted to around £50,000 per vehicle and might take up to 12 months depending on the size of fleet. Depending on the nature of the modification these costs may be incorporated into the capital rental that the TOC pays the ROSCO.
40. We noted that these costs only occur when switching to alternative used rolling stock and not when switching to new rolling stock. These costs are also periodically incurred whether or not a new franchisee chooses to change rolling stock (for example, when the incumbent rolling stock is refurbished). It is therefore not a cost unique to switching.

²³More extensive modifications might cost up to £250,000. However, such extensive modifications relate more to issues of substitutability than switching costs.

Route Acceptance

41. Network Rail's Route Acceptance Process requires specific assessments to confirm the compatibility of rolling stock with the route infrastructure. Successful acceptance is confirmed by means of formal certificates. Rolling stock is restricted in operation to those routes for which certification has been granted.
42. Placing an estimate on the costs of Route Acceptance is difficult because the costs can vary significantly depending on how similar the alternative rolling stock is to the incumbent rolling stock. The more that certain characteristics of the alternative rolling stock (such as weight and structure gauge) differ from those of the incumbent rolling stock, the more extensive are the approval procedures that need completing.
43. Network Rail told us that the Route Acceptance Process cost £100,000 for a relatively standard shape of rolling stock, and £1–£1.5 million for a new class of rolling stock that had not previously been built and tested.²⁴ Network Rail's own guidance states that the process for complete introduction of a new train can take up to three to four years. Network Rail told us that it works in parallel with manufacturing timescales and does not delay vehicle introduction.
44. One TOC [redacted] submitted that it would not switch rolling stock when there was a need for a new Route Acceptance Process.
45. Porterbrook submitted that the Route Acceptance Process is only required in exceptional circumstances, for instance [redacted].

²⁴These costs are a cost per application for Route Acceptance. National Express told the ORR that simple clearance would cost £25,000 to £50,000 compared with £100,000 if complicated.

46. We noted that Route Acceptance costs are only relevant when the class of alternative rolling stock (either used or new) has not been used on the relevant routes in the franchise before (or has not already received Route Acceptance).

Staff training

47. A TOC may need to train staff to operate (and, potentially, maintain) any alternative rolling stock that is of a different class to the rolling stock it currently operates. The DfT suggested that costs and timing were dependent on the scale of switching but it might take up to a year to train staff. Three TOCs commented on these costs providing very wide ranges of cost estimates faced by the TOC:

(a) National Express submitted that there would be a one-off cost of £775,000 for learning how to operate a new train.²⁵

(b) Serco Ned suggested that minimal training was required for maintenance staff when rolling stock was similar to that displaced (£10,000 to £20,000). In the case of crew training, this could be more significant depending upon the number of drivers involved, and could be in the order of one-off costs of £50,000.

(c) Stagecoach submitted that the costs could vary widely, and that the process of staff training could take up to six weeks.

48. We found that staff training is a relevant cost of switching when the TOC switches to a class of rolling stock for which it has no prior experience.

Maintenance facilities

49. Three TOCs [redacted] cited costs of setting up maintenance facilities (for example, holding stocks of different spares) as critical when switching to alternative rolling stock of a

²⁵£775,000 is based on the following—£175 x 2 (driver and relief) x 5 days x 300 drivers + £125 x 2 (conductor and relief) x 5 days x 200 conductors.

type that is not currently operating on the franchise. Porterbrook considered that the costs of establishing maintenance and service support facilities were essential costs if the rolling stock being transferred was different from other rolling stock currently operating on the franchise. The cost and timing of setting up maintenance facilities are highly variable as temporary solutions are also possible. We considered that maintenance facility costs are relevant when a TOC takes on a different class of rolling stock but not if the switch is to alternative rolling stock of the same class of rolling stock already in operation on that franchise.²⁶

Risk of taking on different rolling stock

50. An additional 'cost' of switching to alternative used or new rolling stock is the risk associated with changing rolling stock. If the alternative class of rolling stock either has not been used by a TOC before, or has not been used on the route, then there is a risk that the rolling stock will not perform to the required standards, for instance as a result of difficulties encountered in maintaining the rolling stock to the required level of reliability. This risk may well appear greater than many of the other switching costs above because TOCs must meet the deliverability criteria laid out in franchise specifications, or risk significant financial penalties or loss of the franchise. A TOC may take such risks into account in deciding whether or not to switch to a different class of rolling stock, especially if it is not familiar with such rolling stock from having used it on other franchises or the rolling stock is untested on the franchise. Angel noted that this problem has not prevented switching to new rolling stock notwithstanding that similar difficulties may arise where new rolling stock is introduced.

²⁶For this purpose, different classes may in some cases be regarded as substantially the same. For example, Class 159 trains closely resemble Class 158 trains.

Short-term lease premia

51. Switching to alternative rolling stock that is not available at the franchise start date²⁷ will require the TOC to lease rolling stock (usually the incumbent rolling stock) for the interim period on a short-term lease.²⁸ A price premium (ie above the price of a lease for the length of the franchise) is added to a short-term lease and this may constitute a switching cost.

52. TOCs told us that significant premia may be charged by ROSCOs for short-term leases. Quasar told us that the ROSCOs 'will always charge a premium [on short-term leases] because they understand if they do make a short lease offer, they know what is coming and that they will shortly have to look for a new home for that [rolling] stock'. It added that there have been a 'minority of cases' where it has been unable to negotiate a short-term lease on acceptable terms.

53. Angel and HSBC submitted that higher rentals on short-term leases were required because increased residual value risks²⁹ exceeded the lower credit risks generated by the shorter lease period. Angel submitted that it had tended to apply a sliding scale of rental adjustments based on a [X] lease being [X] per cent higher than an equivalent long-term lease and [X] leases being [X] per cent higher respectively. HSBC commented that any premium on a short-term lease might be offset by the benefit to a TOC of fixing a price on new rolling stock. Porterbrook submitted that it did not necessarily or usually charge a premium on short-term leases. It added that the extent to which a short-term lease premium was charged on a particular lease normally depended on the characteristics of the rolling stock and market conditions.

²⁷For example, new rolling stock that will take time to be built or used rolling stock that is leased on another franchise for a period after the franchise start date.

²⁸We defined a short-term lease as one that lasts for less than the full length of the franchise.

²⁹The rolling stock is secured on lease for a shorter period hence rental incomes are less certain for a greater period in future.

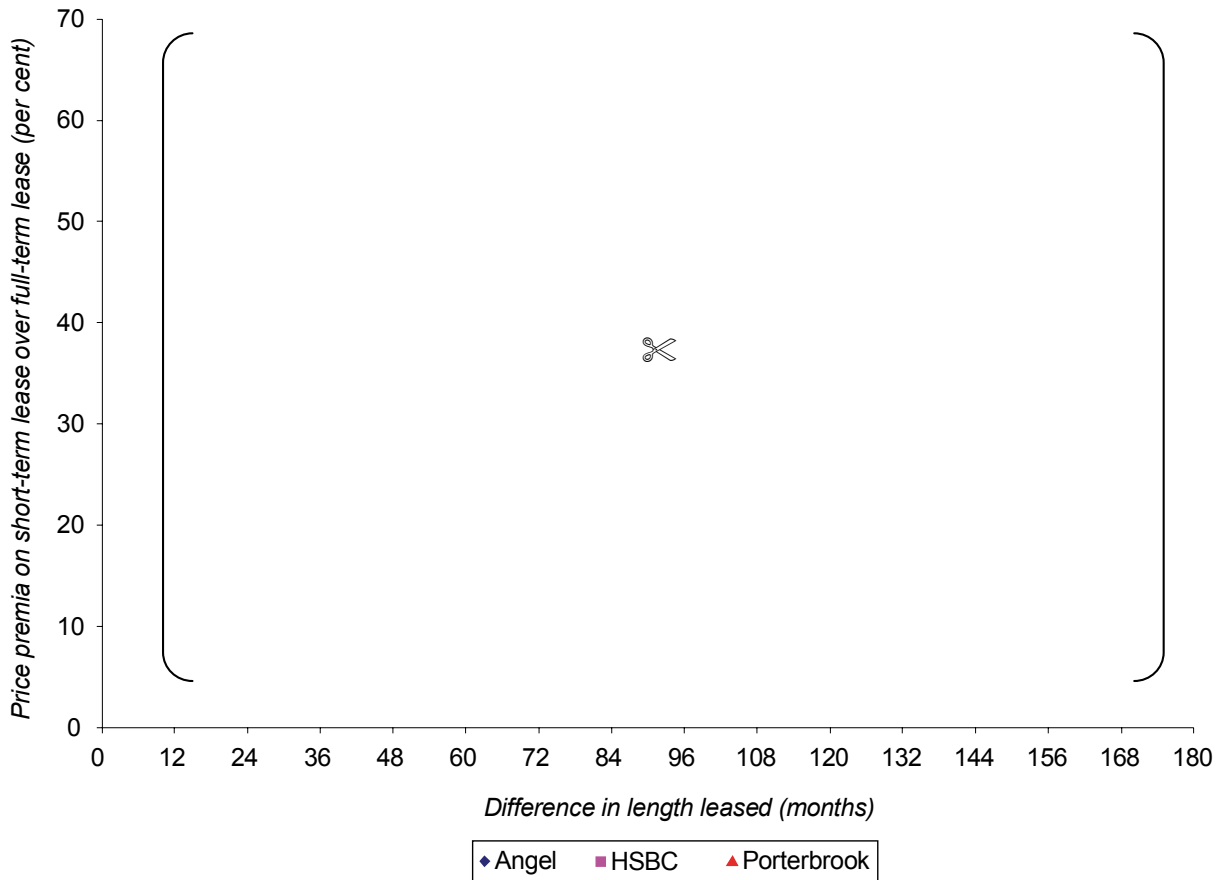
The data which we considered, as shown in Figure 6, showed that Porterbrook had on occasions quoted premia for short-term leases.

54. To assess the extent of premia on short-term leases we compared the available data where a ROSCO has quoted a short-term lease rental and a lease rental for the term of the franchise. We found 38 instances where a quoted short-term lease capital rental and full-term lease capital rental were available on the same fleet of rolling stock.³⁰

³⁰We therefore only compare short-term lease capital rentals and long-term lease capital rentals where they are a like-for-like comparison. Not all the short-term lease premia we examined were contracted as a number were only quotes from the ROSCOs to the TOCs. Porterbrook noted that only three of its ten leases in our data were actually signed. It also added that we had not included some cases where no premium was charged. The example submitted by Porterbrook of an 18-month extension to the Central franchise lease agreements in 2006 did not fit with our definition of a short-term lease as this was a roll-forward of a lease as part of a franchise extension.

FIGURE 6

Premia on short-term leases



Source: CC analysis.

55. Our analysis in Figure 6 shows the wide variation in short-term lease premia. It illustrates that premia of up to 60 per cent has been applied on some short-term leases and often a premium of between 5 and 30 per cent. The short-term lease premium generally increases in relation to the extent that the lease is shorter than the full franchise term.³¹

³¹We noted that the data set may not include all short-term lease offers made since privatization but that this would not alter the finding that many short-term leases have a premium attached that acts as a switching cost.

56. We noted that in some cases the ROSCOs have used short-term premia to deter switching. [REDACTED]³²

Summary of switching costs

57. We found that switching costs vary considerably depending on the circumstances involved. Table 5 summarizes the costs of switching, setting out the estimated cost and timing and the circumstances in which the costs may be incurred.

³²[REDACTED]

TABLE 5 Analysis of switching costs

<i>Switching cost</i>	<i>Estimated cost per vehicle</i>	<i>Estimated fixed cost</i>	<i>Timing*</i>	<i>Circumstances in which costs are incurred</i>
Livery change	£10,000	N/A	Less than a week	Incurred where there is a change of franchisee irrespective of whether the incoming TOC changes rolling stock. But if incumbent franchisee is awarded the new franchise, there is a potential switching cost associated with livery change on alternative vehicles.
Interior modifications	Up to £75,000	N/A	Up to two years	Cost may be incurred irrespective of whether switching rolling stock.
Route Acceptance	N/A	£100,000	Up to a year	Necessary if switch to different class of rolling stock without Route Acceptance.
Staff training	N/A	Varies widely	Up to a year	Necessary if switch to different class of rolling stock which TOC has not used before.
Maintenance facilities	N/A	Highly variable as temporary solutions are possible	Highly variable as temporary solutions are possible	Necessary when switching to a different class of rolling stock.
Risk of introducing different rolling stock	N/A	N/A	N/A	Relevant if switch to a different class of rolling stock which has not been used on a route before and/or which TOC has not used before.
Short-term premia	Up to 60 per cent of monthly capital rental	N/A	N/A	Incurred when leases do not coterminate and a short-term lease is required.

Source: CC analysis of TOC and ROSCO responses to the CC's questionnaire.

*Timing based on the DfT's estimates.

Note: N/A means not applicable.