Potential competition

Introduction and summary

1. This appendix begins by considering Hertfordshire in terms of the provision of bus services and assessing the relative importance of the current providers across the county and in individual districts. Second, entry and expansion are considered. Third, possible barriers to entry in the provision of bus services in Hertfordshire are analysed.

2. The main points are:

   (a) Hertfordshire appears not to be attractive territory for bus operators, with high car ownership and decreasing bus usage.

   (b) The main bus operators in Hertfordshire are Arriva, followed by Sovereign, Universitybus, Centrebus and Metroline. There are also several smaller operators. In certain districts, some smaller bus operators have a significant presence, for example Transit Group in Stevenage.

   (c) We identify several possible barriers to entry. After consideration, the main ones appear to be:

   - lack of depot facilities that can be rented or built at a reasonable cost;
   - network effects, including network ticketing products, economies of scale and the ability to redeploy buses from different depots; and
   - the possible threat of predation or retaliation.

Bus services in Hertfordshire

3. Several submissions have pointed out that Hertfordshire is not 'good bus territory'. One reason given for this is the relatively high level of car ownership which reduces the size of the group of potential bus users. As shown in Table 1, in the districts of Hertfordshire, between 13 and 23 per cent of households do not have a car and HCC's web site notes that Hertfordshire has the fourth highest car ownership in Great Britain.[1] However, car ownership levels for Great Britain are impacted by lower ownership levels in London and other built up metropolitan areas.[2]

[1]www.hertsdirect.org/roadtrans/hertstransdirect/background/.
[2]Transport Statistics Bulletin Revised July 2004, the Department for Transport (page 12).

TABLE 1 **Percentage of households without a car or van, 2001**

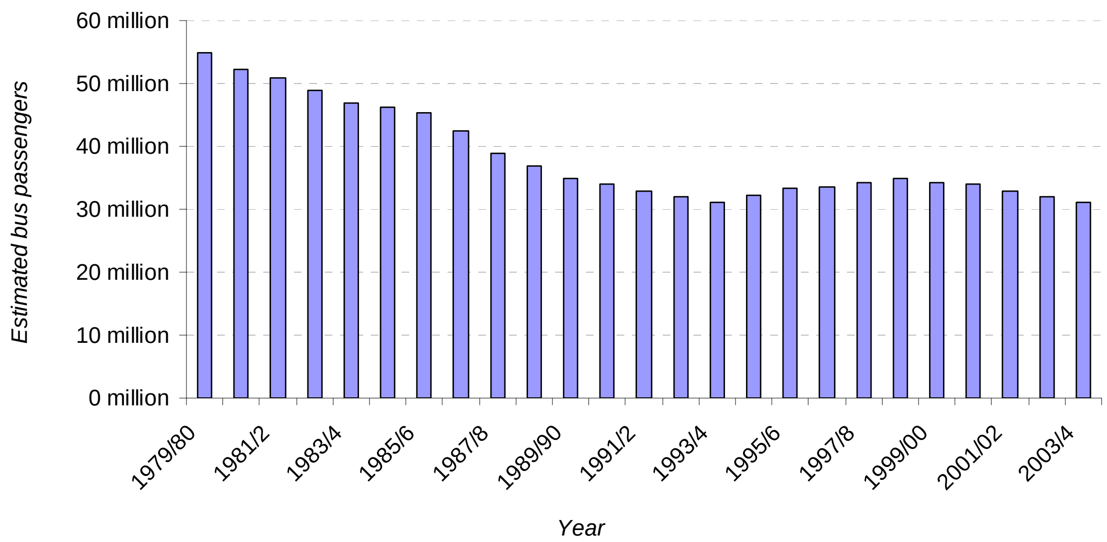
Districts	*%*
Stevenage	23.4
Watford	21.0
Welwyn Hatfield	20.6
North Hertfordshire	18.9
Hertsmere	17.6
Dacorum	17.3
Broxbourne	17.1
Three Rivers	16.2
St Albans	14.8
East Hertfordshire	13.5
Hertfordshire	**17.7**

Source: Census 2001, Office for National Statistics.

4. In general, submissions received indicate that the individual Hertfordshire towns appear to be relatively car-friendly, with parking available at reasonable rates and congestion only seriously affecting a few centres. The use of buses has decreased significantly in Hertfordshire as shown in Figure 1; a similar pattern has taken place in other parts of the UK.

FIGURE 1

Passenger bus journeys in Hertfordshire



Source: HCC.

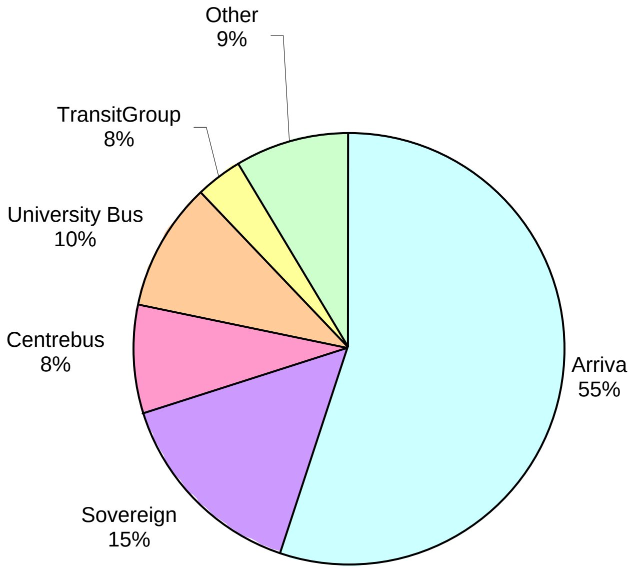
5. One consequence of this situation is that the number of potential bus users in Hertfordshire may be too small to attract other significant operators. FirstGroup told us that it found Hertfordshire unattractive in that it required the ‘provision of provincial services with high wage and other operational costs [which] means that profitability is likely to be lower than other areas where we might get better investment returns’.

Main bus operators in Hertfordshire

6. As shown in Figure 2, Arriva is currently the largest operator over Hertfordshire as a whole, with a share of 55 per cent of commercial services. The next largest operator is Sovereign, with a 15 per cent share. The remaining bus services are provided by Universitybus and Centrebus with shares of 10 and 8 per cent respectively and other smaller players making up the remaining 12 per cent. Amongst these TransitGroup accounts for 3 per cent of the total.

FIGURE 2

Shares of commercial bus services in Hertfordshire, 2004



Source: CC, based on HCC elderly and disabled concessionary fares mileage, period 1, 2004/05 (from 28/3/2004 to 24/4/2004).

7. These shares are calculated on the basis of the number of miles operated by different companies over a period of time. As such, they are more a measure of capacity, albeit an imperfect one, than demand.

8. HCC also provided us with provisional shares of commercial services for a more recent period (see paragraph 18). These indicate an increase in Universitybus's share, and a marginal decline in Centrebus's share.

9. According to figures provided by Arriva for August 2004, the presence at the individual town level is more varied, as shown in Table 2.

TABLE 2 **Shares of commercial services by towns with overlaps, August 2004**

per cent

	Hemel Hempstead	*St Albans*	*Hatfield*	*Welwyn Garden City*	*Stevenage*	*Hitchin*
Arriva	81	19	10	13	53	78
Sovereign	15	18	37	68	18	5
Arriva + Sovereign	**96**	**37**	**47**	**81**	**71**	**83**
Transit Group	-	-	-	-	29	-
Centrebus	4	39	6	9	-	-
Metroline	-	8	-	-	-	-
Universitybus	-	16	47	10	-	-
Other	0	0	0	0	0	17

Source: Arriva.

Note: Centrebus includes LQT.

10. Arriva's share ranges from 10 to 81 per cent in the towns where there are overlap routes. These shares will increase post-merger to between 37 and 96 per cent. Other bus operators account for a relatively high share of bus services in some of the towns in Hertfordshire. Three operators in particular have sizeable shares: Universitybus, Centrebus and Transit Group. They appeared to have developed to their current size in different ways.

11. Universitybus accounts for nearly half of all commercial services in Hatfield and accounts for 10 and 16 per cent respectively in Welwyn and St Albans. It currently operates some 50 buses from its depot in Hatfield which has a total capacity of around 80 vehicles. It currently operates 16 routes. Of these, 11 are tendered routes, five of which are school contracts, one route is part commercial and part tendered and the remaining four routes are commercial. Universitybus told us that its funding comes from the University, which charges it an arm's-length rate of interest. The current Chairman of its board is also the University's Finance Director. Universitybus's revenue comes in part from the University, which subsidizes the fares paid by students, although services are open to all bus passengers and some are run outside term time; students represent between 18 and 22 per cent of Universitybus passengers on an annual basis. The University generally asks Universitybus how it can serve the areas that are important to it and Universitybus develops a proposal to suit those catchments. Universitybus told us that, before awarding contracts, the University does a limited degree of market testing, in that it may look at fares of other operators.

12. Centrebus's share is highest in St Albans, where, after taking over Sovereign's operations, it has 39 per cent of services; the shares of Centrebus in Hemel Hempstead, Hatfield and Welwyn range between 4 and 9 per cent. Centrebus has two fully-owned subsidiaries: Lutonian Buses and LQT. Across Hertfordshire it operates about 30 vehicles. Centrebus explained at its hearing how it had grown through acquisition (see paragraph 37).

13. Over Hertfordshire as a whole Transit Group's share is lower than Sovereign's or Universitybus's but it has a 29 per cent share in Stevenage. It has recently expanded its services in Stevenage, where it has rebranded itself as Stevenage Link and operates between 10 and 14 buses. It competes on several routes against Arriva, whose services it regards as poor and unreliable. Transit Group charges a flat fare of £1 single (£1.40 return) on all its services. It told us that it intended further expansion and had been looking for a suitable depot for some time. It has a total of 40 vehicles across its operations.

14. Metroline is a wholly-owned subsidiary of ComfortDelgro Corporation, based in Singapore, which acquired the company in 2000. Metroline's principal business is the provision of bus services under contract to London Buses, operating through an area that extends from north to west London and includes central London and the City. In Hertfordshire it operates one commercial route, one part-commercial part-tendered route and four tendered routes from two depots: one in Potters Bar and one in Edgware. It operates a total of 29 vehicles in Hertfordshire.

15. Sullivan Buses was established in 1999 for rail replacement services. This type of business still forms the bulk of Sullivan's operations accounting for two-thirds of its revenue. It has 40 buses. It currently focuses on tendered services after trying and failing to establish a commercial route in Watford which lasted for two and a half years.

16. There are also other smaller operators in Hertfordshire, such as Regal Busways and Richmond's Coaches. However, Richmond's Coaches only operates tendered services, and in general the smaller operators appear to focus on tendered services.

17. HCC provided us with shares of the supply of commercial bus services by district, which are reproduced in Table 3.

TABLE 3 **Shares, HHIs and increments by district, period 1, 2004 (from 28/3/2004 to 24/4/2004)**

	Shares									
Districts	*Arriva*	*Sovereign*	*A+S*	*Centrebus*	*University Bus*	*Transit Group*	*Other*	*HHI pre-merger*	*HHI post-merger*	*HHI increment*
Broxbourne	82	0	**82**	0	3	0	16	**6,657**	6,657	**0**
Dacorum	87	8	**95**	4	0	0	1	**7,607**	9,008	**1,401**
East Herts	71	0	**71**	0	3	0	26	**5,044**	5,044	**0**
Hertsmere	14	0	**14**	1	45	0	41	**2,190**	2,190	**0**
North Herts	73	9	**82**	5	0	3	10	**5,432**	6,709	**1,277**
StAlbans	21	17	**38**	42	13	0	8	**2,620**	3,325	**705**
Stevenage	56	23	**80**	0	0	19	1	**4,095**	6,718	**2,623**
Three Rivers	97	0	**97**	1	0	0	1	**9,502**	9,502	**0**
Watford	89	0	**89**	5	3	0	3	**7,918**	7,918	**0**
Welwyn Hatfield	10	51	**61**	4	34	0	2	**3,865**	4,849	**983**
Total Herts	55	15	**70**	8	10	3	9	**3,452**	5,102	**1,650**

Source: CC, based on HCC elderly and disabled concessionary fares mileage, period 1, 2004/05 (from 28/3/2004 to 24/4/2004).

Note: The HHIs are calculated on the basis of shares of the named operators excluding the shares of other (ie ignoring the 'other' column), so they are certainly below the actual HHIs. HHI increments and shares may not add up to 100 or the stated totals because of rounding.

18. Shares in Table 3 were calculated by HCC over a four-week period in order to avoid any problems linked with registration and de-registration of routes.[3] Table 3 shows that Arriva has shares between 56 and 97 per cent in all districts apart from St Albans, Hertsmere and Welwyn–Hatfield. The merger would significantly increase Arriva's shares in all districts where Sovereign operates, and particularly in Stevenage, Welwyn–Hatfield and St Albans. In terms of HHI,[4] all districts are very concentrated and in all districts where Sovereign currently operates the merger would lead to very significant increments in the HHI, with the highest increment occurring in Stevenage.[5] In Stevenage the importance of Transit Group is signifi-

[3]Given that routes can be frequently registered and de-registered, shares calculated at one point in time may be affected by routes that are only operated for a short period of time if at all.
[4]The Herfindahl-Hirschman Index of concentration (HHI) is obtained by summing the squares of the shares of all firms in the market.
[5]The CC *Guidelines on Merger References*, in line with OFT guidelines, regard any market with an HHI in excess of 1,800 as 'highly concentrated' and state that in a highly concentrated market, a merger which increases the HHI by more than 50 may

cantly lower with 19 per cent, compared with a market share of 29 per cent in Table 2. This figure seems more in line with Transit's own perception (expressed at the hearing), which is to represent between 15 and 20 per cent of Stevenage bus passengers. However, HCC also supplied to us figures for the period from 12/9/04 to 9/10/04. According to HCC, these figures, although provisional, indicate some of the more recent changes such as Transit's expansion in Stevenage, where for this period it had 26 per cent, and Universitybus's expansion, which led to an increase in its market share in Hertfordshire to 13 per cent. We also note that Centrebus's share of Hertfordshire has decreased marginally from 9 to 8 per cent. We were also informed by Arriva of further deregistration and registration of services by Transit following this period.

19. We have calculated these shares for previous years on the basis of HCC data. For each year figures are calculated for the same four-week period. These are reproduced in Table 4.

give rise to potential competition concerns. The Guidelines also state that the CC will have regard to these thresholds only as one factor in its wider assessment of competition.

TABLE 4 **Shares of commercial services by district, 2001 to 2004**

	2001/2002			*2002/2003*			*2003/2004*			*2004/2005*		
District	*Arriva*	*Sovereign*	*Other*	*Arriva*	*Sovereign*	*Other*	*Arriva*	*Sovereign*	*Other*	*Arriva*	*Sovereign*	*Other*
Broxbourne	75	0	25	70	0	30	72	0	28	82	0	18
Dacorum	87	8	5	83	7	10	89	8	3	87	8	5
East Herts	64	0	36	65	0	35	59	0	41	71	0	29
Hertsmere	14	6	80	13	7	81	13	4	83	14	0	86
North Herts	78	8	14	73	9	18	73	10	17	73	9	18
StAlbans	21	53	26	20	50	30	22	48	30	21	17	62
Stevenage	58	23	19	54	23	23	53	21	26	56	23	20
Three Rivers	99	0	1	97	0	3	96	0	4	97	0	3
Watford	94	0	6	92	0	8	90	1	9	89	0	11
Welwyn Hatfield	11	55	34	9	54	37	9	54	37	10	51	39
Total Herts	56	21	24	53	21	27	53	20	27	55	15	30

Source: CC, based on HCC elderly and disabled concessionary fares mileages, period 1, 2001–04 (the exact period varies by a few days across years but always broadly covers the first four weeks in April).

Note: Shares may not add up to 100 because of rounding.

20. These figures show that over the past four years shares have fluctuated to some degree. Arriva's share of services in Hertfordshire as a whole decreased between 2001 and 2002 but increased in 2004 to a level comparable to 2001. Sovereign's share has decreased reflecting the sale of its St Albans operations. The individual districts have seen more marked changes over the past four years. In Stevenage, Sovereign's share has remained broadly stable, while Arriva's share has fluctuated and is in 2004 two percentage points below its 2001 share. Other operators in Stevenage have seen their shares increasing marginally from 19 to 20 per cent. Arriva also significantly increased its presence in Broxbourne and East Herts, while Arriva's share has decreased in Watford and North Herts. Apart from St Albans, where Sovereign sold its operations, the most significant reductions in Sovereign's shares happened in Hertsmere and Welwyn–Hatfield. As for the operators included in the 'other' column, Universitybus's share in Hertfordshire grew by one percentage point to 9 per cent, mainly from growth in Hertsmere and Welwyn–Hatfield. It is difficult to assess growth by Centrebus as its figures are affected by significant acquisitions over the period of time considered.

21. HCC provided us with similar figures for commercial and tendered services. These are reproduced in Table 5.

TABLE 5 **Shares of commercial and tendered services by district, 2002 to 2004**

	2002			*2003*			*2004*		
District	*Arriva*	*Sovereign*	*Other*	*Arriva*	*Sovereign*	*Other*	*Arriva*	*Sovereign*	*Other*
Broxbourne	64	0	36	63	0	37	72	0	28
Dacorum	80	6	14	80	6	14	77	5	18
East Herts	54	0	46	60	3	36*	61	4	35
Hertsmere	30	3	67	31	2	67	33	0	67
North Herts	70	10	20	70	10	14*	67	7	26
StAlbans	22	51	27	21	49	30	18	13	69
Stevenage	54	23	23	55	23	22	58	25	17
Three Rivers	74	0	26	74	1	25	75	0	25
Watford	79	1	20	76	2	22	75	0	25
Welwyn Hatfield	8	51	41	8	52	39*	8	50	42
Total Herts	51	17	32	51	17	32	51	12	37

Source: HCC elderly and disabled concessionary fares mileages, period 1, 2002–04 (the exact period varies by a few days across years but always broadly covers the first four weeks in April).

*Shares for 2003 do not add up to 100.

22. The figures in Table 5 show how Arriva's share of commercial and tendered services has remained constant in the past three years. However, Arriva pointed out that its share was 56 per cent in 2000 and 53 per cent in 2001 so its share was currently lower than five years ago.

23. Tendered services appear to be supplied by a greater number of providers than commercial services. Arriva submitted the following shares of tendered services for the towns where they overlap with Sovereign.

TABLE 6 **Shares of tendered services by towns with overlaps, August 2004**

per cent

	Hemel Hempstead	*St Albans*	*Hatfield*	*Welwyn Garden City*	*Stevenage*	*Hitchin*
Arriva	66	13	-	-	73	55
Sovereign	2	9	58	38	20	9
Arriva + Sovereign	**68**	**22**	**58**	**38**	**93**	**64**
Centrebus	10	16	-	-	-	23
Universitybus	3	23	41	42	-	
Other	19	39	1	20	7	13

Source: Arriva main submission to the CC, Annex 23.

24. Shares for tendered services are generally lower for Arriva and Sovereign compared with commercial services—see Table 2. In addition to the operators mentioned in Table 6, other players involved in the provision of tendered services include: Sullivan, Metroline, RegalBusways, Trustline and others (see Appendix G for further details on the bidding for tendered services in Hertfordshire).

Ticketing and fares

25. Arriva stated that it saw itself as competing with private transport, in particular the car. It also stated that in this process fares were not irrelevant but they were far from being the most important consideration in any customer's choice of transport mode. Arriva stated that customers tended to take the first bus that took them to their destination.

26. Sovereign stated that passengers would normally catch the first bus that arrived at their bus stop which would take them to their destination; unless that bus will have a significantly slower journey time than a following one, or where there is a significant price differential (at least 10p), or where the customer is in possession of a pre-paid ticket valid only on another operator's service.

27. Both Arriva and Sovereign stated that they had sought to simplify their ticket offering in recent years. Single and return tickets are the most popular tickets used (see Figure 3 for Arriva's customers). In addition to these tickets, Arriva offers multi-journey and zonal tickets that can be used on a number of different services provided by the operator (see also paragraph 80 and following) depending upon the type of ticket bought. These can vary across areas. For example, the Arriva 'Stevenage and North Herts Day Rover' costs £4.20 (£3.20 concessions[6]) and allows travel within and across these areas, and is also valid on route 100/101 to Luton. The Stevenage zone day ticket is £3.20 adult, £1.90 concession and the North Herts zone day ticket is £3.40 adult, £2.00 concession; Arriva told us that these two tickets combined sold more than the Stevenage and North Herts Day Rover. Sovereign also offers ten-journey tickets (costing five times the day return) and a seven-day ticket (costing 4.5 times the day return), which are route-specific. Sovereign does not offer 'zonal' tickets. Both Universitybus and Centrebus offer tickets that allow travelling on more than one of their services. These tickets represent around 10 per cent of each operator's total on-bus revenue.

28. Different operators offering services that overlap may charge different fares on these services. Arriva has stated that entrants on its routes tend to charge lower fares than the ones charged by Arriva.

[6] These are rates set independently by the private operators.

29. Arriva and Sovereign both referred to annual price increases. Arriva stated that 'The intention of the company is to increase fares once per year on a rolling basis across each depot to produce the revenue increase in the budget. This policy is subject to review depending upon market conditions and the company's financial performance'. In practice, price increases are implemented yearly subject to review of market conditions specific to particular routes or areas. This translates generally into yearly price increases above the RPI in order to provide an overall increase in the commercial on-bus revenue also above the RPI. Arriva noted that staff costs represented a significant proportion of its costs and that staff costs had risen faster than the increase in the RPI in 2002, 2003 and 2004.

30. Sovereign stated that generally its fares were directly related to the distance travelled, but because specific market conditions might vary, not all fares on all services were priced on an equal rate per mile. In August 2004 Sovereign implemented a general fares increase of around 5 per cent on all routes.

31. Arriva referred to an average fare of £1.10 for its services and said that in general its fares tended to be slightly higher than competitors' but the relative position varied on the flows where its services overlapped with Sovereign's. Arriva stated that it was unable to adduce any clear pattern on pricing between Arriva and Sovereign. This was due, according to Arriva, to limited actual overlap and also to the nature of bus competition that there will be limited fare competition. Sovereign also did not see a clear pattern of relative pricing between Arriva and Sovereign.

Service quality

32. HCC commissioned in 2002 a Service and Quality Monitoring Report. The report analysed various quality variables for different operators. These included an assessment of drivers' customer care, driving standard and appearance, as well as an assessment of exterior and interior vehicle conditions. The following table reports a summary of the findings for ATS and Sovereign.

TABLE 7 **Service and Quality Report for Arriva and Sovereign**

percentage of grades

Operator	*Customer care*	*Driving standard*	*Driver uniform and appearance*	*Total driver*	*Exterior vehicle condition*	*Interior vehicle condition*	*Total vehicle*
ATS	57	58	64	**60**	56	64	**60**
Sovereign	54	46	57	**52**	63	59	**61**

Source: Service and Quality Monitoring Report 2002.

33. The table shows similar overall scores for ATS and Sovereign in 2002: Sovereign scored less on its drivers' driving standard, appearance, interior vehicle condition and customer care but more on the exterior condition of its vehicles. Other operators surveyed included Transit Group and Centrebus (Lutonian). These had lower ratings for vehicle appearance than ATS and Sovereign but they were broadly in line with AEHE. Similarly Centrebus and Transit Group had lower scores than Sovereign and Arriva (ATS and AEHE having similar scores) for their drivers' uniform and appearance while all operators scored similarly for customer care. In terms of reliability of services, Transit Group and ATS both tended to have high scores while Sovereign and Centrebus had more buses leaving and arriving late.

Entry and expansion

34. Arriva provided us with a list of main new service registrations by other operators in Hertfordshire over the last five years. It listed 65 entries until 26 August 2004, including school services as well as revisions to existing services. Some of the new routes replaced other services. Sovereign listed ten new entrants into Hertfordshire in the last five years.

35. For present purposes, entry is defined as the establishment of bus service operations in Hertfordshire. This does not cover the establishment of new routes by existing providers. This could be considered entry into narrowly defined (point-to-point) markets, but in this case will be referred to as expansion.

36. We have tried to assess the extent of actual entry in Hertfordshire during the past five years by limiting our attention to bus service operators and avoiding mere changes in routes. We have considered as current bus operators only those listed in the Intalink network map, which includes bus operators that are not members of the Intalink Partnership. According to our analysis, entry in the last five years in Hertfordshire by companies that are still active is shown in Table 8.

TABLE 8 **Current operators* that entered Hertfordshire during the past five years**

		Set up date	*Services currently run in Hertfordshire*	*Size in Hertfordshire (shares of commercial and tendered services)*	*Number of buses/operating discs*
Olympian Coaches		-	Commercial only	1 school route (<0.1%)	
Centrebus	Centrebus Lutonian In Motion	2002 † 2002	Tendered and Commercial	8% of commercial mileage (9%)	30 buses in Hertfordshire
Grant Palmer		2000	Tendered only	Part of one route under contract from Bedfordshire County Council (<0.1%)	
Transit Group		2002	Commercial only	3% of commercial mileage (< 2%)	10–14 buses in Stevenage
Trustline		-	Tendered and Commercial	2 commercial and 9 tendered routes (< 2%)	15 operating discs‡
Local Link–Centra group		2002	Tendered and Commercial	13 commercial and tendered routes—none for HCC—of limited mileage (about 0.1%)	15 operating discs‡
Excel–Stephensons coaches		2003	Tendered and Commercial	3 commercial and 12 tendered routes (2%)	15 operating discs‡
Regal Busways		2002	Tendered and Commercial	1 commercial and four tendered services (0.2%)	Operates 3 buses from Essex
Carousel Buses		2002	Tendered only	1 tendered route (about 0.3%)	

Source: CC based on HCC data on commercial and tendered mileage, period 1, 2004/05 (from 28/3/2004 to 24/4/2004) and information provided by the parties.

*Included in the May 2004 Intalink Network Map as a bus operator in Hertfordshire (this does not include express coach services and journeys that operate solely on schooldays).
†Acquired by Centrebus in 2004.
‡Information provided by Arriva.

37. Centrebus told us that its company was of very recent origin, having been established only two years ago. The current management consists for the most part of former Arriva employees. Centrebus has grown rapidly through acquisitions during the past two years and stated at its hearing that ‘we now operate approximately 40 vehicles in Leicester and Leicestershire. We operate probably about 30 in Hertfordshire and the remainder would be about another 35 in the Luton, Dunstable and Bedfordshire areas. So we have three basic operating bases, one in St Albans, one in Luton and we have a small outstation in Dunstable’.

38. Transit Group has been operating in Stevenage for the past two years. It competes against Arriva on several routes and recently introduced new services competing against Sovereign’s routes in Stevenage and elsewhere, some of which were

subsequently deregistered. Its fares in Stevenage are lower than Arriva's and Sovereign's. It currently operates 10–14 vehicles in Stevenage, and 35 vehicles, plus five spare vehicles, for the total of its operations. Transit stated at its hearing that it intended to expand its operations and had been looking for a suitable depot for some time in order to do so.

39. Arriva stated that Olympian Coaches entered the school contract market in 1999. Arriva also stated that in 2002 there were four significant new entrants to the local bus market in the area where Arriva operated. These were: In Motion (a trading name for LQT, which is owned by Centrebus); Carousel Buses Ltd; Localink Bus Services; and Regal Busways.

40. Carousel primarily operates in High Wycombe and is currently present in Hertfordshire only with a section of a tendered route from Watford to Chesham. Arriva stated that Locallink (owned by Centra), which Arriva said introduced one commercial service in Harlow in November 2002, competed with Arriva on one commercial route between Harlow and Stansted and had won HCC tenders against Arriva. Finally, Regal Busways commented that it did not see itself as a significant entrant given that it only owned 12 buses in total. In Hertfordshire it currently operates four tendered and one commercial route around Waltham Cross with a total of three vehicles (one of which only operates at weekends) from a depot in Essex.

Entry strategies

41. According to Arriva, 'new entrants to the market invariably commence by operating local authority contracted services'. Buses used for school services, for example, can be made available outside school transport hours or outside term time to enter other routes on a marginal cost basis.

42. There may be limits to the ability of firms to move from the provision of tendered services to commercial ones. As discussed above, many smaller operators are only marginally involved in commercial services. This could be due to the existence of barriers specific to commercial services (see paragraph 57 and following).

43. The HCC concessionary schemes can be seen as encouraging entry into commercial services. The revenue from the scheme is distributed to bus operators based on the mileage registered. Consequently, when an operator is deciding whether to establish a commercial service, it knows that it can count on a certain amount of revenue on that route even before any passenger has been carried. However, the amount of revenue distributed by this scheme is fixed (eg £1 million a year in Stevenage, according to HCC) and may provide only limited encouragement to potential entrants. In Stevenage, where concessionary fare payment is higher than in other parts of Hertfordshire, Arriva noted that the payment for daytime services (it is lower for evening services) was 50p per mile registered, which is almost a third of the average cost of operating a relatively modern vehicle. This, in Arriva's view, is not a limited amount.

Hypothetical entry plan described by Arriva

44. Arriva presented a hypothetical entry plan for a potential competitor and stated that this plan showed how easy and sustainable it would be to enter a profitable commercial route in Hertfordshire. The plan presented by Arriva considers a hypothetical route in Hertfordshire where an incumbent is operating with a frequency of six buses an hour. The new entrant will operate three buses an hour and schedule its services so that they reach the bus stop immediately before the incumbent's

buses. In this way the entrant will capture between 30 and 40 per cent of the market. Arriva provided examples of routes in Hertfordshire where this strategy could be employed.

45. Arriva's entry plan appears to make assumptions favourable to the entrant in two main areas. First, it appears to underestimate the set-up costs required. The plan is based on the utilization of buses that would be bought at £[✂] each. These would be very old buses and it is not clear whether such buses could effectively compete with Arriva's more modern offering, especially if they are more likely to break down and thus impact negatively on service reliability. Furthermore, the set-up costs do not include the deposit on the lease of a depot that is typically of three months paid in advance. This would increase total set-up costs from the £[✂] predicted by Arriva to £[✂]. Second, the plan assumes that the entrant will gain between 30 and 40 per cent of revenue previously earned by the incumbent in the first two or three months of it starting its service, and assumes no reaction on the part of the incumbent. This seems unrealistic and in contrast with submissions received both from Arriva and its competitors concerning the incumbent's reactions to entry (see, for example, paragraph 50). Finally, Arriva did not appear to take into account the need for working capital for this type of operation.

46. Arriva commented that the old buses considered in its entry plan could be and were used by bus operators against Arriva on commercial routes. Arriva also questioned whether older buses were more likely to break down than modern ones. Similarly Arriva did not believe that typically operators would have to pay three months' deposit in advance when renting a depot.

Effect of new entry and expansion

47. Arriva stated that many entrants had directly targeted 'busy journeys on core commercial routes in direct competition with Arriva'. However, as shown by Table 4, Arriva's share of commercial services has been broadly constant between 2001 and 2004.

48. Arriva said that it was difficult for it to identify the effect of this entry on bus revenue as this was determined by many other factors. However, it saw an immediate reduction in its revenue from concessionary fares as a consequence of new routes being registered because of the way in which concessionary revenue was divided between bus operators (see paragraph 43).

49. Arriva stated that its IT systems did not allow it quickly and accurately to assess the impact on revenues of new entry on a particular route. Arriva has provided us with five cases where it has analysed the effect of new entry on the route revenue. These concern two routes in Luton, one route in Wycombe (all these are outside Hertfordshire) and two routes in Stevenage. Arriva has analysed entry by looking at the year-on-year change in revenue before and after entry, but has stated that an analysis of year-on-year revenue will be distorted because it does not take into account the behaviour of both Arriva and its competitor during the period of time (for example, marketing activity).

50. The two examples that relate to Stevenage analyse entry from Transit Group. The first concerns entry on Arriva's route 2/3 where Transit Group entered with service 177 in February 2002 and with service 22 in July 2002. Arriva reduced its off-peak fares between April and October 2002 and had marketing campaigns (the 'Going

your way' campaign[7]) at different times between 2003 and 2004. Arriva's revenue [✂] per cent between 2001 and 2002 and [✂] per cent between 2002 and 2003. The second case looks at entry on Arriva's 4/5 route where Transit entered in April 2002 with service 178. Arriva reduced off-peak fares between April 2002 and October 2002. Transit started two more services in December (444 and 555) but withdrew them in March; and also started service 179 in July 2003. The 'Going your way' campaigns were also relevant to these routes. In this second case Arriva's revenue [✂] per cent between 2001 and 2002 and [✂] per cent between 2002 and 2003. In the other three cases, Arriva's revenue changes year-on-year varied from a decrease of [✂] per cent to an increase of [✂] per cent.

51. In order to assess the share of passengers taken by Transit on Arriva routes in Stevenage, Arriva calculated the number of Transit passengers by using Transit buses and comparing the ticket serial number at the beginning and at the end of the day. Arriva also counted the people boarding buses from the bus stop. On the basis of data collected in this way, Arriva estimated that Transit achieved a share between [✂] and [✂] per cent on Arrriva's route 17 and between [✂] and [✂] per cent on routes 2 and 3.

Exit

52. Arriva stated that the main feature of new entrants in 1999 was the start-up of Shephall Express (A R Brown) which, according to Arriva, began operating vehicles of eight seats or less in Stevenage in direct competition with Arriva's services. Arriva reported that Shephall introduced two new routes in Stevenage in 2000. The VOSA 'Notices and proceedings' indicate that Shephall surrendered its licence in 2003 soon after registering two new services in Stevenage.

53. C&K Holidays also tried to run a route in Stevenage but has since closed down. Sullivan told us of previous commercial entry attempts in Watford:

   (a) Green Rover entered in 1992, and it no longer operates in Watford.

   (b) Timebus Travel once operated bus services in the affected area; however, these no longer operate.

Potential entrants and possible expansion by current competitors

54. Transit Group stated that it had plans to expand its operations in and around Stevenage and that it was looking for depot facilities, although this search was proving difficult. Centrebus, in its submission, said that 'significant new entry is unlikely, although there may be entry of small operators with 2–3 buses'. Universitybus also appears to have expansion plans. It stated that it envisaged terminating the lease to Sovereign (or Arriva if the merger proceeded) of the excess capacity at its Hatfield depot. However, Universitybus also explained how its expansion strategies were closely linked to the University's needs to provide attractive transport links to prospective students. It is unclear that this type of expansion would target other commercial operations to a significant degree, particularly outside the Hatfield area.

55. Stagecoach told the OFT that it would not consider expanding in Hertfordshire because of difficulties in setting up a depot and hiring staff. FirstGroup also stated that it had no plans to enter in Hertfordshire.

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[7]Each campaign involved the door-to-door distribution of between 25,000 to 30,000 leaflets which featured money-off vouchers, route maps and frequency guides.

56. The Go-Ahead group stated in its submission that it would not consider the option of entry on an individual route basis as it currently had no base of operations in Hertfordshire. However, it would consider entry via acquisition, but saw the proposed merger as removing one potential platform.

Possible barriers to entry and expansion

57. We look at the following possible barriers to entry which have been drawn to our attention:

(a) Entry and expansion costs:

(i) depots;

(ii) cost of buses;

(iii) marketing and advertising;

(iv) regulatory barriers;

(v) access to bus stations; and

(vi) shortage of drivers.

(b) Network effects:

(i) network tickets and concessionary fare schemes; and

(ii) economies of scale and ability to redeploy buses from different depots.

(c) Threat of predation and retaliation.

Finally, we consider some differences between barriers to entry into tendered and commercial services.

Entry and expansion costs

58. When considering the cost of entry in the provision of bus services in Hertfordshire, it is important to note that the scale of entry may matter significantly. Entry on a very small scale (ie one or two buses) may be proportionally less expensive than entry at a size comparable to Arriva's current competitors (ie between 20 and 50 buses). In considering the extent to which entry costs constitute a barrier to entry, it will be important to assess whether the latter costs could be spread over a period of time: in other words, whether small-scale entry can be followed by expansion to significant scale. The costs associated with this expansion will also be considered.

Depots

59. Arriva submitted that it was not difficult for a new entrant to set up depots, and stated that entry in the past five years supported its view. According to Arriva, there were a range of options from renting space at farms, industrial estates or lorry parks to leasing space at operating centres of other operators. A small-scale entrant, in particular, had a much wider range of options due to the smaller fleet size. Specifically, Arriva stated that the typical cost of renting an outstation (ie small depot for one to two vehicles) ranged from £8,000 to £15,000 a year. In contrast, the cost of

building a brand new depot, or renting a suitable facility for 100 vehicles, can reach £5 million. In the entry plan (see paragraphs 44 to 46), Arriva estimated the rent for a depot for 12 buses to be £37,000 a year.

60. Sovereign estimated the cost of a depot for 50 to 60 vehicles in the range of £650,000 to £1 million depending on geographic location. According to the Transit Group, a 25-bus operation required a depot costing £750,000, including maintenance but excluding washing facilities which would add between £35,000 and £50,000. The figure would rise to £1 million for a 50-bus operation. Centrebus stated at its hearing that it was very difficult to find depots. Renting also imposed a requirement in terms of working capital as one would need to pay three months' rent up front. In terms of building a new depot for around ten buses, this would cost, according to Centrebus, around £0.25 million. In its submission to the OFT, Centrebus stated that it would cost approximately £30,000 a year to rent a depot for 15 to 20 buses.

61. Virtually all submissions, apart from Arriva's, indicated that the need to have a depot represented a significant problem for bus operators. HCC also reported that both small and big companies told the Council of their problems in finding a suitable depot. Transit Group put this situation down to the difficulty in getting planning permission. This means that the few sites that are suitable and have permission end up costing significant amounts of money in rent.

62. Sovereign explained that the full utilization of its depot capacity meant that it had to reduce the number of buses used on existing routes if it opted to expand operations somewhere else. Finally, Arriva said that one of the reasons it wanted to acquire Sovereign was that the lease of its depot in Stevenage had a longer unexpired term than the lease of Arriva's own depot in Stevenage.

Costs of buses

63. Arriva stated: 'The cost of acquiring such [second hand] vehicles is very low, it being possible to acquire a double decker bus with one year's MOT that is perfectly acceptable for operating commercial services for approximately £2,000'. As mentioned above (see paragraphs 44 to 46), as part of the entry plan Arriva estimated that a new entrant could acquire [✂] vehicles for £[✂] each. Sovereign stated that 'It is possible to acquire a vehicle with a year's MOT for as little as £3,000'. However, these estimates refer to very old vehicles which may be more likely to break down. And, crucially, they are not eligible for most tender work. Some tender contracts require vehicles to be less than five years old, some less than ten years old and the remainder less than 15 years old. On this point, Arriva noted that in tenders operators could put in an additional 'non-compliant' bid to offer the County Council better value for money; and to the extent that a tendered service required a vehicle of a particular age or specification, the cost of this to the operator was factored in to the price at which it bid.

64. Arriva's business sale agreement for the acquisition of Sovereign states that Arriva will pay £[✂] for vehicles; its business case notes that there are 46 buses, giving an average cost per vehicle of over £[✂]. The average age of this fleet is said (by Arriva) to be 5.7 years.

Marketing and advertising for commercial services

65. HCC provides passenger information, through bus stop information, route maps and timetable booklets through the Intalink partnership. In addition, organizations such as Traveline, which is an all-operator transport service, provide information about

operators' services, regardless of whether they are members or not. If an operator was entering on to a route already served by another operator, then the route may already be established by token of there being established passenger demand for it. In that case, the introduction of the bus might be sufficient by itself to raise awareness, although operators are required to display a timetable inside the bus or have them available on the vehicle for passengers who request them.

66. Members of the Intalink partnership also have the benefit of having their timetables displayed on the Intalink web site. A subcontractor (Trueform) manages timetable frames and inserts, according to Arriva.

67. Arriva, in its submitted management profit and loss accounts for 2003, shows a total marketing budget of £[✂] for 2003. This is broken down to include £[✂] in marketing staff salaries, £[✂] in timetable costs, and £145,000 in other marketing/promotional activities.

68. Finally, to the extent that passengers, as Arriva submitted, tend to take the first bus that comes along, there may be relatively little need for a new entrant to market its service beyond a timetable at the stop.

Regulatory barriers

69. There are a number of requirements on bus operators. For example, operators require an operating licence. One of the requirements for obtaining a licence is that the applicant must have 'adequate financial standing'. On 18 October 2004, the Department for Transport indicated that the following figures would apply with effect from 1 January 2005.[8]

TABLE 9 **Adequate financial standing—minimum requirements**

	£
Standard International Licences and Standard National Licences:	
First vehicle	6,200
Each additional vehicle	3,400
Restricted licence:	
First vehicle	3,100
Each additional vehicle	1,700

Source: Department for Transport.

70. Services have to be registered in advance with the Traffic Commissioner with 56 days' notice. If the operator wishes to vary timings, route, or even curtail operations of the registered service it may do so, again with the requirement of a 56-day notice.

Access to bus stations

71. Arriva told us that HCC owned all of the county's approximately 4,500 bus stops. It further stated that 'All operators, regardless of size, are entitled to access to facilities on fair and non-discriminatory term, eg spaces at bus stations. Operators may also choose to start bus routes just outside bus stations to avoid having to pay any fee to access the bus station'. This is in line with section 82 of the Transport Act 1985 which makes it unlawful for a local authority to discriminate between operators in relation to local-authority-owned bus stations.

[8]Other minor sums are payable on the grant of a licence and for the issue of operating discs.

72. Stevenage Bus Station is owned by Stevenage Borough Council but managed by Sovereign under the terms of a licence agreement. The rights under the agreement cannot be assigned and can be terminated on 28 days' notice. Stevenage Borough Council explained that:

> Broadly speaking, the licence permits Sovereign to charge all bus operators using the bus station (including themselves) a departure fee for each vehicle leaving the station. However, under the terms of the licence Sovereign are liable for the business rates. The departure fee charged by Sovereign and any review of charges thereafter has to be agreed by the Council. In giving this agreement, the Council takes into account all the costs incurred by Sovereign in fulfilling their obligations under the licence including payment of the business rates, but the main objective is to ensure that such departure fees are kept as low as possible and that Sovereign are able to generate sufficient income only to cover their costs in managing the bus station on behalf of the Council. The licence requires Sovereign to undertake some 'management' of the bus station by ensuring that all operators observe the operational rules as defined in the Code of Practice. The licence does not delegate to Sovereign decision making in respect of allocation of stops etc and/or accommodating new operators. Stevenage Borough Council and HCC take these decisions jointly.

73. In general there appear to be some concerns among third parties that, if the Council employed Arriva in place of Sovereign,[9] the management of the Stevenage bus station could be undertaken in such a way as to damage smaller operators.

Shortage of drivers

74. In general there appears to be a shortage of bus drivers in Hertfordshire. Both Universitybus and Centrebus stated at their hearings that finding drivers represented a problem. The closeness to London may also represent a problem if drivers are attracted by higher salaries available there.

75. Centrebus cited the cost of training staff as another entry barrier. It stated that 'Only large operators such as Arriva and Sovereign have the ability to train in-house'. However, it is not clear whether the difference in size between Centrebus and Sovereign is significant for the purpose of in-house driver training.

Network effects

76. In this section we analyse the potential for a sizeable operator to enjoy an advantage because of the ability to gain revenue from the sale of network tickets, from economies of scale that derive from large operations and the operational flexibility of being able to redeploy buses from its depots.

Network tickets and concessions

77. The kind of advantage that network tickets can bring is exemplified by Sullivan, which stated that in order to compete with Arriva's good off-bus ticket offering it had to set the single fares on its 4 service in Watford at a level below Arriva's. Centrebus told us that Arriva had specifically extended the geographical coverage of its zonal tickets,

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[9]In fact we understand that no decision has been taken by the Council on this matter.

just enough to cover the area on the Hertfordshire/Bedfordshire border where Centrebus was operating a new commercial service.

78. There are a variety of network tickets and concessionary fare schemes in Hertfordshire. Some ticketing products can be used on buses operated by any member of the Intalink Partnership and some only on the buses of a single operator. There are two concessionary fare schemes in Hertfordshire and all operators of eligible services have a right to participate in them.

79. Multi-operator network tickets (such as the Explorer ticket) and concessionary fare schemes tend to *reduce* the significance of the network advantage, while operator-specific network tickets *increase* network effects.

Bus operators' network tickets and HCC concessionary fare schemes

80. Arriva offers a greater variety of tickets than Sovereign. Arriva offers 'zonal tickets' that can be purchased for varying lengths of time and different geographical areas (eg Stevenage, Hemel Hempstead, etc). These tickets provide unlimited travel on all Arriva services and are also sold at a discount to children and senior citizens. Arriva also has a 'student' ticket, which is available for a 12- and 17-month period for travel on the whole Arriva network or for discrete zones. Arriva also offers 'clipper cards' that are valid for a set number of single journeys on Arriva's services and are available in Stevenage, Hemel Hempstead, Chaulden, North Hertfordshire and Watford. There is a question as to the extent to which clipper cards and similar 'carnet' tickets sold by other operators contribute to the creation of a network advantage. It seems that, in theory at least, customers could have a higher preference for such tickets if they can be used on many routes, and these tickets could in turn, to some degree, reward customer loyalty and induce customers to prefer the services of the operator for which they hold one of these tickets. Arriva charges children aged up to 14 half the normal fare, but otherwise does not have special fares for any particular category of person. It also participates in the two concessionary fare schemes.

81. Table 10 shows the revenue from different types of tickets on the routes identified by Arriva as overlapping with Sovereign's services.

TABLE 10 **Revenue by ticket type on some overlapping Arriva services**

Ticket type	*Proportion of total revenue (%)*
10-trip clipper	✂
Arriva zonal ticket	
All network tickets	
Cash return	
Cash single	
Explorer	
Fare paid concession	
Other	
Total	100

Source: Arriva.

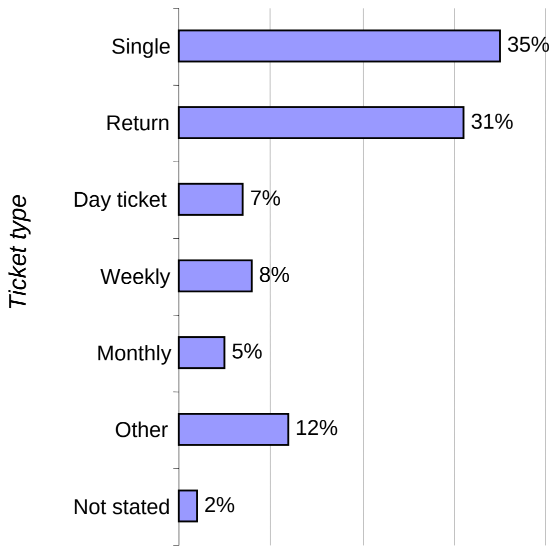
82. All types of network tickets account for about [✂] per cent of total revenue on the routes Arriva identified as overlapping with Sovereign, with zonal tickets alone

accounting for [✂] per cent of revenue.[10] Arriva pointed out that multi-journey tickets were often used for repeated journeys on the same route, for example as weekly passes: as such, their use by customers was no more than a convenient and discounted means of buying tickets for a regular journey. While an operator with more than one route could offer multi-tickets for use on the same route or for different routes, and an operator with only one service could only offer tickets for the same route, Arriva found it hard to see how this was anti-competitive, or could affect the analysis of the merger in any way.

83. The survey commissioned by Arriva from NOP includes information about the number of passengers by ticket type. This is reproduced as Figure 3.

FIGURE 3

Ticket type bought by Arriva's customers



Source: NOP consumer survey for Arriva, August 2003.

84. According to this NOP survey, 66 per cent of passengers use single and return tickets while day, weekly and monthly tickets account for 20 per cent. Although it is not clear what percentage of these passengers travel with other network tickets (eg HCC promoted Explorer tickets) and what types of tickets are included as 'other', what this data shows is that there is a demand for tickets that can have a network effect.

85. Sovereign has a reduced fare rate for students from the University of Hertfordshire and some of its products are available at a discount to holders of concessionary permits, but otherwise it does not have special fares for any particular category of person. It does, however, participate in HCC's concessionary schemes.

86. Sovereign offers single and day return fares, as well as a seven-day ticket and a ten-journey ticket. All are available at child and concessionary rates. Passengers can also purchase monthly and annual tickets, but only through Sovereign's office and not on the bus. All these tickets are route-specific. The only 'network' ticket sold by

[10] Arriva told us that its sales of network tickets (including the Explorer ticket) accounted for [✂] per cent of its on-bus revenue and for [✂] per cent of tickets sold.

Sovereign is the Intalink 'Explorer' ticket, which accounts for 3.5 per cent of revenue on the routes where Sovereign overlaps with Arriva.

87. Both Universitybus and Centrebus offer tickets that allow travelling on more than one of their services. For both companies, all network tickets account for around 10 per cent of their total on-bus revenue.

Tickets and concessions sponsored by local authorities

88. HCC sponsors both a network and a concessionary scheme. Both these initiatives, in so much as they are conducted in partnership with all existing bus operators, decrease the relevance of network effects. The sale of Explorer tickets made by Arriva and Sovereign should give an indication of the extent to which this scheme is likely to counterbalance any network advantages that Arriva may have.

89. The sale of Explorer tickets represents [✄] per cent and 3.5 per cent of revenue for Arriva and Sovereign respectively. One explanation for this difference could be that Arriva's passengers are more likely to be interested in this type of ticket, perhaps because they are more concentrated in urban areas.

Economies of scale and ability to redeploy buses from different depots

90. There may also be economies of scale and other advantages deriving from operating a network of services of a significant size. In particular we have received submissions indicating that small operators cannot profitably provide in-house training for bus drivers.

91. Arriva operates across a wide geographical area in Hertfordshire and has several bus depots. This can constitute an advantage in terms of being able to structure its routes more flexibly in response to changes in demand or other factors. Small operators with only one or two depots may be more constrained in the strategies they adopt by the geographical location of their operating bases.

92. We have received submissions indicating that larger companies may be able to negotiate better terms with suppliers of spare parts and other inputs. This would also provide an advantage over smaller operations. NERA stated in a report on the effectiveness of the bus undertakings prepared for the OFT in 1997[11] that larger operators were able to purchase new buses significantly (20 per cent) more cheaply than small operators, and, by virtue of operating 'younger' fleets than many smaller companies, also enjoyed lower maintenance and operating costs per bus mile.

Threat of predation and retaliation

93. A firm has to take many factors into account before committing to an entry strategy. One of these factors is the likely response of incumbent(s) to the firm's entry. In general, the expectation of fierce rivalry tends to deter entry as much as the expectation of acquiescence tends to encourage it. A firm need not have directly suffered from predation for it to be deterred by it; observing such behaviour against entrants in similar circumstances to its own may be enough to discourage the firm from entering. We have to consider whether the expected behaviour of the incumbent provider of bus services deters entry or expansion in any of the relevant markets.

[11] *The effectiveness of Undertakings in the Bus Industry*, prepared for the OFT by NERA, December 1997, Research paper 14.

94. An incumbent can react to entry in different ways. To simplify, we can identify three main strategies:

(a) *Competitive response:* in the vast majority of cases, entry induces more competition in terms of lower prices, better quality of service, etc. It is therefore to be expected that an incumbent will react to entry by lowering prices, or otherwise bettering his/her services.

(b) *Predation:* in this case the incumbent adopts a strategy (in terms of the level of fares, frequency, or other aspects of service) that has the sole objective of driving the entrant out of the market. Fares and other variables will return to pre-entry levels post-exit. If such behaviour is considered likely, an entrant will find it riskier to commit to set-up costs even if there is enough demand to support the entrant's operations.

(c) *Retaliation:* consider the case of firms operating in more than one relevant market. If one firm decides to enter the other firm's 'turf', the incumbent can retaliate by in turn entering the other's firm market. The threat of severe competition in a broad area of operations could deter entry.

95. It is often difficult to distinguish between predation, retaliation and a competitive response. In this section we examine the threat of predation and retaliation to assess whether they are credible and significant enough to deter entry.

Predation, retaliation and competitive response

96. Predation can take many forms as all aspects of the offer (price, frequency, quality, etc) can in principle be altered to induce exit of a rival from the market. The submissions received from bus operators indicate that the most likely responses from an incumbent in the bus industry would be to increase service frequency and implement other timetable changes and to reduce prices (of both single and network tickets).

97. We received 12 replies to our questionnaire to bus operators in which the respondent expressed a view in reply to a question on the possible threat of predation or retaliation by an incumbent operator. Of these, ten thought this was a concern and two did not. Specifically, respondents raised concerns about the following practices:

- increasing service frequency;
- changing timetables, re-routing and registering services parallel to the entrant's;
- running buses so as to obstruct bus stops;
- uneconomically low fares;
- refusing to accept 'Explorer' tickets issued by competitors; and
- ceasing all previously existing commercial relations with a competitor following entry.

98. Centrebus made a complaint to the OFT which has been subject to investigations opened in September 2003 and August 2004 regarding alleged Chapter II infringements. We understand that all the information supplied to us has also been supplied to the OFT, which is currently considering this information. Arriva denied the Centrebus allegations and emphasized that it had, in any event, every incentive not

to engage in such behaviour because it would be illegal following the entry into force of the Competition Act 1998.[12] Moreover, such behaviour would be fundamentally at odds with the Arriva group's brand values and reputation, the importance of which could not be overstated given Arriva's position as a leading international transport operator. Arriva confirmed that it had a compliance programme in place to ensure that staff fully complied as required with the Competition Act 1998. We are not aware of any other complaints made against Arriva either to the OFT or the Traffic Commissioner regarding its bus operations in Hertfordshire.

99. In order to assess the significance of any such reputation as a barrier to entry and expansion, it is important to consider whether the incumbent (in our case Arriva) has the incentives and the ability to engage in predatory behaviour. We consider these in turn.

100. In general, predatory behaviour can be profitable to the incumbent firm if it confers a reputation that effectively deters entry. Arriva is a national player operating throughout the UK across many local markets. As such, Arriva may have an incentive to predate against one rival in a local market as this can build a reputation that benefits the whole of the Arriva group. Therefore, by predating against one local player, Arriva may effectively deter entry by operators of a similar size in other parts of its UK operations. On this point, Arriva stated that because of its national presence Arriva was in fact 'more likely to conduct itself scrupulously in accordance with the law, if only because the fines, which are meant to underwrite the effectiveness of the laws, are calculated from United Kingdom turnover'.

101. As for the ability to predate, Arriva's financial strength is important. The cost of predatory actions against relatively small local rivals may make little difference to the overall profitability of the group, while small local rivals may find it difficult to survive even with relatively small losses for a short period of time. Arriva stated that on this basis any large company was capable of predation, and noted that its financial strength would also impact on the level of any fine imposed for infringement of competition law. Universitybus noted that 'there is a risk that Arriva/Sovereign could use their financial muscle to drive out smaller operators as ourselves, from the tendered and/or commercial markets'. However, it added, Arriva already had this ability and it was not certain that the merger would change this situation; furthermore the pressure on margins across the county was likely to limit the potential for retaliation. Olympian Coaches noted that 'Arriva are a national company and therefore have sufficient resources to sustain a loss in their developing areas, thus resulting in unfair competition to small local companies'.

Barriers to entry into the provision of tendered services

102. Some barriers to the provision of commercial services also seem to apply to tendered services. The depot location places a constraint on the geographical area for which an operator is able to submit bids with a high prospect of success.

103. The threat of predation by an incumbent operator is not relevant in the same way to tendered services, as there is no on-the-road competition on tendered routes. However, there may be scope for retaliation if an operator that has established services in a certain area bids aggressively in an area where there is another established incumbent of commercial and tendered routes. In this case the latter may 'retaliate' by in turn bidding in the territory of the former.

[12] In the Arriva/Lutonian report in 1998, the MMC found that Arriva had reacted in a predatory way to Lutonian's competition. Predation had taken the form of the introduction of new (uneconomic) services to other Lutonian routes. In response to this, Arriva noted that this happened a long time ago, and since then new management has been put in place.

104. Some barriers may be specific to the provision of tendered services. For some tendered services HCC requires a minimum quality standard from the operator; this may be in terms of restrictions on the age of buses that can be used on the route. As relatively new buses can cost significantly more than older ones (see paragraphs 63 and 64), such requirements may increase the costs that an entrant has to incur in order to provide the service. However, Arriva pointed out that this cost could be factored in the bidding price, and had to be incurred by all tenderers.