



## **Future Efficient Costs of Royal Mail's Regulated Mail Activities**

### **Top Down Final Conclusions**

**23 January 2006**

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## Glossary

We use the following abbreviations in this report:

August Report	LECG's report entitled, "Future Efficient Costs of Royal Mail's Regulated Mail Activities" dated 2 August 2005
CAA	Civil Aviation Authority
CAGR	Compound annual growth rate
CEPA	Cambridge Economic Policy Associates
Deutsche Post	Deutsche Post World Net
Deutsche Post Study	Letter prices in Europe – Current international letter price comparison, Deutsche Post World Net, January 2004
Frontier Economics Report	Impact of Liberalisation on Efficiency: A Survey, Frontier Economics, January 2002
NERA	National Economic Research Associates
NERA Report	Economics Of Postal Services: Final Report. A Report to the European Commission, DG-MARKT, NERA, July 2004
NIESR	National Institute of Economic and Social Research
Postcomm	Postal Services Commission
Postcomm's initial proposals	2006 Royal Mail Price and Service Quality Review, Initial Proposals, Postcomm, June 2005
RM	Royal Mail Holdings Group plc. Used to denote Royal Mail in tables and footnotes
RMG	Royal Mail Group
RML	Royal Mail's letters business
RUOC	Real Unit Operating Cost ratio, including either depreciation or capital expenditure
RUOE	Real Unit Operating Expenditure. The ratio reflects total operating accounting costs divided by the most relevant unit of output. The ratio is expressed in real terms and is expressed

	before depreciation
Strategic Plan	The Royal Mail Letters Strategic Plan, Discussion Draft, 7 December 2004
TFP	Total Factor Productivity
USO	Universal service obligation
WS Atkins Report	An Efficiency Study of Consignia's Inland Letters Business. A report to Postcomm, WS Atkins, November 2002

# 1 Executive summary

## Introduction

- 1.1 Postcomm is in the process of determining the regulatory arrangements that should apply to Royal Mail's regulated mail activities after the expiry of the current price and service quality control at the end of March 2006. A key input into this review is an assessment of the future efficient costs for Royal Mail's regulated mail activities. Postcomm has engaged LECG to provide this assessment.
- 1.2 Our initial conclusions on the level of future efficient costs for Royal Mail's regulated mail activities were set out in our report "Future Efficient Costs of Royal Mail's Regulated Mail Activities" dated 2 August 2005<sup>1</sup>. We refer to this report hereinafter as our "August Report".
- 1.3 Royal Mail has provided a response to this report, which is set out in its report "Response to LECG's report on Future Efficient Costs of Royal Mail's Regulated Mail Activities", dated September 2005. We refer to this report hereinafter as the "Royal Mail Response".
- 1.4 This report provides LECG's response to Royal Mail's review of our initial top down conclusions.

## Summary of Royal Mail's response

- 1.5 Royal Mail concluded that top down analysis should only be used as a cross check, and should not be used as a primary source for estimating the potential for cost reductions. Royal Mail argued that the bottom-up and internal benchmarking approaches are based on industry and company specific data and are, therefore, more directly relevant<sup>2</sup>. Royal Mail's conclusions can be summarised as follows:<sup>3</sup>

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<sup>1</sup> An excised version of this report is available at [http://www.postcomm.gov.uk/policy-and-consultations/consultations/price-control/LECG\\_efficiency\\_review\\_report\\_excised.pdf](http://www.postcomm.gov.uk/policy-and-consultations/consultations/price-control/LECG_efficiency_review_report_excised.pdf)

<sup>2</sup> Royal Mail Response, page 36

<sup>3</sup> Royal Mail Response, pages 5 and 6

- **Historical analysis of Royal Mail's performance:** Royal Mail has achieved 2.3% per annum efficiencies under the current price control and an overall average of 1.5% per annum under regulation;
- **Benchmarking of other regulated companies:** The full range of comparators used by LECG suggests a real unit operating expenditure ("RUOE") reduction of between 0.0% and 5.7% per annum;
- **TFP comparisons:** Royal Mail placed little weight on the results of analysis of total factor productivity ("TFP") trends in Royal Mail and comparator industries. Royal Mail considered that a more appropriate range was between 0.4% and 2.7% in RUOE terms; and
- **International benchmarking:** Royal Mail is relatively efficient when compared to other universal service providers. For the efficiency-adjusted basic weight step price Royal Mail has the second lowest price out of 12 comparators and for adjusted letters per FTE, Royal Mail is third.

1.6 Royal Mail's conclusions are summarised below:

**Table 1: Royal Mail's estimates of RUOE based on the approaches used by LECG**

Benchmark	RUOE trends
Royal Mail historical trends	1.5% to 2.3%
Outturn regulated company savings	0.0% to 5.7%
Total factor productivity	0.4% to 2.7%
International cost trend evidence	NA

Source: Royal Mail Response, page 63

1.7 Royal Mail indicated that the RUOE trend used for setting the control should be based on both the bottom-up analysis and the internal benchmarking analysis. The top-down analysis should be used only as a cross checks on these results. Royal Mail concluded that the analysis above supports an RUOE trend for the next price control of 1.5%.

### **LECG final conclusions**

1.8 After carefully considering Royal Mail's arguments, we believe that our original conclusions were reasonable. Overall, Royal Mail's proposed judgements are

generally very conservative regarding possible future efficiency, and selective in their treatment of the available data. We understand that First Economics, in its comments to Postcomm, reached similar views<sup>4</sup>.

- 1.9 In this report, we set out in some detail comments on each of Royal Mail's main points. In each of the sections that follow, we first summarise our initial conclusions in further detail. We then summarise Royal Mail's response to our initial conclusions. We then respond to each of Royal Mail's points in turn. In the remainder of this section, we summarise our top-down conclusions.
- 1.10 Top-down analysis is necessary in cost efficiency studies because not all of the mechanisms available to a company for raising efficiency, or reducing costs, over a period can normally be foreseen at the start of that period. Looking at the aggregate impact of initiatives that can be identified at the outset of the price control period (which is the nature of the "bottom-up" analysis that we have carried out) is therefore likely to understate the actual scope for efficiency gains.
- 1.11 We have considered the scope for efficiency savings using a variety of methods. None of these methods by itself provides a precise picture of the scope for savings during the forthcoming price control, and each requires us to exercise a degree of judgement when determining the implications for Royal Mail. However, by approaching the efficiency assessment from a number of different directions, we avoid placing undue weight on any one piece of analysis. Instead, we look at a broad range of evidence and set cost allowances based on the overall picture that emerges. This helps to minimise the extent to which our overall conclusions might otherwise be subject to error.
- 1.12 Our top-down assessment of Royal Mail's future efficient cost path is based on a review of the performance of other postal operators, firms in other regulated industries, and of Royal Mail's own historic performance. Based on our review, we would expect Royal Mail to be able to achieve savings in real unit operating expenditure of between 3.0% and 4.0% a year over the forthcoming price control period. This range is stated in real and constant volume terms. The key points underpinning this conclusion are set out below.

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<sup>4</sup> Comments on LECG's draft report (Part E), First Economics, 26 September 2005

*Historical cost trends*

- 1.13 We anticipate that RML's costs (adjusted for volume and mix differences) will be lower in 2005/06 than was envisaged by Postcomm at the time of setting the current price control. We estimate that the rate of improvement in efficiency, expressed in RUOE terms, to be at least 2.7% a year in constant volume terms up to 2004/05. The rate of efficiency over the entire price control period will depend on the rate of performance improvements in 2005/06. Our analysis suggests, however, that RUOE trends, after adjusting for volumes, one-off costs and non-cash costs, over the entire price control will be close to the implied target of 2.9% set by Postcomm at the start of the current price control.
- 1.14 Prior to when Postcomm was given responsibility for the independent economic regulation of the postal services market, Royal Mail's trend in RUOE improvement (adjusted for volume effects) was lower. Since the introduction of economic regulation, Royal Mail's rate of volume-adjusted operating efficiency growth has therefore increased.
- 1.15 Royal Mail has faced limited competition since 2002/03 but will face greater levels of competition across its entire product range from January 2006. We anticipate an increasing focus on efficiency on the part of management as the scope of competitive pressure increases. As such, we believe that Royal Mail should *at least* be able to achieve savings, expressed in RUOE terms, of 2.9% (i.e. equivalent to what has been achieved over the current price control).
- 1.16 Section 2 provides a specific response to the issues raised by Royal Mail with respect to historical cost trends.

*Summary of cross sector regulatory efficiency savings*

- 1.17 Efficiency targets set by regulators tend on average to be less demanding than the cost reductions actually realised. We estimate that, across industries and across regulatory reviews, the efficiency targets incorporated into price controls have averaged some 2.5% per year in real constant volume terms. We estimate that actual cost reductions achieved, however, across the same periods and industries, have averaged between 4.0% and 4.8%, depending on precisely how they are measured.
- 1.18 It appears, therefore, that regulators have generally underestimated the scope for efficiency gains. This need not imply any weakness in the regulatory process –

one of the original premises of RPI-X regulation is that it encourages companies to outperform against their efficiency targets.

- 1.19 In making comparisons between regulated companies, it is necessary to consider the extent to which readily available efficiency gains have already been captured. The regulatory literature shows that significant catch-up efficiency gains have been achieved by regulated companies in the first five to ten years post privatisation and/ or the introduction of regulatory and competitive price pressures.
- 1.20 This effect is termed, perhaps misleadingly, the “Privatisation Effect”, and has been estimated at between 1.25% and 3.5% a year in RUOE terms. Although it is referred to as an effect of privatisation, it can also be understood as an effect of reduced efficiency incentives for firms in public ownership and facing weak competitive pressures. It is the removal of the resulting embedded inefficiency that has allowed the gains to be achieved post privatisation and liberalisation. Overall, therefore, we see no reason to suppose that similar catch-up efficiency gains should not be available to Royal Mail, regardless of its ownership structure.
- 1.21 The results historically achieved in other regulated sectors, in conjunction with the more one-off gains generally achieved in the first 5 to 10 years of price controls, suggest that annual unit cost savings (in RUOE terms) of between 3% and 4% have typically been achievable in firms that are moving towards an efficient frontier after an extended period of public ownership and of absence of competitive pressure.
- 1.22 Section 3 provides a specific response to the issues raised by Royal Mail with respect to cross sector regulatory efficiency savings.

*Total factor productivity*

- 1.23 Another form of top-down efficiency analysis commonly used in the regulatory context is to estimate operating efficiency trends by deriving TFP trends in different sectors of the economy and then making appropriate adjustments to those TFP trends.
- 1.24 Our TFP analysis indicates that in the short- to medium-term, Royal Mail might be able to achieve RUOE savings of between 1.1% and 4.1% a year, the average of which is 2.6% a year. For reasons set out in Section 24 of our August

Report, on balance we expect that over the forthcoming price control, Royal Mail could achieve RUOE savings at or slightly above the average of this range.

- 1.25 Section 4 provides a specific response to the issues raised by Royal Mail with respect to total factor productivity.

*International benchmarking*

- 1.26 Due to the significant issues that influence data comparability, it is not possible to perform meaningful comparisons of the absolute level of unit costs across international postal operators. Consequently, our analysis has focused on unit cost trends instead.

- 1.27 Overall, the average rate of productivity improvement across postal operators appears low – but we believe that the figure is biased by a number of operators starting from a relatively high level of efficiency, such as Denmark Post and Deutsche Post, and by a number of operators experiencing reductions in efficiency, as is the case (in the figures set out in a recent NERA study) for France, Portugal and Greece.

- 1.28 Productivity trends are also influenced by the stage of liberalisation of the postal market in the country under consideration. Comparing Royal Mail to countries at similar stages in the development of a competitive market suggests greater scope for savings. Other research suggests that, in anticipation of competition, Sweden Post achieved savings of approximately 9% annually over a four-year period and Deutsche Post has achieved cost savings of around 2.5% in constant volume terms.

- 1.29 Section 5 provides a specific response to the issues raised by Royal Mail with respect to international benchmarking.

*Summary of top down findings*

- 1.30 Our top down conclusions are summarised in the table below. Numbers are expressed in constant volume and real terms.

**Table 2: Summary of cross sector regulatory efficiency savings**

Benchmark	RUOE trend
Royal Mail historical performance*	2.7% to 2.9 %
Outturn regulated company savings	3.0% to 4.0%
Privatisation effect**	1.25% to 3.5%
Total factor productivity	Above 2.6%
International cost trend evidence	2.5%

Source: LECG. Note: \* 2.7% based on actuals to 2004/05 and 2.9% based on RM budget for 2005/06 adjusted for one off costs and non-cash costs. \*\* Typically, the so-called privatisation effect is additional to normal saving expectations. As such, this range indicates the minimum expected trend.

- 1.31 Across all of the regulated industries, significant opportunities for productivity gains have emerged in two situations: in periods immediately following the onset of price regulation; and when the prospect of competition has started to become real. These “catch-up” gains reflect the early identification and elimination of embedded inefficiency built up during the periods when the companies were under public ownership.
- 1.32 Royal Mail is different from other regulated companies in that it faces potential competition while under public ownership. That does not mean, however, that the scope for increasing efficiency is any less. We would anticipate that the opportunities for “catch-up” gains in efficiency are as real for Royal Mail as they have been for other regulated companies. As such, we believe that Royal Mail’s performance over the current price control, which coincides with a period of some competitive pressures and price regulation, provides a lower bound for the level of efficiencies that can be expected over the forthcoming price control.
- 1.33 Cost control targets imposed by regulators are rarely welcomed by the companies they regulate, and are often described publicly by the regulated companies as unachievable. Notwithstanding this, these targets are generally exceeded, as our analysis has shown. The average productivity gains achieved by other regulated companies are therefore instructive. We believe that this range should form the upper bound for the level of efficiencies that can be expected over the forthcoming price control.

- 1.34 Our conclusions on the implications for Royal Mail of the top down analysis that we have carried out remain unaltered. We continue to believe that, on balance, the results of the comparative top-down analysis suggest an RUOE trend of between 3.0% and 4.0% a year in constant volume terms.

## 2 Royal Mail historical cost trends

### Introduction

- 2.1 In this section, we consider Royal Mail's response to our review of historical efficiency trends. We first summarise our initial conclusions. We then summarise Royal Mail's response to our initial conclusions. We then respond to each of Royal Mail's points in turn. Lastly, we set out our final conclusions.

### LECG initial conclusions

- 2.2 Our initial conclusions are set out in Section 22 of our August Report. We performed a review of Royal Mail's performance under the current price control. Implicit in the current price control was a target reduction in Royal Mail's RUOE ratio of around 5.1% per year, in constant volume terms, over the period 2002/03 to 2005/06<sup>5</sup>. The calculation of efficiency gains, however, appeared to be affected by an over-estimation of costs in the year prior to the current price control (i.e. in 2002/03). Opening year costs were in fact lower than expected. We allowed for this, and estimated that the actual efficiency target, on a volume adjusted RUOE basis, was 2.9% per year, across the period 2002/03 to 2005/06.
- 2.3 We showed that prior to the point in time when Postcomm was given responsibility for the independent economic regulation of the postal services market, Royal Mail achieved lower levels of savings than in the period immediately after. We showed that since the introduction of economic regulation, Royal Mail's rate of volume-adjusted operating efficiency growth had increased. Royal Mail's own projections at that time anticipated efficiency savings over the current price control of 2.8% in constant volume terms.
- 2.4 We noted that Royal Mail would face greater levels of competition across its entire product range from January 2006. Consequently, we anticipated an increasing focus on efficiency on the part of management as the scope of competitive pressure increases.

<sup>5</sup> Review of Royal Mail Group's Price and Service Quality Regulation, Postcomm, February 2003, Tables 7.4 and 7.13

### Royal Mail's response

- 2.5 Royal Mail's response to our historical cost trend analysis is set out in Section 2 of its submission<sup>6</sup>. In summary, Royal Mail raised two key issues<sup>7</sup>. First, Royal Mail considered that the reference to RUOE savings of 5.1% is misleading "*given that in the body of the report the calculations are recognised by LECG as being flawed*". Royal Mail also considered the adjusted target of 2.9% to be overstated.
- 2.6 Second, Royal Mail questioned our analysis of historical performance and concluded that the "*actual RUOE performance under the Renewal Plan is 2.3%*". Royal Mail's arguments are summarised by issue below.

### Postcomm's current price control efficiency target

- 2.7 We concluded that implicit in the current price control is a target reduction in Royal Mail's RUOE ratio of around 5.1% per year, in constant volume terms, over the period 2002/03 to 2005/06. Royal Mail argued<sup>8</sup> that the target is a result of our analysis and not based on an analysis conducted by Postcomm. As such, it is not appropriate to use the target as a headline figure. Royal Mail also noted that the target is based on a WS Atkins projection of 02/03 operating costs that turned out to be £630m higher than the actual outturn for the year ending April 2003. Royal Mail stated that adjusting for this outturn reduced the projected efficiency savings by over 2% per annum.
- 2.8 While Royal Mail acknowledged that we adjusted the forecast of 5.1% for actual outturn, it believed that our revised figure of 2.9% was also "*potentially misleading*"<sup>9</sup>, because the adjustment to constant volumes may be overstated given that volumes are falling and cost elasticities need not necessarily apply because of the lags it believes are associated with removing costs. Royal Mail also noted that the analysis used forecast rather than actual data for two of the three years of the price control. Royal Mail believed that it is more appropriate to look at the expected outturn for the price control period and actual outturn for the Renewal Plan period.

<sup>6</sup> Response to LECG's report on "Future Efficient Cost of Royal Mail's Regulated Mail Activities", Royal Mail, September 2005 ("Royal Mail Response")

<sup>7</sup> Royal Mail Response, paragraphs 2.3 to 2.4

<sup>8</sup> Royal Mail Response, paragraphs 2.5 to 2.6

<sup>9</sup> Royal Mail Response, paragraph 2.7

### Actual performance under the current price control

- 2.9 Royal Mail reviewed the change in costs before and after price control regulation and concluded<sup>10</sup> that for the decade prior to regulation (i.e. up to 2000/01) average unit costs declined by about 1.0% per year (not adjusted for volume). Royal Mail estimated that, for the period during which Royal Mail has been regulated (i.e. from 2000/01 to 2004/05), the average cost per item reduction was around 1.5% per annum over the regulated period and around 2.3% per annum over the Renewal Plan period, in constant volume terms.
- 2.10 Royal Mail argued that although these figures generally show greater annual savings than the savings achieved before regulation, they were significantly influenced by a considerable step reduction in costs in 2003/04 relating to a fall in overhead costs. It noted that, if Share in Success payments were included as a cost of facilitating change, these figures were about 0.3% per annum lower. Royal Mail's analysis is summarised in the table below (not in constant volume terms):

**Table 3: Historical cost trends Royal Mail**

	2000/01	2001/02	2002/03	2003/04	2004/05	Regulated Period CAGR	Renewal Period CAGR
Costs in 00/01 prices (£m)	5,184	5,379	5,253	5,066	5,016	-0.8%	-2.3%
Volumes (m)	19,233	19,887	19,648	19,923	20,143	1.2%	0.4%
Unit costs	0.270	0.270	0.267	0.254	0.249	-1.9%	-2.7%

Source: Royal Mail Response, September 2005, page 13. CAGR based on LECG analysis. RUOE trends are not stated in constant volume terms. In constant volume terms, the CAGR over the regulated period was minus 1.5%, and the CAGR over the renewal period was minus 2.3%.

- 2.11 Royal Mail claimed that, to ensure consistency of comparison, our estimates of expected cost savings over the current price control period of 2.8% and 2.9% needed to be adjusted for the following<sup>11</sup>:
- the impact of unaddressed and access volumes. Royal Mail claimed that the inclusion of access volumes over a growth period in access in

<sup>10</sup> Royal Mail Response, paragraph 2.9 and 2.10

<sup>11</sup> Royal Mail Response, paragraph 2.11 and 2.12

particular leads to an overstatement of efficiency savings due to the lower work content of access products;

- the actual reduction in unit costs (volume-adjusted) between 2003/04 and 2004/05, which Royal Mail now says was only 1.7% rather than the 4.4% previously forecast; and
- the impact of a fall in USO volumes between 2004/05 and 2005/06, for which the cost elasticity might be expected to be higher than the 0.6 figure assumed owing to lags in taking out costs as volumes fall.

2.12 Royal Mail concluded:

*“prior to the period of regulation, the volume-adjusted unit cost reduction achieved by Royal Mail was around 0.4% per annum in real terms. Since the introduction of regulation it has been higher but this result is skewed by a reduction in 2003/04 arising from a once-off reduction in overheads. The evidence for unit cost reduction achieved over a three-year period under regulation supports a figure of about 2.3%, while the overall average under regulation is closer to 1%. This is in contrast to the higher figures presented in the LECG report, which Royal Mail considers to be overstated”.*<sup>12</sup>

### **LECG response**

2.13 We provide a response to each of the key points raised by Royal Mail below.

#### **Postcomm’s current price control efficiency target**

2.14 In Section 6 of our August Report, we showed that the efficiency target contained within the current price control was 5.1% per year, in constant volume terms, over the period 2002/03 to 2005/06. This figure can be readily calculated from Postcomm’s February 2003 Price Control Report<sup>13</sup>.

2.15 In paragraph 6.31 of our August Report, we showed that Postcomm’s forecast of operating costs for Royal Mail’s regulated activities in 2002/03 – of £6,397m in 2003/04 prices – turned out to be £628m higher than actual operating expenditure. Postcomm’s estimate of operating expenditure for 2002/03 and

<sup>12</sup> Royal Mail’s Response, paragraph 2.13

<sup>13</sup> “Review of Royal Mail Group’s Price and Service Quality Regulation”, Postcomm, February 2003, Tables 7.4 and 7.13.

resulting efficiency trends were based on a WS Atkins forecast made in October 2002. Given that, WS Atkins' forecast for 2002/03 was made 6 months into the financial year the scale of the difference is surprising. Royal Mail has not provided any information to account for this discrepancy.

- 2.16 Adjusting for this discrepancy – and taking as an assumption that the original forecast was simply erroneous – gives a restated implicit efficiency target of 2.9% per year. We regard this as an important benchmark (and not in any way misleading) because it allows us to consider how costs were predicted to change, from the lower cost base, over the price control period.
- 2.17 We do not agree with Royal Mail that the adjustments we made to express this figure on a constant volume basis lead to the figure being overstated because – regardless of any lags associated with removing costs – the forecast change in volume over the period was small. Average volumes were forecast to decline by around 0.4% per annum<sup>14</sup>. Using Royal Mail's cost elasticity of 60%, this equates to an adjustment of approximately 0.2% from the RUOE trend unadjusted for volume. Any potential overstatement is therefore likely to be immaterial.
- 2.18 Second, we concluded in our August Report (paragraphs 8.25 to 8.34) that costs are in any case likely to respond more quickly to changes in volume than Royal Mail assumes. Evidence suggests that variable/ incremental costs are likely to change immediately with changes in volume. We believe that there would be no lag effects for small volume changes, as originally forecast by Postcomm.

#### **Actual performance under the current price control**

- 2.19 In paragraphs 22.18 to 22.37 of our August Report, we set out our analysis of historical costs. We concluded that Royal Mail's RUOE before exceptional items had fallen by an average of 2.5% per annum in real terms before adjusting for volume over the period 2000/01 to 2003/04. Royal Mail does not appear to dispute the validity of this calculation.
- 2.20 Royal Mail presents different data and concludes that over the period 2000/01 to 2004/05 (i.e. the period of regulation) RUOE has fallen by only 1.9% before adjusting for volume. Using Royal Mail's data above, the RUOE reduction over

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<sup>14</sup> Growth rate based on actual volumes for regulated activities where available as provided by Postcomm

the period 2000/01 to 2003/04 (i.e. the period considered in the preceding paragraph) was also around 1.9% per annum.

- 2.21 The scope of business covered by Royal Mail's figures above is narrower than we used originally, and any comparison between the two sets of figures is complicated by changes in the allocation of costs to products and activities. It was for this reason that we originally considered the historical cost trend of Royal Mail's regulated activities, as defined by Conditions 2 and 19 of Royal Mail's license (i.e. excluding Non-USO Non-Price Control products). This wider scope of business is consistent with the scope of our efficiency study and avoids issues with cost allocation between USO products and price controlled but non-USO products.
- 2.22 Irrespective of the scope of business, we have a number of issues with Royal Mail's analysis. First, its volume adjustment appears to be high (and therefore its volume-adjusted figures low). Although we cannot see how its adjustment has been performed, it is larger than the figure we compute.
- 2.23 Second, the two periods that Royal Mail uses – 2000/01 to 2004/05 and 2001/02 to 2004/05 – are both different from the current price control period (i.e. 2002/03 to 2004/05). Over the current price control period Royal Mail has achieved RUOE reductions of 3.5% per year before adjusting for volume and 2.7% after adjusting for volume. We believe that these figures provide a better comparator, because:
- whilst Royal Mail has been subjected to a form of price control since 2001, it has only been subjected to fully-considered incentive-based regulatory price pressure since April 2003; and
  - the period is consistent with the current price control. In comparing Postcomm's price control target of 5.1%, adjusted to 2.9%, it is necessary to compare actual performance over the same period.
- 2.24 Royal Mail's budget<sup>15</sup> indicates that efficiency savings will offset normal inflation of 2.7% and pay inflation of 3.5% in 2005/06. This suggests that RUOE trends, adjusted for volumes, one-off costs and non-cash costs, are forecast to be in the range 2.7% and 3.5%. Given that Royal Mail has achieved savings of 2.7% to

<sup>15</sup> Royal Mail Group plc, Budget Proposal 2005-06, page 26

date, we believe that Royal Mail will be close to the implied target of 2.9% set by Postcomm at the beginning of the price control.

- 2.25 We note that the DTI reaches a similar conclusion: “*the business has (in total cost terms) met the efficiency targets set for it at the last review*”<sup>16</sup>.

### Final conclusions

- 2.26 A summary of historical RUOE trends, in constant volume terms is shown in the table below:

**Table 4: LECG initial conclusions on historical RUOE trends**

Period	Source	CAGR	Constant Volume CAGR
2000/01 to 2004/05	Royal Mail	-1.9%	-1.5%
2001/02 to 2004/05	Royal Mail and LECG restated	-2.7%	-2.3% to -2.4%*
2002/03 to 2004/05	LECG analysis of RM data	-3.5%	-2.7%
2004/05 to 2005/06	Royal Mail forecast	NA	-2.7% to -3.5%**

Source: LECG analysis and Royal Mail data. Note: \* Restated by LECG using our stated approach to estimating CAGR in constant volume terms (refer to our August Report). \*\* Adjusted to exclude one off costs and non cash costs

- 2.27 Royal Mail has faced limited competition since 2002/03 but will face increasing levels of competition across its entire product range from January 2006. We anticipate an increasing focus on efficiency on the part of management as the scope of competitive pressure increases.
- 2.28 As such, we believe that Royal Mail should *at least* be able to achieve savings, expressed in RUOE terms, equivalent to those achieved over the current price control period. For the reasons set out above, we believe that those actual gains achieved – expressed in constant volume terms – are at or close to the levels implied by the current price control of 2.9% per year.

<sup>16</sup> Ibid

### **3 Historical efficiency trends in other regulated sectors**

#### **Introduction**

- 3.1 In this section, we consider Royal Mail's response to our review of historical efficiency trends in other regulated sectors. We first summarise our initial conclusions. We then summarise Royal Mail's response to our initial conclusions. We then respond to each of Royal Mail's points in turn. Finally, we set out our final conclusions.

#### **LECG initial conclusions**

- 3.2 LECG's initial conclusions are set out in full in Section 23 of our August Report. We concluded that comparisons with other regulated companies are commonly used to provide high-level indications of the scale of future efficiency savings. We found that when comparing RUOE trends to the assumptions and targets set by regulators, regulators have generally underestimated the scope for efficiency gains. The average annual cost target has been 2.5% in constant volume terms. However, the average compound reduction in costs has been between 4.0% and 4.8% on a volume adjusted RUOE basis.
- 3.3 We concluded that in making comparisons between regulated companies, it is necessary to consider the extent to which readily available efficiency gains have already been captured. The regulatory literature shows that significant catch-up efficiency gains were achieved by regulated companies in the first five to ten years post privatisation, and/ or the introduction of regulatory and competitive price pressures. Based on comparisons with other industries that were formerly under public ownership and without effective price regulation or competition, we concluded that there were likely to be 'catch-up' efficiency gains available to Royal Mail. We quantified this catch up element at up to 3.5% in RUOE terms.
- 3.4 We concluded that the results achieved in other regulated sectors, in conjunction with the more one-off gains generally achieved in the first five to ten years of price controls, implied that annual unit cost savings (i.e. RUOE) of at least 3.0% to 4.0%, in constant volume terms, should be achievable. This was a conservative estimate: we believe that a higher range could reasonably have been supported.

### Royal Mail's response

- 3.5 Royal Mail's response to LECG's historical cost trend analysis is set out in Section 6 of its report<sup>17</sup>. Royal Mail argued that the RUOE estimates presented in Table 245 of LECG's August Report range between 0.0% and 5.7%. Royal Mail argued that this showed considerable diversity in the RUOE trends. It contends that this illustrates the considerable diversity in the starting efficiency levels of those companies<sup>18</sup>.
- 3.6 Royal Mail believed that the trends in other regulated sectors are not relevant to the postal sector because it was so distinct from other regulated sectors. Royal Mail pointed out that it is still under public ownership and has the highest input ratio of labour to capital. Royal Mail indicated that a range of factors needed to be considered<sup>19</sup> including: the strength of incentives, including ownership structure; the comparability of input mix and input price growth (e.g. wage growth) ; the comparability of the initial efficiency positions; atypical performance; the comparability of the industries and the potential for technological development; the comparability of volume growth and the impact of economies of scale; the regulatory cycle and, to a lesser extent, the business cycle; the controllability of costs; the comparability of quality-of-service performance; and the consistency of the measures.
- 3.7 Royal Mail concluded, "*LECG makes a selective choice of the efficiency range from a wider sample range and ignores the greater commercial flexibility of comparators which are privatised and not people-intensive*".<sup>20</sup>

### LECG response

- 3.8 Our August Report showed that comparisons with other regulated companies are commonly used by Regulators to provide high-level indications of the scale of potential future efficiency savings. We believe, therefore, that our approach is wholly in line with regulatory best practice.

<sup>17</sup> Response to LECG's report on "Future Efficient Costs of Royal Mail's Regulated Mail Activities", Royal Mail, September 2005.

<sup>18</sup> Royal Mail's Response, paragraph 6.7

<sup>19</sup> Royal Mail's Response, paragraph 6.8

<sup>20</sup> Royal Mail's Response, paragraph 1.6

- 3.9 We do not believe that we have been selective in our choice of efficiency range. The results of aggregate savings achieved by regulated utilities have been published in connection with a number of price control reports, as described below.
- 3.10 Frontier Economics, in a 2002 report on the impact of liberalisation on efficiency<sup>21</sup>, concluded, “*when capital inputs are taken into account, real unit cost reductions are generally lower. This is consistent with the view that some degree of substitution of capital for labour inputs has occurred in these sectors over the period since privatisation. Nevertheless substantial average annual cost reductions have been made. On balance we believe that this evidence is consistent with medium-term unit reductions relative to RPI of between 2% and 7% per year, for a constant level of service quality cost (and including capital inputs)*”.
- 3.11 That range was narrowed in the conclusions from a more recent (2003) study conducted for Ofwat by Europe Economics<sup>22</sup>, which concluded, “*the evidence from analysis of the UK regulated infrastructure firms suggests that savings of the order of 3 to 5 per cent per annum in real operating expenditure have been achieved since privatisation*”.
- 3.12 The CAA published further analysis on this issue in 2004, as summarised below.

**Table 5: Compound annual RUOE reductions**

Regulated Company	Period	RUOE reductions	RUOE adjusted for volume growth
Water	1992/93-2001/02	2.5% to 2.6%	2.5% to 2.6%
Sewerage	1992/93-2001/02	0.1% to 0.9%	0.0% to 0.9%
Electricity distribution	1990/91-2000/01	3.4% to 4.1%	3.1% to 3.8%
NGC	1990/91-2001/02	4.9% to 6.0%	4.6% to 5.7%
NIE	1992/93-1999/00	4.4%	3.9%
BT (exchange lines)	1995/96-2000/01	3.5%	3.4%

Source: “Supporting paper 4: Top-down efficiency analysis”, CAA, November 2004.

<sup>21</sup> The Impact of Liberalisation on Efficiency, Frontier Economics, prepared for Postcomm January 2002. Page 30

<sup>22</sup> Scope for Efficiency Improvement in the Water and Sewerage Industries, Final Report, Europe Economics, March 2003

- 3.13 The CAA concludes that the “*figures show that other privatised companies have generally been able to reduce real unit opex by between 2.5% and 6% per annum (a range that is now often quoted in studies of the achievements of regulated monopolies since privatisation)*”<sup>23</sup>. It is clear that in forming its conclusion the CAA narrowed the range by excluding the sewerage sector.
- 3.14 Regulatory precedent shows, therefore, that it is normal to narrow the range, to ensure outliers or atypical results are properly controlled for and/ or excluded. It is notable that one of Royal Mail’s advisers, Oxera, has in the past taken exactly this approach. Oxera’s 2003 report for the Office of the Rail Regulator concluded, “*the analysis shows a general reduction in RUOE for all industries, and suggests that, on average, and excluding some of the extreme observations, annual reductions in RUOE of 2.5% – 5.5% have been achieved since privatisation*”.<sup>24</sup>
- 3.15 Given the evidence above, we disagree strongly with Royal Mail’s assertion that we have been in any way selective in our presentation of the evidence. It is notable that the ranges set out above, derived by other commentators, typically have higher upper limits for efficiency gains achieved than those that we put forward in our initial conclusions.
- 3.16 We also strongly reject Royal Mail’s assertion that we have not considered whether the achievements of other regulated monopolies can be applied to the postal sector. Our August Report sets out in some detail the reasons why we believe it is appropriate to compare such trends. For example, in forming our conclusions, we considered the following factors, *inter alia*:
- there are strong incentives for Royal Mail to decrease costs over the next price control. Royal Mail has faced limited competition since 2002/03 – but will face greater levels of competition across its entire product range from January 2006. One of Royal Mail’s consultants, Oxera, supports the view that there is a strong relationship between efficiency and competition. Oxera concludes, “*the rate of improvement in companies’ efficiency*

<sup>23</sup> Supporting paper 4: Top-down efficiency analysis, CAA, November 2004.

<sup>24</sup> Operating Cost Reductions in Regulated Network Industries, Oxera, July 2003

*appears to be related to competitive conditions rather than the type of ownership*".<sup>25</sup>

- Royal Mail is starting from an inefficient position. As the DTI has stated, *"Royal Mail has a significant way to go to attain the efficiency, productivity and service levels achieved by its peers"*. In terms of incentives, the DTI recognises that *"further progress in the forthcoming price control should be expected"*.<sup>26</sup>
- we agree that in making comparisons between regulated companies, it is necessary to consider the extent to which readily available efficiency gains have already been captured. We showed that significant catch-up efficiency gains have been achieved by regulated companies in the first five to ten years post privatisation, and/ or the introduction of regulatory and competitive price pressures. This 'catch-up' element of efficiency has been estimated at up to 3.5% in RUOE terms. We see no reason to suppose that similar catch-up efficiency gains should not be available to Royal Mail, especially given its starting position;
- the scope for technological development and labour substitution is significant. Royal Mail's Strategic Plan supports this view and focuses on the need to *"increase the use of automation and machinery across the network to drive productivity"*<sup>27</sup>; and
- in line with the CAA's approach and that of most other regulators, we have adjusted for differences in volume growth across industries and differences in economies of scale.

### **LECG final conclusions**

- 3.17 Comparisons with other regulated companies are commonly used to provide high-level indications of the scale of future efficiency savings. The results that we have presented are not selective and are consistent with the conclusions of other regulators, and indeed with those of one of Royal Mail's own consultants, as shown in the table below:

<sup>25</sup> Benchmarking of Royal Mail's overheads, Report prepared for Royal Mail, Oxera, 9 September 2005

<sup>26</sup> Shareholder perspective on Royal Mail Price and Service Quality Review and your Initial proposals, DTI, 31 August 2005, paragraph 4

<sup>27</sup> Royal Mail response, paragraph 5.5

**Table 6: Summary of cross sector regulatory efficiency achieved savings in RUOE terms**

Benchmark	Range
CAA	2.5% - 6.0%
Europe Economics	3.0% - 5.0%
Frontier Economics	2.0% - 7.0%
Oxera	2.5% - 5.5%

Source: CAA, Europe Economics, Frontier Economics, Oxera and LECG analysis

- 3.18 Our analysis indicates that the average compound reduction in costs is between 4.0% and 4.8%, depending on precisely how these costs are measured. This is not the simple average of the high and low ends of the range, but reflects the average of the full set of values within this range (refer to Tables 244 and 245 in our August Report).
- 3.19 In making comparisons between regulated companies, it is necessary to consider the extent to which readily available efficiency gains have already been captured. Our research shows that significant catch-up efficiency gains have been achieved by regulated companies in the first five to ten years post privatisation and/ or the introduction of regulatory and competitive price pressures. This effect has been estimated at up to 3.5% a year in RUOE terms. As noted above, Oxera itself recognises that the effect is related to competitive conditions rather than type of ownership.
- 3.20 We therefore see no reason to suppose that similar catch-up efficiency gains should not be available to Royal Mail. Royal Mail states, but provides no evidence in support the statement, that our analysis ignores the greater commercial flexibility of comparators, which are privatised and are not people intensive. However, in stating this Royal Mail ignores the level of efficiency it has actually achieved under the current price control (i.e. at least 2.7%<sup>28</sup>), its own plans for extensive capital substitution and the incentives that increased competition will provide.

<sup>28</sup> Based on Royal Mail's own data for the period 2002/03 to 2004/05.

- 3.21 We do not, therefore, see any reason to change our initial conclusions. The results historically achieved in other regulated sectors, in conjunction with the more one-off gains generally achieved in the first 5 to 10 years of price controls, suggest that annual unit cost savings (in RUOE terms) of at least 3% to 4% have typically been achievable in firms that are moving towards an efficient frontier after an extended period of public ownership and absence of competitive pressure. We believe that this provides evidence as to the scale of efficiency gains available to Royal Mail.
- 3.22 We understand that First Economics, in its comments to Postcomm, reaches similar views<sup>29</sup>.

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<sup>29</sup> Comments on LECG's draft report (Part E), First Economics, 26 September 2005

## 4 Forecasting Royal Mail's total factor productivity

### Introduction

- 4.1 In this section, we consider Royal Mail's response to our review of total factor productivity trends in industries that are comparable to Royal Mail. We first summarise our initial conclusions. We then summarise Royal Mail's response to our initial conclusions. We then respond to each of Royal Mail's points in turn. Finally, we set out our final conclusions.

### LECG initial conclusions

- 4.2 Our initial conclusions are set out in full in Section 24 of our August Report<sup>30</sup>. A number of UK industry regulators have commissioned assessments of the potential for productivity gains, based on comparisons with other regulated sectors or general economic sectors of the economy. Such studies have been performed in two different ways – either using nature of work comparisons or by using simple productivity ratios such as RUOE. We performed a nature of work comparison, based on TFP trends. Historic trends can be observed in other industries and aggregated to the company or industry in question.
- 4.3 In performing our analysis, we indicated that any estimate of achievable productivity paths for Royal Mail is necessarily approximate. We therefore used the estimates derived from TFP figures as only one of a range of indicators in assessing the overall productivity improvements available to Royal Mail.
- 4.4 Across all of the regulated industries, significant opportunities for productivity gains have emerged under price regulation and as the prospects for competition strengthened. We expected similar gains – which reflect the identification and elimination of embedded inefficiency – to be available to Royal Mail. Factoring in these 'catch-up' efficiency gains provided an estimate, in RUOE terms, of forward available efficiency gains of between 1.1% and 4.1% a year – the average of which is 2.6% a year.

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<sup>30</sup> "Future Efficient Costs of Royal Mail's Regulated Mail Activities", LECG, 2 August 2005.

## Royal Mail's response

4.5 Royal Mail's response to LECG's TFP analysis is set out in Section 8 of its report<sup>31</sup>. Royal Mail's response can be summarised as follows<sup>32</sup>:

- *“Royal Mail believes that TFP analysis should be used only as a sense check to other more detailed and directly relevant analysis (e.g. bottom-up assessments and econometric analysis) where this is available and should not be used to set the level of efficiency for the price control review. Royal Mail believes that using TFP analysis only as a sense check is consistent with good regulatory practice. The primary reason for this is the degree of subjectivity and uncertainty of the approach, which can result in inappropriate benchmarks being estimated”;* and
- *“In order to demonstrate the uncertainty involved in this approach and to present an alternative view based on it, Royal Mail has followed LECG's approach, but has adopted what it believes is a more prudent and appropriate approach to TFP analysis for Royal Mail. Royal Mail's calculations result in a potential range for the RUOE reductions of 0.4% to 2.7% per annum”.*

4.6 Royal Mail's response is summarised under the following headings below: regulatory precedent; accuracy of nature of work approach; a conservative approach; 'nature of work' estimates; and conclusions.

### Regulatory precedent

4.7 Royal Mail argued that TFP analysis is not normally used as a means of directly setting efficiency targets. Royal Mail argued<sup>33</sup> that where TFP has been used by regulators, it has been as a sense check for their efficiency estimates based on more accurate techniques, in situations where more detailed data is scarce or not available, and/ or in conjunction with a range of other estimates. In support of this position, Royal Mail referred to precedents from Ofgem, Ofwat and the CAA.

<sup>31</sup> Response to LECG's report on "Future Efficient Costs of Royal Mail's Regulated Mail Activities", Royal Mail, September 2005.

<sup>32</sup> Royal Mail's Response, Section 8, page 43

<sup>33</sup> Royal Mail's Response, paragraph 8.2

### Accuracy of nature of work approach

- 4.8 Royal Mail argued that, *“the reason why regulators have combined the nature of work approach with other approaches is that TFP is inherently subjective”*<sup>34</sup>; and that we had recognised this inherent subjectivity.

### A ‘Conservative’ approach

- 4.9 Royal Mail argued that we did not adopt a conservative approach. It illustrated this via a review of Ofwat’s recent final determinations. In that review, Europe Economics was commissioned to assess an efficiency range based on TFP analysis, and concluded that the total scope for reduction in annual real base service operating expenditure was between 2% and 4% in the water sector and between 2.25% and 4.25% in the sewerage sector<sup>35</sup>. Ofwat concluded that there was *“an overall scope for efficiency over the five years of around 2.4% a year”*<sup>36</sup>. Royal Mail infers from this that *“Ofwat consider the so-called ‘privatisation effect’ to be far lower than suggested by Europe Economics”*<sup>37</sup>.

### Nature of work estimates

- 4.10 Royal Mail accepted our Scenario 1 nature of work estimate: *“the LECG figure is appropriate since it is based on an updated version of the data originally used by Royal Mail, which at the time of its analysis had not yet been published”*<sup>38</sup>.
- 4.11 Under Scenario 2 LECG made some adjustments to the industries against which Royal Mail was compared. Rather than simply using “distributive trades” as a comparator for all of Royal Mail’s activities, LECG removed “hotels and catering” from distributive trades for the purposes of making a comparison to Royal Mail’s delivery network; LECG replaced “distributive trades” with “manufacturing” for comparisons with mail centres; and LECG used “transport” for Royal Mail’s logistics operations. Royal Mail disagreed with these adjustments, arguing that<sup>39</sup>:
- mail centres are not expected to be comparable to manufacturing plants during the next price control period. Royal Mail argued that the

<sup>34</sup> Royal Mail’s Response, paragraph 8.7

<sup>35</sup> PR 04 Scope for Efficiency Improvement, Europe Economics, November 2003

<sup>36</sup> Future water and sewerage charges 2005-10: Final determinations, Ofwat, November 2004, p. 147

<sup>37</sup> Royal Mail’s Response, paragraph 8.12

<sup>38</sup> Royal Mail’s Response, paragraph 8.15

<sup>39</sup> Royal Mail’s Response, paragraph 8.16

“distributive trades” sector is more relevant because unskilled manual staff work in the mail centres;

- Royal Mail’s choice of “distributive trades” for delivery offices reflects both the large proportion of manual workers in the industry and the repetitive nature of tasks. From this it argued that **all** “distributive trades” are relevant. As such, removing the hotel and catering from the estimate could be viewed as selection bias; and
- logistics primarily involves managing the interchange of mail. It is therefore most closely associated with similar activities in “distributive trades”.

4.12 Royal Mail suggested that our conclusion – that our Scenario 2 provided a more robust nature of work comparison – was “*a matter of opinion and thereby subjective*”<sup>40</sup>. Royal Mail concluded that by “*using few and equally plausible assumptions, [it] calculated a range of 0.8% to 1.1% of TFP growth compared to LECG’s range of 0.8% to 1.5%*”<sup>41</sup>.

#### **Estimating the RUOE**

4.13 When using TFP indices it is common to adjust for differences between comparator companies. LECG identified a number of factors, other than the nature of work comparison, which could influence the rate at which TFP gains could be realised. Royal Mail argued that a number of these factors overstate the long-run annual scope for cost reductions. Royal Mail made the following points<sup>42</sup>.

- the “privatisation effect” that we calculate (at 1.25% to 3.5%) is inconsistent with the difference between (a) our estimate of RUOE reductions achieved by privatised companies after liberalisation (3% to 4%) and (b) Europe Economics’ estimate of the long run scope for efficiency improvements (1.5% to 1.75%);
- the CAA has estimated the privatisation effect to be 1% in TFP terms;

<sup>40</sup> Royal Mail’s Response, paragraph 8.20

<sup>41</sup> Ibid, paragraph 8.21

<sup>42</sup> Ibid, paragraphs 8.24 to 8.26

- Ofwat implicitly considered (see above) the privatisation effect to be lower than that suggested by Europe Economics;
- a market incentive effect does not currently apply to Royal Mail because it has not been privatised;
- at the start of the next price control Royal Mail will have been regulated for five years during which it has taken out a significant amount of cost;
- Royal Mail has a greater labour input than the companies used to estimate the privatisation effect; and
- Royal Mail has little scope for capital substitution due to the exclusion of many of Royal Mail's original capex plans from our forward financial projections.

4.14 Royal Mail concluded, "*a more prudent approach, akin to that of Ofwat and Europe Economics' in its report for Water, is more appropriate for Royal Mail than that proposed by LECG, namely 0.5% to 2.5%*"<sup>43</sup>.

#### **Royal Mail conclusions**

4.15 Royal Mail's conclusions are summarised in the table below.

**Table 7: Royal Mail's TFP estimate**

	<b>Low</b>	<b>High</b>
(1) Nature of work TFP benchmark	0.8%	1.1%
(2) TFP for UK Economy	1.3%	1.3%
(3) TFP outperformance = (1) - (2)	-0.5%	-0.2%
(4) Capital substitution	0.8%	0.8%
(5) Input price effect	-0.4%	-0.4%
(6) Long run potential for outperformance = (3) + (4) + (5)	-0.1%	0.2%
(7) Privatisation effect	0.5%	2.5%
<b>RUOE estimate = (6) + (7)</b>	<b>0.4%</b>	<b>2.7%</b>

Source: Royal Mail Response, Table 8.2

<sup>43</sup> Royal Mail's Response, paragraph 8.27

- 4.16 Royal Mail said that this range is broadly consistent with its actual reduction in unit costs during the current price control period.

### **LECG's response**

- 4.17 Royal Mail has not argued that our methodology is flawed or that we have made mathematical errors in its application. In effect, it has taken a different view on the extent to which experience in other industries is likely to be representative of the opportunities available within Royal Mail's own operations. We do not find its arguments compelling.

### **Regulatory Precedent and accuracy of nature of work approach**

- 4.18 Royal Mail's own research confirms that most regulators use this type of analysis – as we have – in conjunction with a range of other estimates. In general, there is no indication given as to whether one form of evidence assumes a higher or lower weighting. For example:

- *"...the CAA recognises that the comparisons set out in this paper are just one way of looking at efficiency. The CAA has therefore looked at other evidence from benchmarking studies and its own bottom-up review of NATS' March 2004 business plan before arriving at any firm judgments on the opex allowances it should set for CP2"<sup>44</sup>; and*
- *"both a total factor productivity study commissioned by Ofgem (Cambridge Economic Policy Associates, Productivity Improvements in Distribution Network Operators, November 2003) and the business plans of several DNOs suggest that ongoing efficiency savings will be achievable in the next price control period. Considering the available evidence, Ofgem has set operating cost allowances for the period 2005/06 to 2009/10 based on a 1.5 per cent per annum reduction in underlying efficient costs over this period, before additional costs are considered"<sup>45</sup>.*

- 4.19 Regulators have adopted a wide range of techniques to assess efficiency. Bottom-up reviews are typically complemented by top-down analysis. In its 2000 Review of Railtrack's access charges, the ORR<sup>46</sup> concluded that bottom-up

<sup>44</sup> Top-down efficiency analysis: supporting paper 4, CAA, November 2004, page 10

<sup>45</sup> Electricity Distribution Price Control Review: Final Proposals, Ofgem, November 2004, page 73

<sup>46</sup> Periodic Review of Railtrack's Access Charges – Final Conclusions, ORR, February 2000

analysis should not be used on its own to inform conclusions on the scope for future efficiency gains. The ORR observed, correctly, that bottom-up reviews tend to underestimate the scope for future efficiency savings, not least because assumptions are based on information available to date, and the past may not always be a good predictor of future efficiency possibilities. For these reasons, the Rail Regulator decided to use top-down efficiency studies as well.

4.20 The same point is made by Europe Economics in its review for Ofwat in March 2003<sup>47</sup>. It stated, “*top-down and bottom-up approaches measure different things. A bottom-up approach focuses on potential improvements in working practices that can be foreseen at the time of the study and at the level of the individual processes that are being studied.*” It went on, “*But a bottom-up approach does not take into account potential improvements in efficiency that cannot be specifically anticipated at the time of the study.*” Finally, it noted, “*The purpose of a top-down study is to address this gap by using other sources of evidence*”.

4.21 Emerging best practice is, therefore, to use the results from more than one technique to derive an overall range for potential efficiency gains in a price control review. In particular, bottom-up and top-down approaches are frequently used to complement each other. The approach adopted by Ofgem<sup>48</sup>, in its recent electricity distribution price control review, incorporated: a review of actual costs to assess trends, anomalies, differences in categorisation or input mixes; bottom-up modelling; benchmarking of overall costs in particular categories (e.g. total operating costs) across companies on the basis of regression analysis and other comparative modelling techniques; and a review of companies' own forecasts of costs and the methods, processes and data used to derive them. We adopted a similar approach.

#### **A conservative approach**

4.22 We believe that we have adopted a conservative approach. We concluded that, over the short to medium-term, Royal Mail might expect efficiency gains of between 1.1% and 4.1% a year, the average of which is 2.6% a year. This range

<sup>47</sup> Office of Water Services, Scope for Efficiency Improvements in the Water and Sewerage Industries, Final Report, Europe Economics, March 2003

<sup>48</sup> Ofgem website, Cost Assessment & Efficiency, 15 December 2003

is low in comparison to those derived for the purposes of other regulatory determinations, as highlighted in the table below.

**Table 8: Summary forecast TFP and RUOE trends**

Regulatory Review	Date	Source	RUOE trend
Railtrack	Dec 1999	Europe Economics	3% to 5%
Transco	Sept 2001	Europe Economics	2% to 4%
Water & Sewerage	Mar 2003	Europe Economics	2% to 4.25%
Electricity Distribution	Dec 2003	CEPA	0.7% to 3.7%
NATS	Nov 2004	CAA	3.0% to 4.0%
Average			3.0%

Source: Regulatory price control documents, Europe Economics, CEPA. TFP trends capture outperformance relative to the whole economy

4.23 Given that Royal Mail faces significant opportunities arising from the unwinding of historical inefficiency, due to the absence of price pressures from competitors and regulatory pressure, we believe our estimate is in fact conservative. It is worth noting that many of the studies above were performed at a time when the regulated companies had already experienced a long period of catch-up. As such, the TFP trends would have been necessarily lower than the trend we would expect these companies to have experienced shortly after liberalisation.

4.24 Royal Mail also questions our estimate of the privatisation effect. This point is addressed further below.

#### **Nature of work estimates**

4.25 With respect to Royal Mail's choice of comparators for the network element of costs, we make a number of observations. First, we do not believe that it is appropriate to compare mail centre and sorting activities to "distributive trades and services". Royal Mail simply asserts that, but does not explain why, mail centres are not comparable to the manufacturing sector. There has been a trend towards increasing automation within mail centres, which is expected to continue in line with Royal Mail's current Strategic Plan<sup>49</sup>.

<sup>49</sup> Overview of Royal Mail's integrated operation plan, Royal Mail, 9 September 2005, Exhibit Eighteen

- 4.26 Second, Royal Mail indicates that its choice of “distributive trades” for mail centres reflects the fact that work is performed by unskilled manual workers. Our analysis confirms that the manufacturing sector, in total, has a lower percentage of low skilled workers (around 50%) compared to distributive trades (around 70%)<sup>50</sup>. Both, however, have a high degree of low skilled labour. Over the next price control period, increasing levels of automation will require higher levels of skilled workers, a fact that Royal Mail’s Strategic Plan recognises through its “engaged and motivated colleagues” initiative<sup>51</sup>. In addition, Royal Mail’s initiatives include significant costs relating to additional training<sup>52</sup>.
- 4.27 We believe that a more suitable comparator to mail centres is the manufacturing sector, especially as the extent of automation is expected to increase significantly over the price control period.
- 4.28 “Distributive trades” includes wholesale trade, retail trade, and hotels and catering. TFP growth in the hotels and catering sector between 1974 and 1999 was minus 1.99%<sup>53</sup>. This has a significant impact on the sector average. It is unclear to us why Royal Mail thinks hotels and catering operations provide a suitable comparator for its own operations; and Royal Mail provides no justification in support of its inclusion.
- 4.29 In RM 3106, Royal Mail provides an indication of why distributive trades are comparable to distribution activities. Royal Mail indicates that “*distributive trades includes wholesale distribution of agricultural products, fuels, ores, metals and industrial materials, timber and building materials, motor vehicles, household goods, hardware and ironmongery, textiles, food, drink and tobacco, pharmaceutical and medical; other wholesale distribution; dealing in scrap metals; and commission agents*”.<sup>54</sup> It is instructive that in justifying the selection of distributive trades as a comparator for delivery offices, Royal Mail excludes any mention of hotel and catering.

<sup>50</sup> The National Institute of Economic and Social Research sectoral productivity dataset (NISEC02) – see <http://www.niesr.ac.uk/research/nisec.htm>

<sup>51</sup> Overview of Royal Mail’s integrated operation plan, Royal Mail, 9 September 2005, Exhibit Seventeen

<sup>52</sup> Refer to initiative 12 on Auto Utilisation

<sup>53</sup> LECG analysis based on NISEC02 dataset – assuming a compound annual growth rate

<sup>54</sup> RM 3106, page 15, footnote 17

- 4.30 In any case, we note that the exclusion of hotel and catering affects the weighted adjusted TFP trend by just 0.1%.
- 4.31 We also concluded that Royal Mail's Logistics costs could be more appropriately linked to transport and communications costs than to costs in the distributive trades. The transport sector includes railways, water transport, air transport and other transport and transport services. The transport and communications sector also includes a number of logistic activities – and hence, it is not clear why Royal Mail continues to dispute this comparator.
- 4.32 In summary, we continue to believe that the comparators set out in our Scenario 2 are valid. Postcomm has commissioned an external and independent review<sup>55</sup> of the work that we have done in this area, and of the comments put forward by Royal Mail. This review supports the positions that we have adopted.

#### **The privatisation effect**

- 4.33 Royal Mail argues, based on a review of Europe Economics' work for Ofwat, that our estimates for the privatisation effect are overstated. It should be noted, however, that Europe Economics' conclusion in respect of the *historic* privatisation effect was that it lay between 1.25 and 3.5%<sup>56</sup>. The range quoted by Royal Mail of 1.25% to 2.5% was Ofwat's/ Europe Economics' estimate of the *continuing* potential for the water companies to outperform normal long run efficiency trends.
- 4.34 Since the water companies have now been privatised for some 15 years we would not expect their current position to be comparable to Royal Mail's. Rather, we would anticipate that the opportunities for "catch-up" gains in efficiency are as real for Royal Mail as they have been *historically* for other regulated companies - Royal Mail is unlikely yet to have exhausted the opportunity for catch up gains. As the DTI has noted, "*Royal Mail has a significant way to go to attain the efficiency, productivity and service levels achieved by its peer group.*"<sup>57</sup>

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<sup>55</sup> First Economics, 26 September 2005

<sup>56</sup> Scope for Efficiency Improvements in the Water and Sewerage Industries, Final Report, Europe Economics, March (2003), Section 7.4

<sup>57</sup> Shareholder perspective on Royal Mail Price and Service Quality Review and your Initial proposals, DTI, 31 August 2005, paragraph 4

- 4.35 Its worth noting that Oxera, one of Royal Mail's advisors, has concluded elsewhere that *"the analysis shows a general reduction in RUOE for all industries, and suggests that, on average, and excluding some of the extreme observations, annual reductions in RUOE of 2.5% to 5.5% have been achieved since privatisation"*<sup>58</sup>. The implication of this range is a higher privatisation effect – of up to 4% per year in RUOE terms – than the range that we have used.
- 4.36 Royal Mail has questioned the degree to which the privatisation effect applies in its case given that it does not currently have a publicly quoted trading value. As we noted in our August report, there is widespread agreement that exposure to price pressure through effective regulation and/ or competition is the key driver affecting the efficiency performance of regulated industries. Oxera itself made the same observation in a paper included in Royal Mail's recent submissions<sup>59</sup>.
- 4.37 Royal Mail comparison to the CAA's estimate of 1% in TFP terms is totally inappropriate, as one estimate is in TFP terms and the other is in RUOE terms.

### **LECG's final conclusions**

- 4.38 We believe that the approach that we have adopted is consistent with regulatory best practice. We recognise that our estimate of achievable productivity paths for Royal Mail is approximate. Consequently, we believe that it is important to use our findings as one of a range of indicators in assessing the overall productivity improvements available to Royal Mail.
- 4.39 We continue to believe that it is sensible to consider a number of "nature of work" scenarios. The purpose of exploring two scenarios was to obtain an estimate for the full range of productivity trends that are likely to affect the business during the next price control period. We believe that the scenarios we have developed are entirely reasonable. This conclusion is supported by First Economics.
- 4.40 We have not been convinced by Royal Mail's arguments with respect to the privatisation effect. Based on the evidence set out in our August Report, we consider it likely that a productivity gap has arisen while Royal Mail has been in public ownership and without effective price regulation or competition. We

<sup>58</sup> Operating Cost Reductions in Regulated Network Industries, Oxera, 2003

<sup>59</sup> Benchmarking of Royal Mail's overheads, Report prepared for Royal Mail, Oxera, 9 September 2005

believe that closing this gap will give rise to a boost in RUOE of between 1.25% and 3.5% a year over the period of the forthcoming price control.

- 4.41 Consequently, we are not minded to change our initial conclusions, which are set out in the table below.

**Table 9: LECG's TFP estimate**

	<b>Low</b>	<b>High</b>
(1) TFP outperformance =	(0.5%)	0.2%
(2) Capital substitution	0.8%	0.8%
(3) Input price effect	(0.4%)	(0.4%)
(4) Long run potential for outperformance = (1) + (2) + (3)	(0.1%)	0.6%
(5) Privatisation effect	1.2%	3.5%
<b>RUOE estimate = (4) + (5)</b>	<b>1.1%</b>	<b>4.1%</b>

Source: LECG analysis, Europe Economics, Royal Mail

- 4.42 Efficiency savings at the average level would be slightly lower than the efficiency savings that Royal Mail has actually achieved under the current price control to date (i.e. 2.7% on Royal Mail's own figures). The figure however, is lower than the rate of efficiency savings actually achieved by other regulated companies. On balance we expect that over the forthcoming price control, Royal Mail could achieve RUOE savings at above the rate implied by the 2.6% average of the range shown above.

## 5 International benchmarking

### Introduction

- 5.1 In this section, we consider Royal Mail's response to our work on International Benchmarking. We first summarise our initial conclusions. We then summarise Royal Mail's response to our initial conclusions. We then respond to each of Royal Mail's points in turn. Finally, we set out our final conclusions.

### LECG initial conclusions

- 5.2 LECG's initial conclusions are set out in full in Section 25 of our August Report<sup>60</sup>. We summarise our initial conclusions below.
- 5.3 We concluded that due to the significant issues that influence data comparability, it was not possible to perform meaningful comparisons of the absolute level of unit costs across international postal operators. Consequently, our analysis focused on unit cost trends instead.
- 5.4 We concluded that overall, the average rate of productivity improvement across postal operators appeared low. We thought, however, that this figure was influenced by a number of operators starting from a relatively high level of efficiency, such as Denmark Post and Deutsche Post.
- 5.5 We argued that productivity trends are influenced by the stage of the liberalisation process a company or country is at. Comparing Royal Mail to countries at similar stages in the development of a competitive market suggested greater scope for savings. We showed that in anticipation of competition, Sweden Post achieved savings of approximately 9% annually over a four-year period; Deutsche Post achieved cost savings of around 2.5% in constant volume terms; and TPG achieved savings of around 1.5% per annum unadjusted for growth.
- 5.6 We also argued that prices are not an indicator of comparative efficiency – unless they are adjusted for cost allocation differences and other exogenous factors (e.g. such as differences in allowed profit). We concluded that little weight should be attached to price benchmarking.

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<sup>60</sup> Refer to "Future Efficient Costs of Royal Mail's Regulated Mail Activities", LECG, 2 August 2005.

## Royal Mail's response

5.7 Royal Mail's response to our international benchmarking is set out in Section 9 of its submission. Its response can be summarised as follows<sup>61</sup>:

- international comparisons of efficiency need to take account of the absolute level of efficiency in order to be meaningful, and looking at trends without reference to absolute starting levels is not a valid approach;
- LECG presents an unbalanced view of the performance of other postal operators; and
- meaningful analysis can be undertaken, by comparing prices internationally, and using econometric modelling to adjust for exogenous factors. Royal Mail argued in particular that a comparative analysis of prices indicated a relatively high level of efficiency in Royal Mail.

### Comments on LECG's general approach<sup>62</sup>

5.8 Royal Mail believed that drawing conclusions from an examination of movements in RUOC in different countries requires an understanding of the starting absolute level of efficiency. For a USP that starts close to the efficiency frontier, the subsequent RUOC trend would be low and *vice versa*. Consequently, an observation of high RUOC savings over time for a particular USP could simply reflect a relatively high level of inefficiency at the outset. Since the movement in RUOC for a specific USP may arise because of a different starting position, the scope for subsequent movements in RUOC requires an understanding and comparison of the starting position.

### LECG's unbalanced reporting<sup>63</sup>

5.9 Royal Mail argued that we made several statements that appear unbalanced. First, LECG noted a general downward trend in unit costs over time of 1.8% in real terms, rather than commenting directly on the upward volume adjusted trend of 0.8% shown in Table 263 of our August Report

5.10 Second, LECG noted that the average rate of productivity improvement across postal operators appeared low, but we believed the average figures were biased

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<sup>61</sup> Royal Mail's Response, Section 9, page 51

<sup>62</sup> Ibid, paragraphs 9.2 to 9.3

<sup>63</sup> Ibid, paragraphs 9.4 to 9.8

by a number of operators starting from a relatively high level of efficiency, such as Denmark Post and Deutsche Post. Royal Mail argued that this comment showed a lack of balance on our part, because:

- since an average is an average the use of the word “biased” is incorrect;
- our references to Denmark and Deutsche Post as starting from a relatively higher level of efficiency confirm Royal Mail’s point that consideration of absolute efficiency levels is necessary; and
- we provided no evidence for our assertion that Denmark Post and Deutsche Post are starting from a relatively higher level of efficiency.

5.11 Third, LECG concluded that comparing Royal Mail to countries at similar stages in the development of a competitive market suggests greater scope for savings. Royal Mail argued that this does not provide a balanced view, for the following reasons:

- we referred to the stage of development of liberalisation but made no reference to the relative starting positions of the relevant countries;
- we quoted the figures for Sweden Post between 1992-1995 and made no reference to the figure of 1.7% (i.e. a unit cost increase) for the period 1998-2003; and
- Table 263 of our report shows an RUOC trend at constant volumes of annual cost increases of 1.8% from 1999 to 2002 for the Netherlands whilst our conclusions elsewhere were that it has achieved savings of around 1.5%.

5.12 Royal Mail concludes, “*the level of inefficiency pre-liberalisation not only differs between countries but also needs to be understood before consideration of the relevance of any RUOC in one country with that of another; and that inefficiency can be removed pre or post liberalisation. As such, Royal Mail does not believe that the LECG’s international work concludes anything on the historic or future level of efficiency and RUOC for Royal Mail*”<sup>64</sup>.

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<sup>64</sup> Royal Mail’s Response, paragraph 9.8

### **Royal Mail's approach**

- 5.13 Royal Mail submitted two papers on this topic, both of which used prices as the initial benchmark for the absolute level of costs. Royal Mail asserted that our conclusions did not incorporate the findings of either paper.
- 5.14 In the first paper, Royal Mail compared prices of the First Class public tariff, basic weight step across a range of countries. Royal Mail argued that if the prices reflect the recovery of costs across countries, then prices could provide some indication of the level of efficiency between countries. Otherwise, if the prices are not similarly cost reflective, pricing differences between countries could reflect the need for changes to the prices. Royal Mail concluded that its First Class prices (0-60g) are amongst the lowest in the world, and hence, assuming that prices reflect the recovery of costs, then the observed prices indicate a relatively high level of efficiency in Royal Mail.
- 5.15 In the second paper, Royal Mail sought to adjust/ correct the prices to remove the effect that country-specific operational factors (potentially exogenous factors) have on the observed prices. Royal Mail concluded that to the extent that the adjusted/ corrected prices reflect the recovery of costs, then the prices indicate a relatively high level of efficiency in Royal Mail.

### **LECG's response**

- 5.16 We respond to Royal Mail's points, in turn, below.

### **LECG's general approach**

- 5.17 Most regulators have sought to use international perspectives to help assess the scope for efficiency savings in the UK. The general conclusion has been that there are significant differences between countries on issues such as scale economies, regulatory regime, required standards of service, extent of competition, cost allocation principles and different risk profiles. As we recognised in our August Report, this makes international comparisons of efficiency levels unreliable.
- 5.18 The generic issues that influence international comparability are particularly acute within the postal sector as each operator faces significantly different environments. These differences include the geography and topography of the delivery network, quality and service obligations, strength of labour unions and the market status (i.e. existence of competition, degree of regulation, etc). These

in turn drive both the way in which postal services are provided and the level and structure of costs.

- 5.19 For these reasons, and in line with regulatory good practice, we did not perform a detailed comparison of the *absolute* level of unit costs across international postal operators. Instead, we performed a limited review of unit cost trends. We believe that this approach is consistent with regulatory precedent elsewhere, as summarised in our August Report<sup>65</sup>.
- 5.20 Our report fully recognised these limitations, and because of them, we placed a lower weighting on the results of the international benchmarking exercise. We did note the performance of Sweden Post, and that of Deutsche Post and TPG – both comparators that Royal Mail itself used in its Integrated Operational Plan<sup>66</sup>. We believe that Royal Mail’s own analysis of these companies is consistent with our conclusions<sup>67</sup>.

#### **LECG’s unbalanced reporting<sup>68</sup>**

- 5.21 We do not believe that our analysis is unbalanced. We respond to each of Royal Mail’s points below.
- Royal Mail suggests that we failed to comment on cost trends in constant volume terms, but in fact we did note that, *“this decline can be explained, in part, by increasing mail volumes. Adjusting for volume, the general trend in unit costs is mixed, with **only eight countries out of 19 showing a downward trend**”*<sup>69</sup> (emphasis added);
  - by the word “biased” we meant that the average was *influenced by* countries starting from a relatively higher level of efficiency or from a relatively low level of efficiency, and therefore could not be applied directly to Royal Mail;
  - we believe that Denmark Post and Deutsche Post do start from a relatively higher level of efficiency – based not least on the views of Derek Osborn, a

<sup>65</sup> See paragraphs 25.3 to 25.7

<sup>66</sup> Exhibit Five, Royal Mail’s Integrated Operational Plan

<sup>67</sup> International Postal Benchmarking, McKinsey, page 3. RM 3094a

<sup>68</sup> Royal Mail’s Response, paragraphs 9.4 to 9.8

<sup>69</sup> See paragraph 25.19

senior postal expert on our team with over 10 years of experience in international consultancy across the postal world (although our overall conclusions were not based on whether Denmark or Deutsche Post is in fact starting from a particular position); and

- as to the suggested inconsistency in the presentation of TPG’s results, we in fact addressed the point directly – noting that “*TPG’s results are misleading as it has already undergone a number of savings programmes in the past – and the recent cost trends may therefore reflect a company operating in a stable state. We also note that TPG’s trend is inconsistent with Royal Mail’s findings... this highlights NERA’s concern that the data is of inconsistent quality*”<sup>70</sup>. Given the concerns of NERA expressed in its own report, none of our conclusions were based on the NERA dataset.

5.22 Royal Mail’s own submission on international performance comparisons concludes “*other [international] operators have shown steeper productivity improvement trajectories over the past 5 years [and] as a result of their productivity improvements, other operators have been able to drive greater cost reductions than RM over a five-year period and have reduced their real unit costs in the face of declining volumes*”<sup>71</sup>. Royal Mail’s own analysis of cost trends, which is put forward as covering the most relevant comparators, is summarised below:

**Table 10: Royal Mail cost reduction comparisons**

Country	Change in addressed volume 1999-2003	Change in real operating cost 1999-2003	Change in real cost per addressed item 1999-2003
TPG	1.0%	(5.0%)	(6.0%)
USPS	0.3%	(4.5%)	(4.8%)
Deutsche Post	9.9%	(11.7%)	(19.7%)
Royal Mail	4.4%	4.9%	0.5%

Source: International Postal Benchmarking, McKinsey, page 6. Royal Mail reference 3094a.

5.23 The efficiency trend for Deutsche Post is higher than suggested by NERA’s findings when restated on an annual basis. The data suggest real savings of

<sup>70</sup> See paragraph 25.23

<sup>71</sup> International Postal Benchmarking, McKinsey, page 3. RM 3094a

around 5.3% unadjusted for growth, which compares to NERA's estimate of 2.9%. Adjusted for growth Royal Mail's submission suggests savings of around 3.7% compared to NERA's estimate of 2.5%. In our initial proposals, we selected the lower figure.

- 5.24 Royal Mail's data relating to TPG suggest savings of approximately 1.5% per year in real terms, unadjusted for growth. There is a general perception, however, that TPG is already an efficient operator. As such, we expect this estimate to be lower.

#### **Royal Mail's approach**

- 5.25 Royal Mail submitted two papers to LECG, which used prices as the initial benchmark for the absolute level of costs. We did review these papers. In addition, we reviewed a similar report written by Deutsche Post. Our analysis of this report is set out in paragraphs 25.29 to 25.36 of our August Report.
- 5.26 In January 2004, Deutsche Post World Net ("Deutsche Post") performed a benchmarking study on letter prices in Europe<sup>72</sup>. It argued that letter prices could provide a high level indicator of comparative efficiency – if appropriate adjustments were made to account for differences between operators.
- 5.27 In comparing letter prices, the study attempted to address many of the differences between countries. Deutsche Post adjusted for labour costs, delivery quality, delivery frequency, mail volume, geographic factors, demographic factors, and the purchasing power of different exchange rates. These aspects represent the cost-relevant factors and were recognised as key by the 1992 EU Commission's green paper on European postal services.
- 5.28 As we noted, the results show that current postal prices in the UK are amongst the lowest in Europe – even after adjusting for country differences. Analysis of this nature, however, says little about underlying cost efficiency. Prices can only ever be regarded as a broad proxy for cost – and hence relative efficiency – even if prices reflect underlying cost structures.
- 5.29 In this regard, we note that Royal Mail has argued elsewhere that its current prices are *not* cost reflective, and in particular, that first class stamp prices need

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<sup>72</sup> Letter prices in Europe – Current international letter price comparison, Deutsche Post World Net, January 2004

to increase to at least 41p in order to reflect underlying costs<sup>73</sup>. It appears likely that there are similar significant and varied differences between prices and costs in other countries. We do not believe that an assumption that prices are generally aligned with costs is sustainable.

- 5.30 In conclusion, we believe that without adjusting for cost allocation differences and exogenous factors (i.e. such as how competition and regulation impacts the price setting process), little weight can be attached to price benchmarking as a potential indicator of underlying efficiency.

### **Conclusions**

- 5.31 In response to Royal Mail's key points we conclude that:
- our approach is consistent with regulatory best practice;
  - our report clearly signposted relevant data issues;
  - we have not presented an unbalanced review of the evidence;
  - our analysis of unit cost trends is not methodologically or mathematically flawed; and
  - we do not believe that it is appropriate to consider prices as a proxy for cost efficiency.
- 5.32 In our August Report, we explained fully the limitations of the analysis of international comparisons. We believe that our overall conclusions on unit cost trends are consistent with the data and with the analysis presented to us by Royal Mail and its advisors.

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<sup>73</sup> RM's Strategic Plan, pages 30 and 31