

## Asset values

### Introduction

1. In order to estimate whole-life returns on rolling stock, we needed to determine an appropriate opening asset value. For new rolling stock, this was taken to be the cost of acquisition and was readily available. However, the MOLA assets were acquired partway through their lives and therefore we needed to consider the appropriate economic value.
2. There is no resale market for used rolling stock and we therefore had to estimate opening values for MOLA stock by examining proxy valuations such as the privatization and subsequent purchase values of the ROSCOs, other valuations submitted by the ROSCOs and the DfT, and third party valuations such as the NAO report on ROSCO privatization.<sup>1</sup>
3. The opening value ascribed to rolling stock will have a substantial effect on the estimated returns, whether derived by IRR or ROCE. There is a significant difference between the lowest and highest valuations we have considered.
4. This appendix shows two principal findings. The first is that the concept of DRC, which is described in our guidelines, and has been proposed by all the main parties, does not provide an appropriate economic value for the MOLA assets unless it is calculated for the time at which we wish to start our analysis. The second is that the appropriate starting valuation (proxy economic value at privatization) of the MOLA assets should be based on two values, the first being the values derived from the purchase price of the ROSCOs, after privatization, and the second being a 15 per

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<sup>1</sup>NAO report *Privatisation of the Rolling Stock Leasing Companies*, 5 March 1998.

cent reduction to these values to reflect the potential for excess returns being capitalized in the purchase price values.

5. In this appendix we first set out the principles of deprival value—the asset valuation methodology we have used. Deprival value is a calculation of how much a business would be worse off if it were deprived of the asset and is the lower of (a) the cost of replacing the asset (DRC) and (b) its economic value. The economic value is the higher of (a) the NPV of future earnings from the asset (DCF) and (b) the net realizable value (NRV). This conceptual framework for the consideration of asset values is discussed in a research paper prepared for the OFT by Oxera.<sup>2</sup>
6. Since there is no effective market for second-hand rolling stock we have assumed that NRVs are low in the rolling stock market. Therefore, in this case, deprival value is the lower of DRC and DCF.
7. Our guidelines state that ‘The CC will normally consider returns on the depreciated replacement cost of assets, unless there are specific reasons why this is inappropriate’. There is no market for the sale of second-hand UK rolling stock, and for this reason DRC values have had to be estimated. Since our assessment of competition is concerned with the period since privatization, we wished to obtain an opening asset value at, or close to, the time of privatization.
8. When a company is acquired, the purchase consideration is allocated to the net assets acquired based on their estimated fair values. These fair values would normally be a market value, but where there is no market the economic value would be used. For the ROSCOs, the economic value would be the lower of the DCF and the DRC. Where the purchase consideration exceeds the fair values, the ‘excess’

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<sup>2</sup>OFT Research Paper: *Assessing profitability in competition policy analysis*, OFT, July 2003.

consideration is recorded as goodwill. The ROSCOs allocated the purchase prices to the MOLA assets based on fair values and the MOLA asset base therefore includes the fair value revaluation.

9. We do not consider that the privatization DCF value is an appropriate economic value because the privatization values were discounted. The subsequent purchases were transactions between independent parties. However, there is the risk that these purchase values could be higher than an economic value because of the risk of excess returns being capitalized. The consideration of deprival value therefore means that the relevant DRC values would not be higher than the DCF asset values derived from the purchase prices and may well be lower.
  
10. In this appendix we explore the parties' submissions using DRC and comment on their relevance to our assessment in the context of deprival value. We then consider the DCF valuations at privatization and subsequent purchase. We explore the context for these values in the period between privatization and the subsequent purchase of the ROSCOs. We also consider the NAO report which has been cited by several parties, and other evidence.

### **The DRC calculations**

11. The DRC values submitted by the parties have generally been prepared by considering the price of an equivalent new train as a starting point, and then adjusting this value to reflect the (generally) lower utility of an older train to come up with a DRC value. Some of the parties' DRC valuations have been calculated as at a particular date, and others have then been rolled back or forward to different dates.
  
12. We noted that DRC valuations performed in this way were sensitive to two variables. The first was the price of an equivalent new train. We noted that new train costs had

increased significantly in money terms over the period since privatization. With all other things being equal, new rolling stock inflation would increase the DRC value of MOLA stock over time, effectively giving the owners of the stock a 'holding gain' caused by the inflation. As we were concerned with the opening value of MOLA stock, we did not wish to reflect any holding gain.

13. The second sensitive variable in the ROSCOs' DRC valuations was the utility adjustment for age. Utility is a DCF calculation of the additional net earning potential of new rolling stock compared with MOLA. The ROSCOs based this on passenger survey evidence which attempted to model the increased revenue potential of new trains, and the difference in lifetime maintenance costs and track access charges. We were concerned that the responsiveness of passengers' demand for rail travel could affect the accuracy of this survey evidence.
14. We therefore considered that whilst a DRC valuation performed in the way set out above may provide useful evidence of deprival values, there were issues which would prevent our putting excessive weight on such evidence. We considered that more recent DRC valuations that had been rolled back were less reliable than ones performed closer to the time of privatization.

***DfT***

15. The DfT presented a range of IRRs on three asset value scenarios—privatization value, purchase price value and DRC—based on a sample. The DRC value was close to, but higher than, the sample's privatization value. The DRC was based on indifference pricing methodology as applied by GoIndustry Henry Butcher for a sample fleet and assumed a 25 per cent first day depreciation charge which was especially significant.

16. The DfT argued that the DRC was objective. The ROSCOs all criticized the DfT's DRC depreciation methodology and the ORR expressed 'some sympathy with the criticisms of the DfT's methodology put forward by the ROSCOs'. We also had concerns about the DRC as we were not able to justify the 25 per cent day one depreciation. We noted that the DRC value was close to the privatization price values. However, the privatization values were affected by a significant discount so we found the proximity of the two values is surprising. We noted that GoIndustry Henry Butcher also prepared a DRC value for Angel in 1998 which Angel told us did not include a day one charge.

### **Angel**

17. Angel also presented a range of IRRs on three main bases with one variant. These are the RBS purchase value,<sup>3</sup> the 1998 DRC which appears to be the basis of the accounting fair values recorded for the RBS acquisition and a 2007 DRC. At December 1997 (RBS purchase), the lowest value is the 1998 DRC.

18. Angel commented that the 1998 DRC value<sup>4</sup> was low compared with the DCF valuation; as a result, Angel recorded goodwill at that time.<sup>5</sup> Given the contemporaneous DRC, we believe that the 1998 DRC is the more robust value for our assessment. However, we also considered the impact of goodwill in our assessment of Angel's returns. Angel said that the 2007 DRC most closely reflected the current replacement cost and provided a conservative estimate of the DRC at 1997.<sup>6</sup> This argument is, however, based on the presumption that the DRC values track the cost of new rolling stock and we noted that potential competition is not restricted to new rolling stock. We also noted that the rolled-back 2007 DRC implied a higher value

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<sup>3</sup>With a variant using annuity depreciation.

<sup>4</sup>Angel said that, as outlined in the Oxera profitability report, they had a number of reservations with respect to how robustly this valuation reflected the DRC value of assets.

<sup>5</sup>Angel was the only ROSCO to record goodwill on its post-privatization acquisition.

<sup>6</sup>Angel said that the difference between DRC (1998) revaluation and DRC (2007) valuation reflects some measurement inaccuracies in the DRC (1998) valuation, as discussed in the Oxera profitability report.

than either the RBS purchase value or the 1998 DRC. We therefore considered the asset values based on the purchase price paid by RBS to be a better economic value for our purposes, although we also considered how these values might be affected by goodwill.

### **HSBC**

19. HSBC submissions were based on a DRC value applied to each year from 2002 to 2006. The critical assumptions behind HSBC's ROCE calculations were that the appropriate comparator was new rolling stock, [REDACTED].
  
20. HSBC's argument was based on the presumption that the DRCs track new rolling stock whilst we note that potential competition is not restricted to new rolling stock. We also noted that HSBC's DRC valuations were based on 2006 asset values but these were then adjusted to represent the expected cost of new rolling stock each year between 2003 and 2006, based on a proxy for new rolling stock inflation. They did not provide strong evidence of the value of MOLA stock at or around the time of privatization, which is what we were seeking for our opening value. We noted that the DRC valuation increased as the value is rolled back through time, and therefore that the rolled-back value could be higher than the DCF purchase price value at the time of the HSBC acquisition. We therefore considered the asset values based on the purchase price paid by HSBC to be a better economic value for our purposes.

### **Porterbrook**

21. Porterbrook submitted DRC valuations for two fleets as at the date of the Abbey acquisition (April 2000), which show values higher than those determined by the analysis that Quasar Associates undertook for Abbey to determine its valuation of Porterbrook. We noted these valuations, but were unclear as to how typical the differences between DRC and purchase price were for the rest of Porterbrook's

portfolio. We also note that this argument implies that Abbey was able to secure the acquisition of Porterbrook from Stagecoach for a price that could be considered to be lower than might be expected in a sale negotiation.

22. We noted that Porterbrook's valuation was at 2000, and did not provide strong evidence of the value of MOLA stock at or around the time of privatization, which is what we were seeking for our opening value. Any rollback of the DRC was likely to be higher than the value of the DCF from the Stagecoach purchase. We therefore considered the asset values based on the purchase price paid by Stagecoach to be a better economic value for our purposes.

## **Privatization and purchase price fair values**

### ***Introduction***

23. The analysis of purchase prices is based on consideration of the entire entity being acquired. For the ROSCOs, the purchase price fair values may therefore be based on DCFs which include both MOLA capital and non-capital rentals. If the asset values were based on these cash flows, it is possible that there may need to be an adjustment to the asset values if they are to be used as the start point for an assessment of capital rental profitability. An alternative scenario would be to assume that there are no profits from the maintenance activities, and therefore that the asset value is derived from the capital rental cash flows.
24. Our analysis has shown that maintenance is profitable, but is not particularly significant in the context of overall profitability. We have therefore assumed that the DCF values of the MOLA assets are related to the capital rental activities.
25. The fact that the acquisition dates of the ROSCOs are different will also affect direct comparisons between the ROSCOs. However, we do not believe that the effect is

significant because there were no major changes in the asset base in the period from privatization to first purchase, nor were there any franchise renewals in this period.

### **Privatization values**

26. When considering opening values for MOLA stock, we were aware of significant and specific risks relating to the privatization process, which we believed would have caused a discount to asset values. We sought to exclude this discount from our estimated opening value. In this appendix we have described the scale of the relationship between purchase values and privatization values using the terminology of ‘implied discount’ in the privatization values. We have described the percentage of the revaluation to the fair value of the assets after the revaluation as the ‘revaluation percentage adjustment’.

27. Table 1 compares the privatization proceeds with the purchase prices for the ROSCOs.

TABLE 1 Comparison of privatization values with purchase prices

	<i>£ million</i>			
	<i>Angel</i>	<i>Assets subsequently acquired by HSBC</i>	<i>Porterbrook</i>	<i>Total</i>
Privatization values—proceeds	696	568	528	1,793
August 1996—Stagecoach			826	
February 1997—HSBC		726		
December 1997—RBS	1,091			
Total				2,643
Difference between post-privatization purchase prices and privatization proceeds	395	158	298	850
Percentage of privatization values (%)	57	28	56	47

Source: NAO report *Privatisation of the Rolling Stock Leasing Companies*, 5 March 1998.

**Notes:**

1. The HSBC privatization value comprises £518 million plus £50 million for the Network Express assets.
2. The Hambros value at privatization was £1,812 million.
3. Subsequent to NAO report, Porterbrook was acquired by Abbey in 2000.

28. Table 1 shows that a significant profit was made by the original purchasers of the ROSCOs within a short period after privatization. The NAO investigated the sale of

the ROSCOs and their findings were set out in a report *Privatisation of the Rolling Stock Leasing Companies*, dated 5 March 1998, which we consider in the next section.

29. Table 2 compares the privatization proceeds with the fair values of the net assets acquired at privatization. The information in Table 2 has been taken from the fair value tables in the statutory accounts of the relevant companies and the total consideration of £1,810 million is higher than the consideration of £1,793 million in Table 1. We believe that this is because the consideration in the fair value tables also included relevant acquisition costs such as professional fees.

TABLE 2 **Accounting fair values of rolling stock and goodwill at privatization**

	<i>Angel £m</i>	<i>Assets subsequently acquired by HSBC £m</i>	<i>Porterbrook £m</i>	<i>Total £m</i>
Privatisation consideration	707	574	530	1,810
NBV of rolling stock assets at privatization	630	677	467	1,774
Revaluation	0	134	94	228
Fair value allocated to rolling stock at privatization	630	811	561	2,001
Other assets at fair value	-164	-237	v151	-552
Fair value of net assets	466	574	410	1,450
Goodwill arising	241	0	120	361

Source: ROSCO statutory accounts.

*Notes:*

1. HSBC data includes the Network Express assets.
2. Angel commented that the privatization proceeds amounted to £704 million.
3. The most significant item in the caption 'other assets' is deferred taxation reflecting the incidence of capital allowances.

30. The consideration of £1,810 million in Table 2 is almost entirely represented by the rolling stock assets. The historic cost NBV of £1,774 million at privatization represents the assets vested into each ROSCO on 1 April 1994 by the British Railways Board (BRB) together with subsequent additions and depreciation up to the date of privatization of each ROSCO.

31. The revaluation percentage adjustment is around 11 per cent (£228 million/£2,001 million) on average. There are some differences between the companies as to how the consideration was allocated to assets or to goodwill. HSBC recorded fair-value adjustments to the rolling stock assets, Porterbrook also recorded fair-value adjustments and recognized goodwill on consolidation. Angel also recorded goodwill. We found the scale of the differences in accounting treatments between the parties unexpected given that all three were carved out from British Rail on a consistent basis.

### **Purchase values**

32. Table 3 sets out the revaluations and the subsequent accounting NBV of the rolling stock assets following the post-privatization sale of each company. The data for Porterbrook is based on the Stagecoach acquisition.

TABLE 3 Fair values of rolling stock and goodwill on post-privatization purchases

	<i>£ million</i>			
	<i>Angel</i>	<i>HSBC Rail</i>	<i>Porterbrook</i>	<i>Total</i>
Implied NBV before revaluation	(	⊗	)	1,973
Revaluations				890
NBV after revaluation				2,863

Source: HSBC, Porterbrook and Angel.

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Note: RBS also recorded £352 million of goodwill on the acquisition of Angel.

33. The accounting NBV of rolling stock assets before the revaluations (albeit at different dates) derived from the purchase prices amounts in total to £1,973 million, which is slightly below the revalued asset value total of £2,001 million at privatization set out in Table 2. It therefore appears that the asset base did not change significantly during this period. Accordingly the revaluations recorded on the post-privatization purchases appear to arise largely from changes in assumptions concerning the future cash flows particularly a more optimistic view of these forecasts. This could arise from changes in the expected cash flows and/or changes in the discount rate.

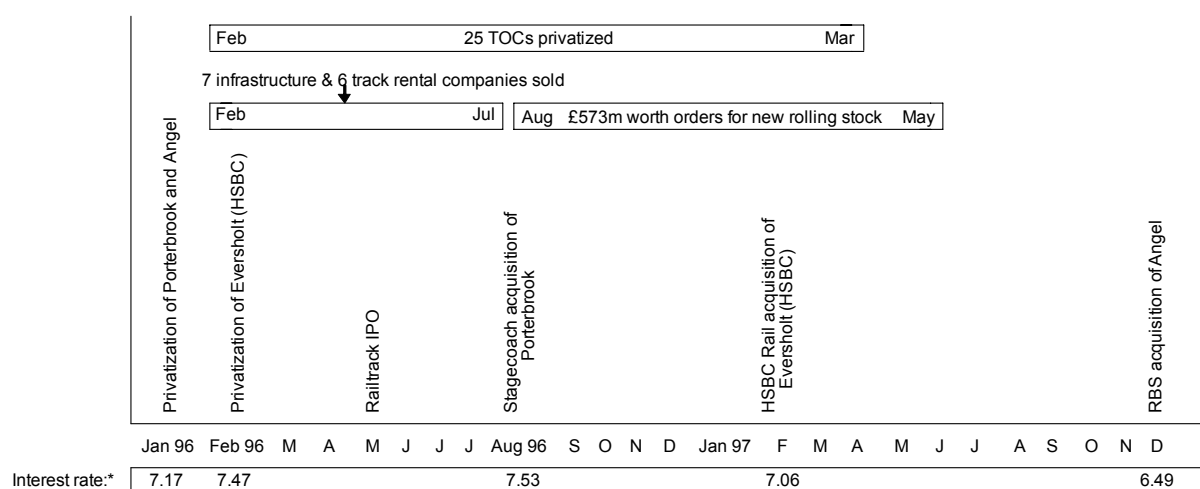
34. The revaluation percentage adjustment is significant at around 31 per cent on average (£890 million/£2,863 million). There is again also a difference in accounting treatment between the parties: Angel has recorded goodwill and a revaluation whereas HSBC and Porterbrook have recorded only revaluations.

**Context**

35. Figure 1 sets out some of the key events in the privatization programme.

FIGURE 1

**Timeline of key events between privatization and first purchase**



Source: NAO report, CC analysis.

Note: Before April and June 1995 six heavy maintenance departments sold.

36. The ROSCOs were among the first railway entities to be privatized. By the time of the Stagecoach acquisition of Porterbrook, there had been some significant changes. Railtrack had been sold by way of IPO, a number of franchises had been awarded to TOCs and the first post-privatization orders had been placed for new rolling stock.

37. In the period between privatization and the December 1997 RBS acquisition of Angel during which franchises were awarded, there were no renewals and, whilst new rolling stock was ordered, there were no significant acquisitions of rolling stock assets.

38. We next consider whether interest rates and taxation could be significant factors in the comparison of the two values.

### ***Interest rates***

39. The initial lease rentals were based on a model of equivalent cost pricing which was intended to provide 'a 10 per cent annual return on the assumed capital cost of rolling stock (8.5%, representing an estimate of 25 year interest rates on investment plus 1.5% gross profit margin)'.<sup>7</sup> By reference to our estimates, the RFR at privatization of 7.17 to 7.47 per cent was between 1.03 and 1.33 per cent lower than the rate factored into the rental stream.
40. We considered that the change in the RFR between privatization and purchase might have an effect on the relative comparison of the privatization and purchase values. However, we observed that there was a relatively small change in the interest rates between privatization and purchase and so considered that this change in interest rates was unlikely to be a significant factor.<sup>8</sup>

### ***Taxation***

41. Each ROSCO was allocated a portion of the British Rail capital allowances pool at 1 April 1994. The value of capital allowance at privatization for Angel was £227 million, HSBC £228 million and Porterbrook £176 million.<sup>9</sup> The total of £631 million is only 35.5 per cent of the historic cost NBV of the rolling stock assets. The lower level of capital allowances in the MOLA assets compared with post-MOLA rolling stock will have an impact on the comparison of MOLA and post-MOLA rolling stock profitability.

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<sup>7</sup>NAO report *Privatisation of the Rolling Stock Leasing Companies*, op cit.

<sup>8</sup>The largest change in interest rates is seen for Angel, where the decline is 0.68 per cent; there is a 0.41 per cent decline for HSBC and a 0.36 per cent increase for Porterbrook.

<sup>9</sup>Hambros Information Memorandum.

42. Each ROSCO was expected to be tax paying (on the income stream from the initial leases) from the start. By the tax losses (from capital allowances) on the new fleets procured by the ROSCOs could be offset against taxable profits from the MOLA assets or surrendered to a parent company by way of group relief. Significant investment in new rolling stock attracting capital allowances might require a parent with tax capacity to utilize the tax losses.

### ***The NAO report***

43. The NAO report reviewed the privatization process and calculated a range of possible values to purchasers at privatization under alternative assumptions. The NAO commented that the intention in the privatization process:

was to produce initial lease prices similar to those that would be charged in a competitive market and which were high enough to avoid step increases in prices and public sector subsidy to train operating companies when leases were renewed in future. ... The option which best met this objective was not the most expensive option but it has resulted in higher costs—and thus a higher public sector subsidy to the train operating companies—than if an alternative pricing method had been used. The higher prices will, however, have increased the sale proceeds received.

44. The NAO<sup>10</sup> commented that 'in Hambros' view bidders were making very cautious assumptions and were heavily discounting the value of income after the end of the initial lease period, because of the political uncertainties they perceived out of stated political opposition to the sale'.

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<sup>10</sup>NAO report *Privatisation of the Rolling Stock Leasing Companies*, op cit.

45. The NAO also commented on two other matters. Bidders had concerns that they would not know the identity and creditworthiness of their customers because the TOCs were to be privatized shortly thereafter and the ROSCOs were sold with little or no relevant track record in the new industry.
46. The NAO estimated that ‘the possible value of the companies to purchasers was between £2.0 billion on the most cautious assumptions that we used and £2.5 billion on more optimistic (but not the most favourable) assumptions’. Table 4 sets out the NAO values by reference to the privatization and purchase values.

TABLE 4 Implied discount in privatization price

	<i>Value £m</i>	<i>Discount %</i>
Privatization price	1,793	-
NAO most cautious assumptions	2,002	10
NAO more optimistic assumptions	2,539	29
Purchase price	2,643	32

Source: CC analysis and NAO report *Privatisation of the Rolling Stock Leasing Companies*, op cit

47. The NAO’s report was oriented towards assessing the value received by the Government, considering both capital and non-capital rentals. The NAO methodology was to apply discount rates to cash flows based on the expected rental streams from privatization. We regard the NAO’s report as being persuasive evidence that there was a substantial discount at privatization. However, we also note that the NAO assessment of value is not directly comparable to the purchase price values.

### ***Railtrack privatization***

48. The ORR commented that:
- ... the gap between privatisation asset values and forecast cash flows is significant. Even applying a substantial uplift to privatisation values, such as the one previously applied by ORR to the value at privatisation (based on the first day trading value) of Network Rail’s (Railtrack) equity of 15%

would result in a forecast IRR of [~~8~~] per cent for the ROSCOs, which is some way above our benchmark range.<sup>11</sup>

49. Porterbrook referred to the Railtrack privatization and, in relation to the political and commercial uncertainty at that time, commented that ‘... much of this uncertainty was removed by the time of the 1997 election ...’ and ‘over this period, Railtrack’s share value increased by a further 59% in addition to the opening day uplift’.
50. We note that our analysis of the combined increase in Railtrack share price from privatization to June 1997 is 68 per cent (close to the ORR 15 per cent and Porterbrook’s 59 per cent combined) and that over broadly the same period the FTSE 100 rose by 23 per cent. However, we have concerns as to the extent to which Railtrack is a relevant comparator, because it was privatized after the ROSCOs, it was privatized through an IPO not an auction, and its business is different from the ROSCOs, not least because of the development potential in its property portfolio.

### ***Abbey acquisition of Porterbrook from Stagecoach***

51. Subsequent to the NAO report, Stagecoach sold Porterbrook to Abbey for £1,400 million in April 2000. This represents a combined increase in value from privatization of £872 million of which £574 million arises on the Abbey acquisition. The Abbey acquisition occurred nearly four years after the Stagecoach acquisition, and by this time there had been significant investment by Porterbrook in new rolling stock assets and Porterbrook noted a number of significant changes to its business. Table 5 sets out the fair values and revaluations recorded on the Abbey acquisition.

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<sup>11</sup>*The leasing of rolling stock for franchised passenger services. ORR’s reasons for making a market investigation reference to the Competition Commission, 26 April 2007, Annex C, paragraph 82.*

TABLE 5 Fair values of rolling stock arising on the Abbey acquisition of Porterbrook

	£ million			
	MOLA	Post-MOLA rolling stock	Other	Total
Implied NBV before revaluation				
Revaluations				
Fair value NBV of rolling stock after revaluation		✂		

Source: Porterbrook, Abbey

Notes: [✂]

52. The revaluation adjustment percentages are 30 per cent for MOLA (£[✂]) and 29 per cent for post-MOLA rolling stock (£[✂]). The revaluation adjustment for MOLA could arise from a change in discount rates and/or changes in cash-flow projections.

### **DfT**

53. The DfT calculated an IRR for each ROSCO based on its most recent purchase assuming that the MOLA rentals in 2005 were the same as those at the time of the purchase, and would also continue at that level. The IRR was compared with the RFR as at the date of acquisition to determine the surplus. The surpluses were in the range of 1 to 3 per cent (Angel [✂] per cent, HSBC [✂] per cent and Porterbrook [✂] per cent).

54. The DfT also commented that rentals had increased by 2.6 per cent over the two to three years to 2005. If this is correct, then the observed IRRs would be lower because the early years rentals would be lower. We also note that the DfT's risk-free discount rate is likely to be below a corporate hurdle rate. We interpret the DfT's evidence as further support of the argument that there was a significant discount at privatization.

## **Angel–Oxera report**

55. When RBS acquired Angel in December 1997, the revaluation of the rolling stock assets was based on a DRC calculation. These revaluations<sup>12</sup> were rolled back to January 1996 (privatization) giving an estimated DRC value at privatization of around £869 million which is higher than the historic cost and privatization fair value of the assets of £630 million. We have already commented that we believe there was a substantial discount at privatization. We can impute a value for the rolling stock at privatization using the ratios of the two numbers above. Using the rolled-back 1998 DRC, the fraction 869/630 times £1,774 million overall asset value implies a £2,447 million value of assets for all three ROSCOs.

## **Parties' arguments concerning privatization and purchase values**

56. The ORR said 'it seems likely that the asset values implied by privatization prices were, as argued by the ROSCOs depressed at privatisation by a number of factors, including perceptions of the risks faced by the ROSCOs and the extent of competition between buyers, suggesting that caution should be exercised when interpreting these results'.<sup>13</sup> The DfT included the privatization value within its range but acknowledged that the price may have been depressed.

57. The ROSCOs argued that the privatization value was not appropriate. The ORR stated that both Angel and Porterbrook<sup>14</sup> cited the NAO report and the context of privatization risks at the time in support of this. For example, Porterbrook has quoted external surveys of IPO discounts and the gain in the Railtrack share price in the period following its privatization. Porterbrook criticized the level of reliance placed by the CC on the NAO report in seeking to determine an appropriate valuation of Porterbrook (and therefore its level of profitability). Porterbrook also argued that the

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<sup>12</sup>This value was £764 million as at October 1998 after the valuation was completed.

<sup>13</sup>*The leasing of rolling stock for franchised passenger services. ORR's reasons for making a market investigation reference to the Competition Commission, 26 April 2007*, Annex C, paragraph 82.

<sup>14</sup>*Ibid*, Annex C, paragraph 69.

NAO report was prepared for a different purpose, was ten years old and was unable to take account of the evidence from subsequent developments (such as the sale of Porterbrook to Abbey).

58. The DfT and the ORR<sup>15</sup> pointed to the risk of circularity in adopting values derived from the purchase prices as the basis of valuation because excess returns may be capitalized. The DfT commented that it was assumed at privatization (when initial rentals were set) that a competitive market would develop to set the rentals for subsequent lease periods. If the ROSCO owners valued the business at purchase on a DCF basis and assumed that rentals for subsequent lease periods would continue at the same levels as those set at privatization, that would have the effect of capitalizing future monopoly profits.
59. The ROSCOs argued that it was not necessarily the case that excess returns had been capitalized, because of the expectation of a competitive market.<sup>16</sup> The ROSCOs' profitability submissions all include some calculations based on depreciated purchase price. Two ROSCOS (Angel and Porterbrook) also pointed to DRC calculations as objective evidence that there was no circularity in the purchase prices and that therefore the depreciated purchase price had not been inflated as a result of the potential circularity.

***CC comment***

60. We attempted to estimate an opening asset value for MOLA stock to use in our calculation of lifetime returns. Since our analysis of competition is concerned with the period since privatization, we wished to obtain an opening asset value at, or close to, the time of privatization.

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<sup>15</sup>Ibid, paragraph 83.

<sup>16</sup>Porterbrook argued that excess returns have not been capitalized because the Abbey purchase price was based on a detailed and deliberately prudent valuation by Quasar Associates, which did not assume any increase even in nominal lease charges (except where a major refurbishment was being contemplated).

61. Determining an estimate with a reasonable degree of precision was problematic for the following reasons:
- (a) We were not able to obtain any useful data on the market or economic value of an old train in order to build up a depreciation profile.
  - (b) We were not comfortable with using privatization values for MOLA stock as we recognized that they included a significant discount to reflect privatization-specific risks. We did not consider that if the MOLA assets were sold at a discount (undervalued) at privatization, the DfT should be entitled to recapture the discount.
  - (c) We considered that valuations which related to more recent periods provided less strong evidence of the likely opening DRC values. Where recent DRC valuations that had used equivalent new train prices as a starting point were to be rolled back, they would be less reliable indicators of an opening DRC value as they were using higher new train prices than those around the period of privatization.
62. We were able to determine the purchase price for the ROSCOs at their first resale after privatization. These purchases occurred 7 to 23 months after privatization, and we considered that much of the privatization-specific risk which had led to the discounted price would have passed, but that this relatively short period meant that the passenger rail market had changed relatively little.
63. However, we noted that these purchase values carried with them a risk of circularity. We therefore placed less weight on these values, but took them into account and sought other evidence to determine deprival value.
64. We examined the valuation undertaken by the NAO, which sought to estimate the proceeds of a less risky ROSCO privatization. This gave us persuasive evidence that

there was a sizeable discount at privatization and would therefore point to a valuation which was closer to the purchase price valuations.

65. We also noted that Angel's submission included a rollback of the purchase price DRC fair value to privatization, which implies that Angel's DRC asset value at privatization was higher than the DCF fair values. On the basis that there was a significant discount at privatization, and that this DRC value was used to support the purchase price fair values, we can arithmetically extrapolate this uplift to the total privatization asset historic cost book values. This extrapolation would point to a value of around £2,447 million, being about a 15 per cent discount to the revalued purchase price asset base. This implied value is only £92 million lower than the NAO optimistic value which formed the upper limit of the NAO's range of values.
66. We also noted that there was other corroborating evidence (such as Railtrack share price changes and the DfT's assessment of the purchase prices) which also pointed to a significant discount in the privatization prices, and therefore an economic value which might be closer to the purchase prices.
67. We believe it is appropriate to start our interpretation by considering margins and IRRs based on purchase price fair values. For Porterbrook, we have applied a 30 per cent sensitivity to lower the asset base from the value implied at the time of the Abbey purchase to that implied by the Stagecoach purchase (which occurred closer to privatization). These values will therefore form the upper limit of our range of economic asset values. We have noted that there is a risk of circularity in the purchase price values and we also intend to apply a general percentage sensitivity of 15 per cent to assess the significance of a lower asset value which will therefore form the lower limit of our range of asset values. We will then consider our conclusions in the context of this range.

68. However, we note that our analysis has shown that there is considerable uncertainty determining an appropriate asset value. This will have an impact on the nature of the conclusions we can draw from our analyses.