THE PERFORMANCE
- OF THE UK INLAND MAILS BUSINESS OF CONSIGNIA

Paper 1 of a series of papers prepared by Consignia in June 2002 for Postcomm's review of the price control for 2003

Summary

The overall performance of the UK inland mails business of Consignia during the last 10 years is characterised by improved efficiency and relatively stable service performance. The basic weight step prices of UK First and Second Class public tariff mail have reduced in real terms by 8 to 15 per cent respectively over the last decade while the respective service performances have remained relatively stable such that on average over 90 per cent of mail is delivered within the service specification.

In terms of international comparison, price comparisons of similar products provide an indication of the relative performance, and efficiency, of the postal service in the UK. The extension of the comparison of prices and service specification across Europe and leading OECD[1] countries shows the UK to out-perform most other postal services in those countries and thereby to be close to the efficiency frontier of inland mails businesses worldwide.

Since 2002, the postal sector has joined the group of regulated industries. The average price in post[2] is compared with those in other regulated industries over the last 10 years, using information form the Retail Prices Index (RPI). The movement in prices for the regulated industries over the last 10 years is diverse. The postal sector is the most labour-intensive of the regulated industries with a network that comprises predominantly of labour rather than capital. The postal sector also has relatively low growth when compared to telecommunication, low investment relative to water and rail and low capital input relative to all regulated industries including electricity and gas. The movement in postal sector prices is between the change in the prices of, on the one hand, rail and water and, on the other hand, electricity, gas and telecommunication.

Average postal prices and basic weight step First and Second Class public tariff prices are compared with the movement of price indices for the utilities sector (including most regulated industries) and service sector as a whole over the last decade. Prices in the service sector as a whole have *increased* in real terms by 8 per cent. Overall prices in the utilities sector have *reduced* in real terms by 21 per cent, but have varied between a price *increase* in real terms of 17 per cent for water and a price *reduction* in real terms of 39 per cent for telecommunication. The reduction in the average postal price and First and Second Class public tariff prices over the period lies between the service sector as a whole and the utilities sector.

The average annual productivity growth for the UK inland mails business of Consignia, as measured by the efficiency improvements excluding economies of scale from volume growth, is 1 per cent per annum for the 10-year period to 1999/00 and marginally less

[1] Organisation for Economic Cooperation and Development

[2] For the postal sector, the index includes not only the inland UK first and Second Class public tariff mail but also international mail, parcels, postal orders, recorded delivery and special delivery.

than 1 per cent for the 5-year period to 1999/00. A total factor productivity analysis weights the productivity of other sectors to estimate the underlying productivity of the postal sector. The underlying productivity for the UK inland mails business of Consignia measured in this way is also about 1 per cent per annum, using distributive trades as the main comparator for the postal network and electricity, gas and water as one of the main comparators for the remaining costs. The actual overall efficiency improvement, taking account of volume growth and productivity, was about 2.5 per cent over the last 10 years.

The historic performance of the UK inland mails business has been reviewed in the context of the price control review for 2003. On the assumption that the starting value was appropriate for the UK mails business of Consignia, the analysis of the actual productivity and efficiency performance can be used to indicate the RPI-X value that was achieved over 5 and 10-year periods to 1999/00. Revenue changed by RPI+2.1 to RPI+2.7 and prices changed by RPI-1.6 to RPI-1.9 over 5 and 10-year periods to 1999/00. For a weighting of prices and revenue consistent with an optimal hybrid structure[3], the weighted average of revenue and prices changed by RPI+0.9 to RPI+0.6 over 5 and 10-year periods to 1999/00. These figures reflect the underlying productivity and efficiency performance of the UK inland mails business of Consignia over the last 10 years.

It is necessary to take account of the historic performance of the UK inland mails business in the price control review for 2003. During the two years to 2000/01 there has been a decline in the financial performance of the UK inland mails business. This has coincided with a significant reduction, in real terms, in the price of Second Class public tariff and pre-sorted mail and, in addition, a reduction in real terms in the price of First Class public tariff mail[4]. This has also coincided, though less significantly, with an annual improvement in efficiency (as measured by addressed letter items per employee gross hours) that is marginally lower than the historic long-term efficiency performance. In addition, the UK inland mails business remains amongst the most efficient by international comparison. Hence efficiency improvements are more limited and the historic performance more relevant in the price control review than they might otherwise be.

A price control that reflects this historic, medium to long-term performance would include:

i. an underlying productivity improvement of about 1 per cent per annum;

ii. a rise in postal workers earnings in line with increases above RPI in the external labour market; and

iii. efficiency improvements from economies of scale, relative to a case of no economies of scale, approximately equal to the product of 0.4 and the forecast volume growth per annum based on an estimate of the long-run marginal cost for mails services of 0.6.

[3] "*Volume Risk I: forecasting error – for the UK inland mails business of Consignia*", Consignia June 2002, where, subject to a number of assumptions, the appropriate structure involves a fixed portion of revenue of about 0.6 .

[4] Since these prices are held constant in nominal terms under the present price control there has been a further real price reduction in these prices since 2000/01.

In addition, the price control review will need to take account of, amongst other related factors, the initial value of revenue and prices, volume projections and the overlays relating to any special projects and investments that could cause future values to differ from the historic values.

1. Introduction

This paper sets out the performance of the UK inland mails business of Consignia. Oxera consulting Ltd, an experienced regulatory economics consultancy, has assisted in the development of this paper. Consignia submits this paper to Postcomm with a separate, but related, paper entitled: "Consignia's comments in April 2002 on '*The impact of liberalisation on efficiency: a survey - A paper report prepared for Postcomm by Frontier, January 2002*'". Consignia submits both papers for consideration as part of the current price control review

Section 2 of this paper sets out evidence on prices and performance within the public domain. It shows the change in prices of First and Second Class public tariff mail relative to changes in the Retail Prices Index over the last 20 years. It shows the performance of the UK inland mails business of Consignia in meeting the UK service specification for First and Second Class mail over the last 10 years. It also shows a comparison of the prices of UK First and Second Class public tariff mail with their closest counterparts across European and leading OECD countries. Finally, it shows a comparison of the relative movement in prices in the UK postal sector with those for other regulated industries, the utilities sector and the service sector as a whole.

Section 3 of this paper sets out evidence of the performance, productivity and efficiency of the UK inland mails business of Consignia. In the mails business, letters or mail items per employee have been used as a measure of performance and a measure of this that is used by the UK inland mails business is analysed over the 10-year period to 1999/00. Cost information for the same period enables efficiency savings from productivity improvements and scale economies of volume growth to be identified. A total factor productivity comparison is used to compare actual performance and productivity with a weighting of productivity factors from other sectors. The historic performance is placed in the context of a RPI-X format of control for alternative control structures. In the context of the price control review for 2003, Consignia identifies some of the parameter values for the actual historic performance of the business over the medium and long-term.

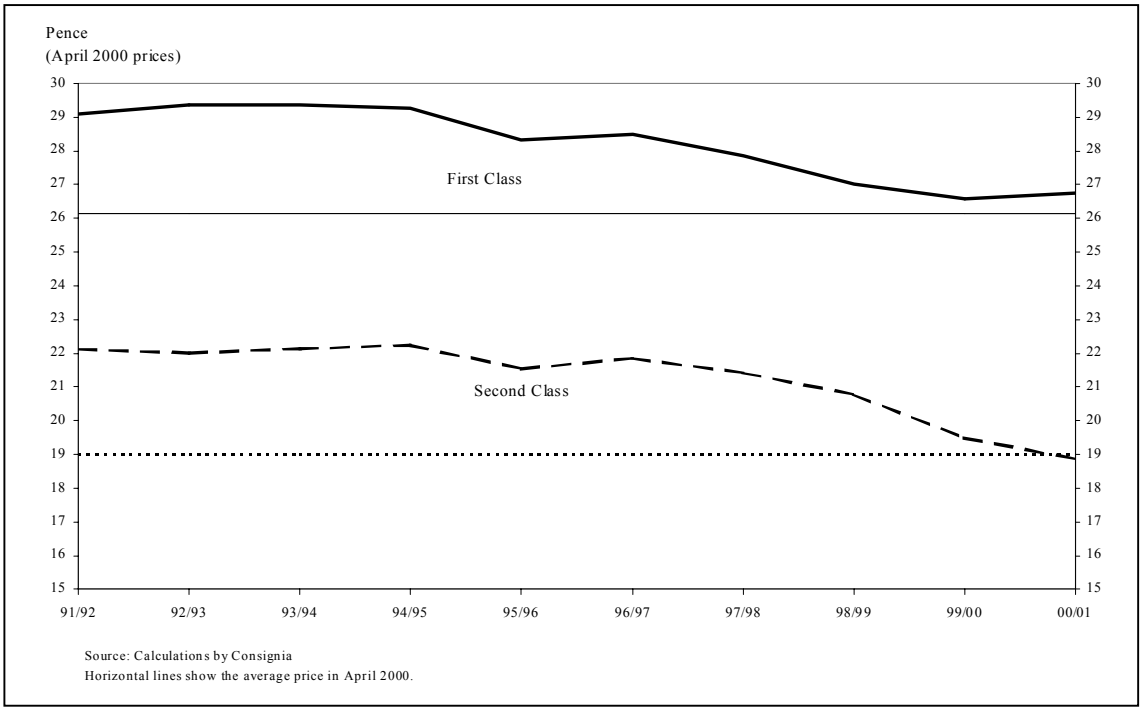
2. Evidence on prices and performance

2.1 Comparison of the prices of UK first and Second Class mail against UK Retail Prices Index

The movement in prices for UK First and Second Class public tariff mail for the UK basic weight step (of up to 60grams) is compared with the UK retail prices index (RPI) over the last 20 years. The price of inland UK First and Second Class public tariff mail has reduced in real terms over the last 10 years. This is shown in Figure 1, with summary statistics shown in Table 1. For example, the price of inland UK First Class public tariff mail has reduced in real terms by about 8 per cent in the last 10 years and 15 per cent in the last 20 years. In addition, the price of inland UK Second Class public tariff mail has reduced in real terms by about 15 per cent in the last 10 years and 27 per cent in the last 20 years.

It is only in the last two years to 2000/01 that the financial performance of the UK inland mails business has declined significantly. The decline in the financial performance coincides with a reduction in real terms of 9 per cent in the basic weight step price of Second Class public tariff and related pre-sorted mail and a 1 per cent reduction in real terms in the basic weight step price of First Class public tariff mail. Since these prices are held constant in nominal terms under the present price control there has been a further reduction in real terms in these prices since 2000/01.

Figure 1: Prices of inland UK First and Second Class public tariff mail for the basic weight step over the last 10 years in April 2000 prices[5]



[5] Public tariffs were last changed in April 2000 and prices have been deflated to this price base.

Table 1: Price change in real terms for inland UK First and Second Class public tariff mail for the basic weight step over the last 5, 10 and 20 years

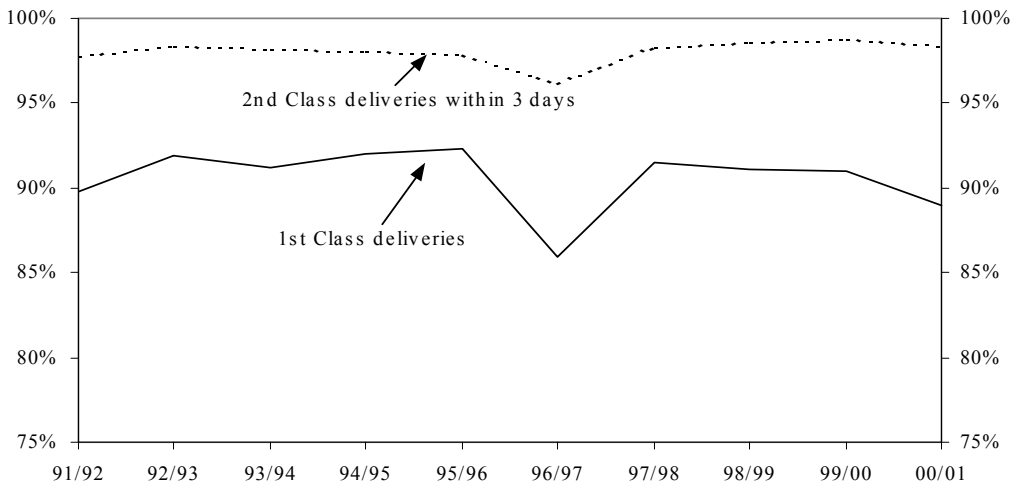
Period of comparison Years	First Class %	Second Class %
5	-6	-14
10	-8	-15
20	-15	-27

2.2. Comparison of performance for the service specifications of UK for First and Second Class mail.

The performance in meeting the service specification for UK First and Second Class mail is compared over the last 10 years. Figure 2 shows the percentage of UK First Class mail delivered by the next day service specification over the period. There was a steady improvement in performance in the first part of the 1990s up to the strikes in 1996. Overall, the percentage of UK First Class mail delivered by the next day service specification over the last 10 years has averaged at over 90 per cent.

Figure 2 also shows the percentage of UK Second Class public tariff mail delivered within the three day service specification over the last 10 years. There was a gradual improvement in the performance through the last decade and the impact on performance in 1996 of the strikes was much greater for First Class relative to Second Class.

Figure 2: Quality of service performance of UK First and Second Class mail service specifications over the last decade

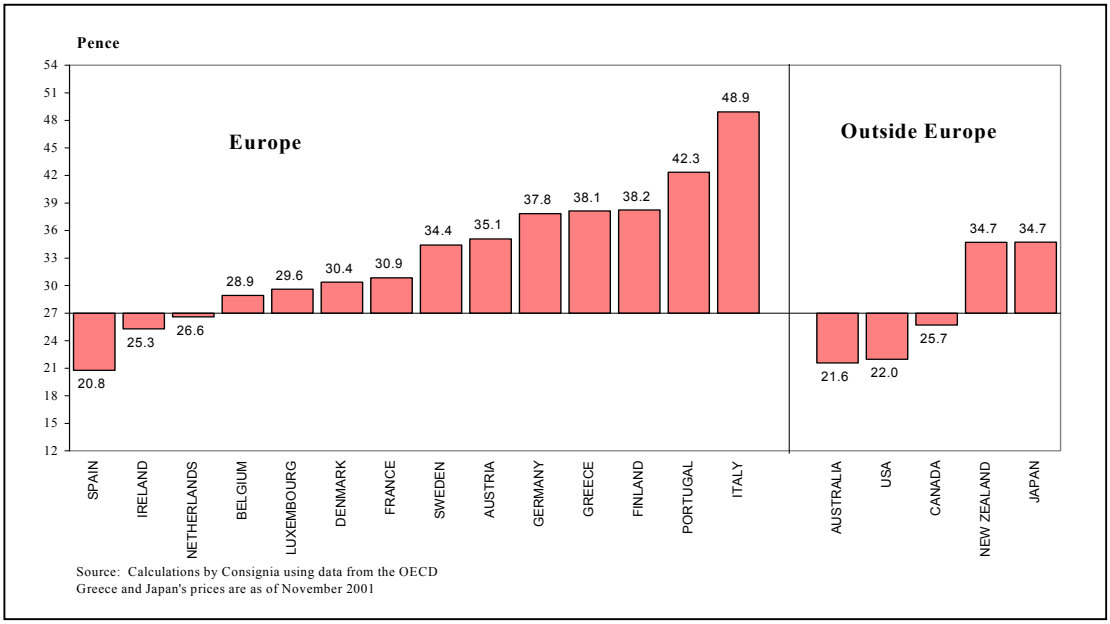


Source: Consignia.

2.3 *Comparison of UK postal prices with those in Europe and some developed countries*

The comparison of prices and service standards is extended for countries across Europe. Figure 3 shows a comparison of prices across Europe and leading OECD countries, for the products most closely relating to the UK First Class public tariff mail and a domestic letter of up to 20 grams[6], relative to the price of inland UK First Class public tariff mail for January 2002[7].

Figure 3: A comparison of price across Europe and leading OECD countries for a domestic letter of up to 20 grams, relative to the price of inland UK First Class public tariff mail for January 2002



Source: Calculations by Consignia using data from the OECD
Greece and Japan's prices are as of November 2001

The price of inland UK First Class public tariff mail is amongst the lowest in Europe. The UK price of 27p is lower than the corresponding price in the major European countries of France, Germany and Italy as well as Austria, Belgium, Denmark, Finland, Greece, Luxembourg, Portugal and Sweden[8]. It is very similar to the price in the geographically much smaller Netherlands where there is also a lower service specification than in the UK. Only in Spain[9] and Ireland[10] is the price lower than in the UK although again, even in these two cases, the comparable product has a lower service specification than that in the UK.

The price of inland UK First Class public tariff mail is also lower than its closest counterpart in New Zealand and Japan. The price of inland UK First Class public tariff mail is higher than its closest counterpart in Australia, Canada and the USA,

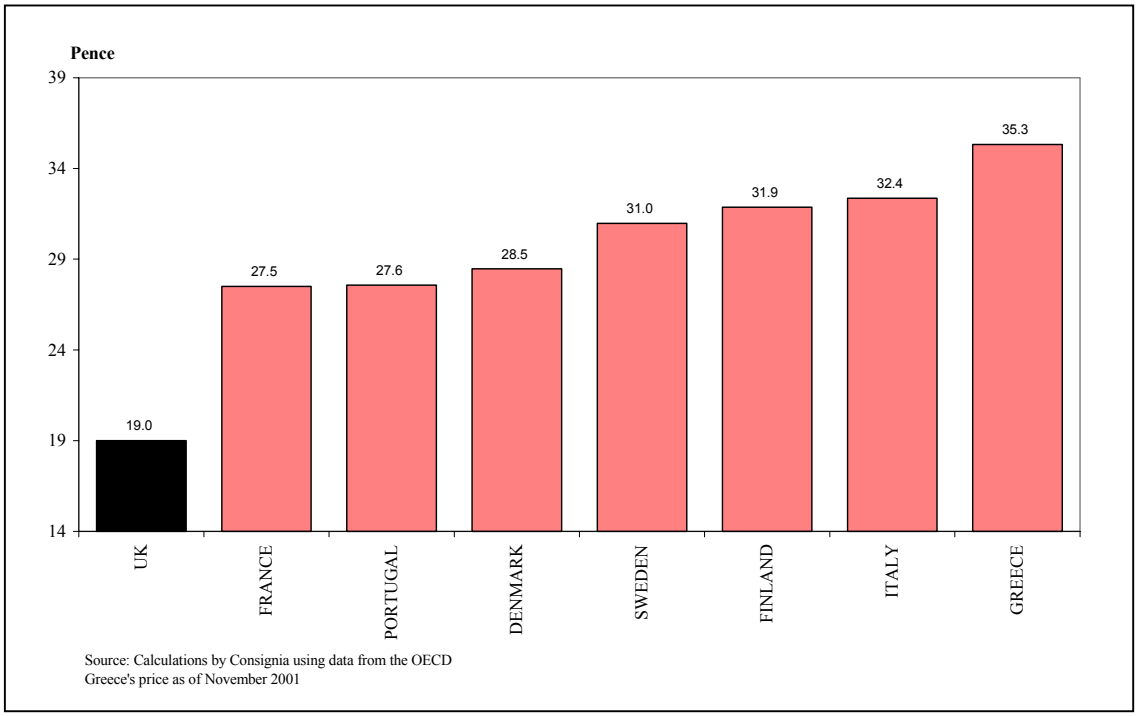
[6] Most countries have a basic weight step of 20 grams while that in the UK is 60 grams.
[7] This uses purchasing power parities published by the OECD.
[8] The Sweden and Finland prices include VAT of 25 and 22 per cent respectively, but the prices excluding VAT also exceed that in the UK.
[9] The price in Spain is also affected by a subsidy.
[10] On 2 April 2002 the price in Ireland increased by 8 per cent so that its purchasing power parity price is about 27p. Further price increases have been proposed.

although the service specification is generally higher in the UK than in these countries. For example, the US First Class service, the price of which is shown in Figure 3, is closer to the UK Second Class service than the First Class service.

Many countries have a basic weight step of up to only 20 grams while that in the UK is up to 60 grams. This comparative analysis was extended to compare price across Europe for a domestic letter of up to 60 grams, relative to the price of inland UK First Class public tariff mail for January 2002. In this case the price in the UK is the lowest of all the European countries reported in Figure 3.

Figure 4 shows a comparison of price across Europe for a domestic letter of up to 20 grams, relative to the price of inland UK Second Class public tariff mail for January 2002[11]. The comparison is limited to those countries that offer a Second Class public tariff. The price of inland UK Second Class public tariff mail is the lowest in Europe by a considerable margin - it is about 30 per cent less than the next lowest Second Class public tariff in Europe.

Figure 4: A comparison of price across Europe for a domestic letter of up to 20 grams, relative to the price of inland UK Second Class public tariff mail for January 2002[12]



2.4 *Comparison of UK postal price trends against those in other regulated industries and the service sectors*

The movement in the price of postal sector is compared with those in other regulated industries over the last decade. This comparison uses the Retail Prices Index figures published by National Statistics for several industries including the

[11] Based on purchasing power parities published by the OECD.
[12] The figure for Greece is for 2001.

postal[13], electricity, gas, rail, telecommunication and water sectors. These indices are shown in Figure 2 and the price changes in real terms are summarised in Table 2 for the last 5 and 10 years.

Figure 5 and Table 2 show that the postal sector price index has reduced in real terms by 7 per cent over the last 5 and 10 years. In comparison, there has been a greater price reduction in real terms in electricity, gas and telecommunication and price increases in real terms in water and rail. There are significant differences between the industries.

The postal sector is the most labour-intensive of the regulated industries with a network that comprises predominantly of labour rather than capital. The postal sector also has relatively low growth when compared to telecommunication, low investment relative to water and rail and low capital input relative to all regulated industries including electricity and gas. The profile of the postal sector price index in Figure 5 is between the profiles of the indices for, on the one hand, rail and water, and on the other hand, electricity, gas and telecommunication. The postal sector indices reflect a balance of improved efficiency and relatively stable service performance.

Figure 5: Retail Prices Index figures for postal, electricity, gas, rail, telecommunication and water sectors over the last 10 years

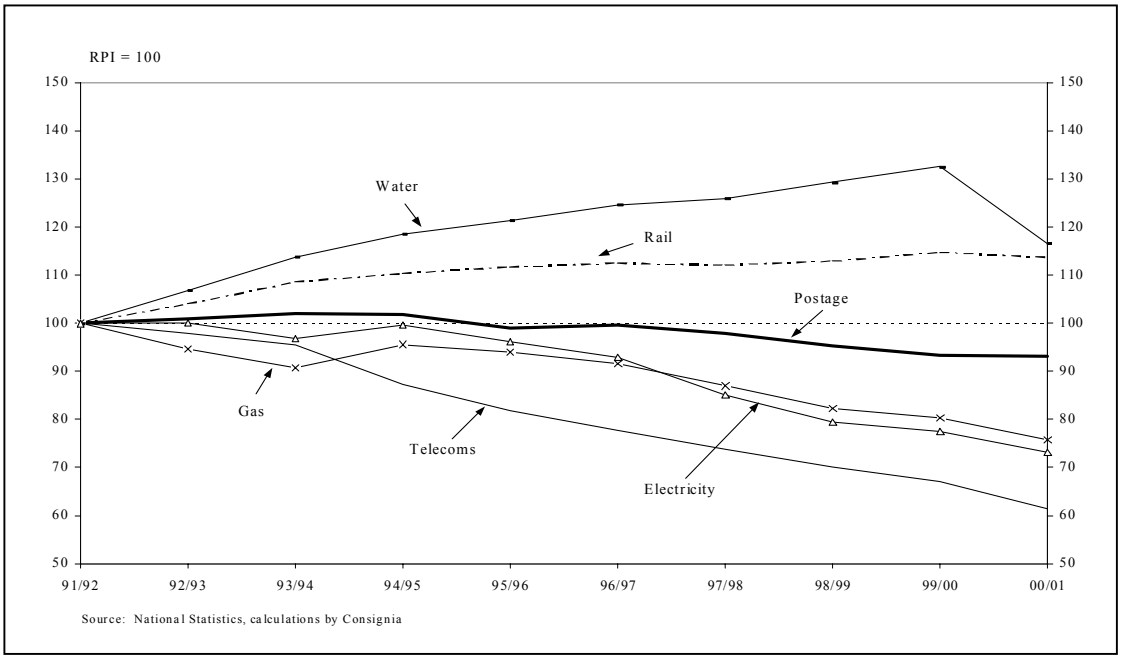


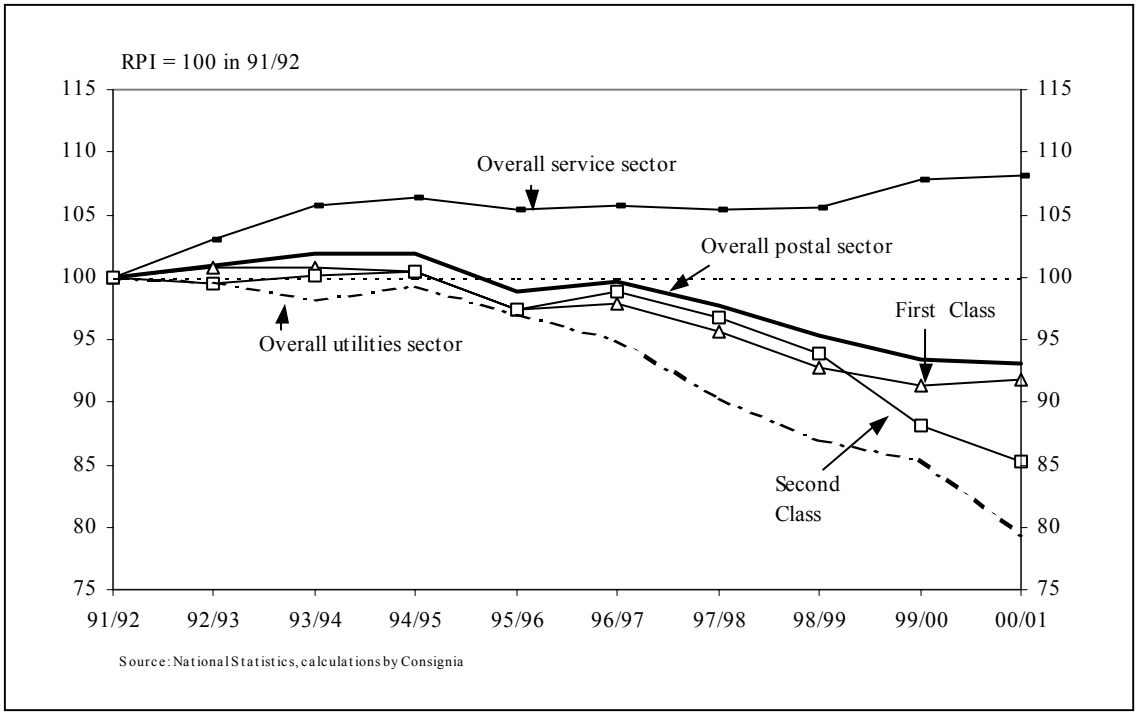
Table 2: Price changes in real terms for postal, electricity, gas, rail, telecommunication and water over the last 5 and 10 years

Period of comparison	Telecoms	Electricity	Gas	Post	Rail	Water
	%	%	%	%	%	%
5 years	-21	-21	-17	-7	1	-6
10 years	-39	-27	-24	-7	14	17

[13] For the postal sector, the index includes not only the inland UK first and Second Class public tariff mail but also international mail, parcels, postal orders, recorded delivery and special delivery.

The movement in the general price of postal sector and the prices of First and Second Class public tariffs are compared with those in the utilities sector and service sector as a whole[14] over the last decade. This comparison uses the Retail Prices Index figures published by National Statistics for the postal sector, utilities sector (including most of the regulated industries) and service sector together with the actual First and Second Class public tariffs. These indices are shown in Figure 6. Figure 6 shows that the service sector price index *increased* by 8 per cent and the utilities sector overall price index *reduced* by 21 per cent in real terms over the last 10-year period. Figure 6 also shows that the average postal price index and price indices of First and Second Class public tariff *reduced* by 7, 8 and 15 per cent respectively. Consequently, the reduction in postal prices over the last decade is between the price changes in the service sector as a whole and the utilities sector.

Figure 6: Retail Prices Index figures for average postal sector, the utilities sector and the overall service sectors and price indices (in 1991/92 prices) for the prices of First Class and Second Class public tariff letter mail for the basic weight step over the last 10 years



2.5 *Conclusions*

The overall performance of the UK inland mails business of Consignia during the last 10 years is characterised by improved efficiency and relatively stable service performance. The prices of UK First and Second Class public tariff mail have reduced in real terms by 8 to 15 per cent respectively over the last decade while the respective service performances have remained relatively stable such that on average over 90 per cent of mail is delivered within the service specification. It is only in the last two years to 2000/01 that the financial performance of the UK inland mails business has declined significantly.

[14] The service sector as a whole includes "rent", "utilities", "shops" and "non-shops".

The decline in the financial performance coincides with a significant reduction in real terms in the basic weight step price of Second Class public tariff and related pre-sorted mail and, in addition, a reduction in real terms in the basic weight step price of First Class public tariff mail. Since these prices are held constant in nominal terms under the present price control there has been a further reduction in real terms in these prices since 2000/01.

In terms of international comparison, price comparisons of similar products provide an indication of the relative performance, and efficiency, of the postal service in the UK. The extension of the comparison of prices and service specification across Europe and leading OECD countries shows the UK to out-perform most other postal services in those countries and thereby to be close to the efficiency frontier of inland mails businesses world-wide.

Since 2001 the postal sector has joined the group of regulated industries. The average price in the post[15] is compared with those in other regulated industries over the last 10 years. The movement in prices for the regulated industries over the last 10 years is diverse. The postal sector is the most labour-intensive of the regulated industries with a network that comprises predominantly of labour rather than capital. The postal sector also has relatively low growth when compared to telecommunication, low investment relative to water and rail and low capital input relative to all regulated industries including electricity and gas. The movement in postal prices is between the change in the prices of, on the one hand, rail and water and, on the other hand, electricity, gas and telecommunication.

Average postal sector prices and basic weight step First and Second Class public tariff prices are compared with the movement of price indices for the utilities sector (including most of the regulated industries) and service sector as a whole over the last decade. Prices in the service sector as a whole have *increased* in real terms by 8 per cent. Overall prices in the utilities sector have *reduced* in real terms by 21 per cent, but have varied between a price *increase* in real terms for water of 17 per cent and a price *reduction* in real terms for telecommunication of 39 per cent. The reduction in average postal price and First and Second Class public tariff prices over the period lies between the service sector as a whole and the utilities sector.

[15] For the postal sector, the index includes not only the inland UK first and Second Class public tariff mail but also international mail, parcels, postal orders, recorded delivery and special delivery.

3. Evidence on efficiency and performance

3.1 Letters per employee

In mails businesses within the postal sector, letters or mail items per employee over time have been used as a measure of performance. Letters or mail items and employee numbers can be measured in a variety of ways. One measure of mail items per employee that is used by the UK inland mails business of Consignia involves addressed letter mail volumes[16] and employee gross hours. An alternative measure of employee numbers that has been reported in the Annual Reports and Accounts is that of Full-Time Equivalent (FTE) where an adjustment was made to full time work hours to take account of part-time work hours[17].

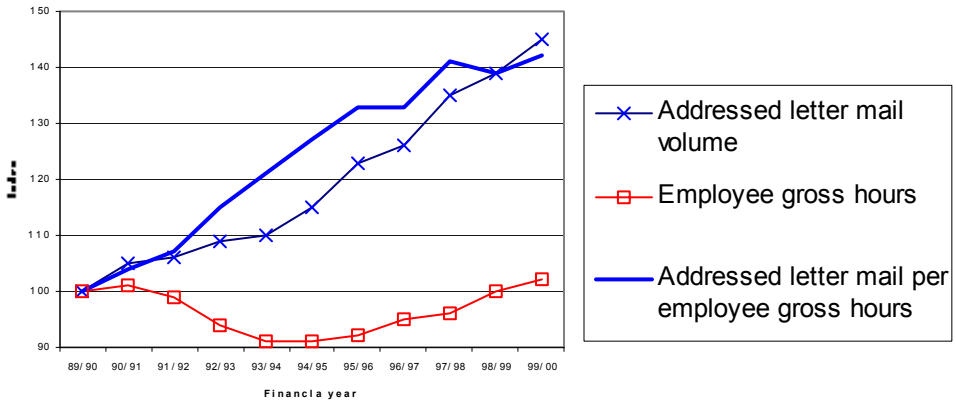
When comparing mail items per employee over time it is necessary to ensure that the measures of volume and employees are made on a consistent basis. Corrections to the published addressed letter and FTE figures of the UK inland mails business of Consignia are required to place the data on a consistent basis for time series analysis and are discussed in the separate paper[18]. Similar corrections are needed for the measure of addressed letter mail per employee gross hours. The need to correct the data reflects the complex issues around ensuring that available data is on a comparable and consistent basis for one postal operator. The need to make published data consistent for comparative analysis applies to all postal operators. The issues become significantly greater when making comparisons of postal operators in different countries.

Figure 7 shows the indices of addressed letter volume, employee gross hours and addressed letters per employee gross hours for the UK inland mails business of Consignia (at that time the Post Office) from 1989/99 to 1999/00 on a consistent basis over time. Figure 7 shows a steady improvement in the measure of addressed letter mail per employee gross hours over the period of about 3.6 per cent per annum, with addressed letter mail volume growth of 3.8 per cent and employee gross hours growth of 0.2 per cent per annum.

Addressed letter volume, employee gross hours and addressed letters per employee gross hours for the UK inland mails business for 2000/01 is also available. In the two years to 2000/01, addressed letter mail per employee gross hours improved by 2.4 per cent per annum, with addressed letter mail volume growth of 3.5 per cent and employee gross hours growth of 1.0 per cent per annum. During the two years to 2000/01 there has been a decline in the financial performance of the UK inland mails business which coincides with a marginally lower annual improvement in efficiency (as measured by addressed letter items per employee gross hours) relative to the historic long-term efficiency performance shown in Figure 7.

[16] The labour required to handle addressed letter items are much higher than that needed for unaddressed mail.
[17] The measure of Full-Time Equivalent was discontinued in 1999 and hence the index of employees uses gross hours.
[18] "*Consignia's comment in April 2002 on 'The impact of liberalisation on efficiency: a survey - A paper report prepared for Postcomm, January 2002*", Consignia, May 2002.

Figure 7: The indices of inland addressed letter mail volume, employee gross hours and inland addressed letters per employee gross hours for the UK inland mails business of Consignia from 1989/00 to 1999/00

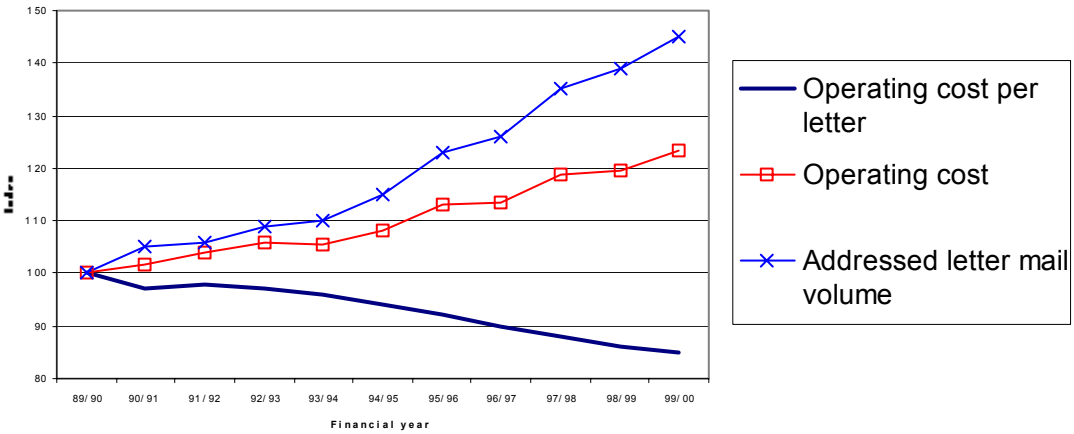


Source: Consignia
Data: UK inland mails business of Consignia
Addressed letter mail excludes unaddressed mail and non-letter items.

3.2 *Cost per inland addressed letter*

The measure of letters per employee does not take account of the impact on operating costs and can be influenced by, amongst other factors, changes in employment policy (e.g. outsourcing) over the period. Figure 8 shows the operating cost per addressed letter over the period and indicates a steady *reduction* in cost per letter over the period of about 1.6 per cent per annum, with operating cost increasing by 2.1 per cent per annum on addressed letter volume growth of 3.8 per cent per annum.

Figure 8: The indices of inland addressed letter mail volume, operating cost and operating cost per addressed letter for the UK inland mails business of Consignia from 1989/99 to 1999/00



Source: Consignia
Data: UK inland mails business of Consignia
Addressed letter mail excludes unaddressed mail and non-letter items.

3.3 Actual historic productivity and postal costs

Consignia has considered the historic productivity performance for the UK mails business of Consignia from 1989/90 to 1999/00, by assessing the difference in the underlying, or expected, costs and the actual costs over the period. For a company with no economies of scale (i.e. cost elasticity of unity), the increase in total cost over time, in real terms, would reflect the growth in volumes and input costs (e.g. real wage inflation) and the efficiency savings from underlying productivity improvements. For a company with some economies of scale, efficiency savings arise from both productivity improvements and the economies of scale of volume growth. The level of efficiency savings from economies of scale can be estimated from the overall long-run marginal cost estimate or cost elasticity for the sector. When the change in the level of efficiency savings from economies of scale and change in actual total cost are subtracted from the expected change in total cost for a company with no economies of scale, it leaves a residual change in costs that reflects the underlying productivity.

Table 3 shows the contributions to average annual change in cost and underlying productivity from 1989/90 to 1999/00. For this analysis, non-labour input costs are assumed to increase at the rate of change in the Retail Prices Index.

Table 3: Contributions to average annual change in total cost and underlying productivity from 1989/90 to 1999/00

Factor	Annual change 1989/90 to 1999/00 %		Annual change 1994/95 to 1999/00 %	
Cost				
Volume growth	3.8		4.7	
Real wage inflation	0.8		0.7	
Subtotal		4.6		5.4
Efficiency savings				
Economies of scale	1.5		1.9	
Productivity	1.0		0.8	
Subtotal		2.5		2.7
Overall		2.1		2.7

During the period from 1989/90 to 1999/00, the average annual growth in volume was 3.8 per cent, the average annual growth in employee gross hours was 0.2 per cent and the average annual real growth in postal workers earnings was 1.3 per cent. For a company with a cost elasticity of unity, labour costs forming 70 per cent of total costs, with volume growth of 3.8 per cent and without productivity improvement, the expected real change in total costs is +4.6 per cent [i.e. 3.8 + 0.7(1.3)].

The UK inland mails business of Consignia is estimated to have a cost elasticity of about 0.6 and thereby savings from economies of scale of +1.5 per cent [i.e. 0.4(3.8)]. The real annual change in actual costs was +2.1 per cent. The improvement in productivity reflects the level of efficiency savings from

economies of scale and the actual change in cost subtracted from the expected change in total cost for the company with a cost elasticity of unity or no economies of scale [i.e. 4.6 – 1.5 - 2.1 = 1.0]. The productivity of 1.0 per cent comprises of an increase in capital, as a portion of total costs, by about 0.2 per cent per annum to reflect capital substitution of labour over the period and direct labour productivity at about 0.8 percentage points.

Table 3 also shows the contributions to average annual change in cost and underlying productivity from 1994/95 to 1999/00. The average annual productivity over this period was also close to unity, at 0.8.

In conclusion: the average annual productivity was about 1 per cent over the 10-year period to 1999/00 and marginally less, at 0.8, over a 5-year period to 1999/00. The overall efficiency of the UK mails business, combining productivity improvement and economies of scale from volume growth, was 2.5 per cent over the 10-year period to 1999/00 and 2.7 per cent over the 5-year period to 1999/00. This is a similar to the overall efficiency improvement for the UK economy as a whole over those periods.

3.4 Total factor productivity comparison

Total factor productivity (TFP) analysis has been used by some regulators to provide an estimate of the underlying productivity for a regulated industry and thereby enable comparison of expected and actual performance. In its price control review for 1999, OFWAT undertook a TFP review to assess the underlying performance of operating costs excluding capital depreciation relative to output in the water sector[19]. For the TFP analysis, the operating costs of the business are split by function, so that each can be allocated an appropriate productivity factor from another sector, thereby enabling the cost-weighted average productivity to be estimated.

For national statistics, the postal service is included within a standard industrial classification of 'transport and telecommunication' [20]. This category consists of a broad and diverse range of services. The operating costs are split by function to enable appropriate comparison of costs across all categories.

In terms of the comparative analysis of output and input measures, the postal sector has characteristics that are distinct from other regulated industries. The cost base of a regulated business with a geographic network can be divided into two main types: the costs relating to the area network infrastructure and the costs relating to support, management and sales services. These two main categories can then be further sub-divided. This enables appropriate comparators to be identified for use in any TFP analysis.

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[19] OFWATS final proposals for the price control in 1999 used *"Water and Sewerage industries: general efficiency and potential for improvement*" Europe Economics and Professor Nick Crafts, October 1998

[20] Transport and communication includes railways; sea transport (deep sea, short sea, domestic and coastal routes, shore bases); air transport; other inland transport (including urban railways, bus, motorcoach and tramway services, other road passenger transport, road haulage); supporting services to land, inland water, sea and air transport; and miscellaneous transport services (travel agents, freight brokers and storage and warehousing); postal services and telecommunication– Standard Industrial Classifications, National Statistics, 1980 (rather than the 1992 version).

The costs relating to the network of the postal sector have no direct comparator within the regulated industries. These costs within the UK inland mails business relate principally to labour and not capital. In comparison to capital-intensive networks, the UK inland mails business is characterised by a low capital-base and limited opportunities to substitute labour for capital and introduce new technology. In addition, while the input prices have reduced in real terms for capital, input prices have increased in real terms for labour. Consequently, it would be inappropriate to compare these costs within the mails business with the network costs or support, management and service costs of other regulated industries (whether privatised or not). Consignia considers that the productivity of these costs is more comparable with that of labour-intensive services associated with distribution (i.e. distributive trades and services[21]).

The costs relating to support, management and sales services include common and specialised functions e.g. vehicles, IT, insurance and corporate office (e.g. personnel, accounts etc). Most of these functions are also present within other regulated industries. However, the size of any function differs between the regulated industries to reflect, amongst other factors, the composition of the inputs and outputs related to the network cost. For example, a labour-intensive, network industry could be expected, amongst others, to have large personnel department relative to those of a more capital-intensive industry. Consignia considers that the productivity of some of these costs can be comparable with specific sectors (e.g. the productivity of vehicles can be compares with the transport sector) while other costs can be compared with the other regulated industries (e.g. general management costs).

The Service Delivery business unit employs the operational staff in the inland letters mail service and forms the vast majority of the mail business costs of Consignia. The TFP for the Service Delivery business unit of Consignia can be formed as follows:

a. Identification of components of cost within the total operating cost to which TFPs for relevant sectors can be applied and a weighted TFP for Service Delivery derived. This is shown in Table 4A.

Table 4A

	%
Network	73
Management	6
Vehicles	5
Logistics	7
IT	2
Property	7

[21] 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– Standard Industrial Classifications, National Statistics, 1980 (rather than the 1992 version).

b. Take relevant TFP sector values for 1973 to 1995 from O'Mahony[22] and adjust for volume growth and the different impact of economies of scale between sectors[23]. This is shown in Table 4B.

Table 4B

Sector	O'Mahony TFP	Adjustment for volume growth	TFP adjusted for volume growth
Distributive trades	0.43	0.16	0.27
Financial and business services[24]	0.98	0.53	0.45
Electricity, gas and water[25]	2.87	0.25	2.62
Construction[26]	2.15	0.05	2.10
Transport and communication	3.06	0.27	2.79

c. Allocate adjusted TFPs to components of operating cost and weight the adjusted TFP by the contribution to operating cost. This is shown in Table 4C and yields an overall estimate of about 0.7.

Table 4C

Category	Comparator	Adjusted TFP	Weight	Weighted and adjusted TFP
Network	Distributive trades	0.27	0.73	0.20
Management	Electricity, gas and water	2.87	0.06	0.17
Vehicles	Transport and communication	2.79	0.05	0.14
Logistics	Distributive trades	0.27	0.07	0.02
IT	Financial and business services	0.45	0.02	0.01
Property	Construction	2.10	0.07	0.15
Total			1.00	0.68

d. Amend the weighted and adjusted TFP to take account of the capital substitution of labour. With a capital substitution of labour of 0.2, the amended TFP is 0.9.

e. On the assumption that operating costs excluding depreciation form virtually all of the overall costs, the overall productivity is about 0.9.

[22] A standard source for comparisons of this type is "*Britain's Relative Productivity Performance, 1950-1996 – An International Perspective*", O'Mahony, National Institute of Economics and Social Research (NIESR), 1999.

[23] The adjustment assumes a cost elasticity of 0.9 for each sector or, equivalently, that costs increase by 90 per cent of the growth in volume when savings from economies of scale are taken into account.

[24] Financial and business services includes banking and finance; insurance (except compulsory social insurance); business services including activities auxiliary to insurance, house and estate agents, legal services, accountants, auditors and tax experts, architects surveyors and consulting, technical services and advertising; renting of movables; owning and dealing in real estate – Standard Industrial Classifications, National Statistics, 1980 (rather than the 1992 version)..

[25] Electricity, gas and water includes production and distribution of electricity; production and distribution of other forms of energy; public gas supply; water supply industry– Standard Industrial Classifications, National Statistics, 1980 (rather than the 1992 version)..

[26] Construction includes general construction and demolition work; construction and repair of buildings; civil engineering; installation of fixtures and fittings; building completion work– Standard Industrial Classifications, National Statistics, 1980 (rather than the 1992 version)..

The vast majority of the costs of UK inland mails business are in Service Delivery (i.e. about 95 per cent). Taking the productivity of the Service Delivery as representative of UK inland Mails business as a whole, the annual rate of productivity improvement of the UK inland mails business from the TFP analysis is about 0.9 per cent.

In conclusion, this TFP approach derives a result that is broadly in line with the level of productivity achieved by the UK mails business over the 10-year period to 1999/00 of about 1 per cent per annum on an underlying basis.

3.5 Implications for the price control

This paper reviews the historic performance of the UK inland mails business in the context of the present price control review. The form of the price control could be that of RPI-X, where the X –value reflects the real change in prices and/or revenues depending on the structure of the control.

The structure of the control is discussed in separate papers[27] which indicated that, under some assumptions[28], the optimal structure of the control with cream-skimming entry would have about 60 per cent of its revenue fixed and about 40 per cent dependent on volume. This is in contrast to a pure price control where all revenue is dependent on volume so that prices do not vary with movements in volume and a pure revenue control where all revenue is fixed and independent of volume so that prices vary to fully offset movements in volume.

The historic performance of the UK inland mails business has been reviewed in the context of the price control review for 2003. On the assumption that the value of revenue/prices at the start of the period was appropriate for the UK mails business of Consignia, the analysis of the actual productivity and efficiency performance can be used to indicate the RPI-X value that was achieved over 5 and 10-year periods to 1999/00. Revenue changed by RPI+2.1 to RPI+2.7 and prices changed by RPI-1.6 to RPI-1.9 over 5 and 10-year periods to 1999/00. For a weighting of prices and revenue consistent with an optimal hybrid structure[29], the weighted average of revenue and prices changed by RPI+0.9 to RPI+0.6 over 5 and 10-year periods to 1999/00. These figures reflect the underlying productivity and efficiency performance of the UK inland mails business of Consignia over the last 10 years.

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[27] "*Volume Risk I: forecasting errors – for the UK inland mails business of Consignia*" and "*Volume Risk II: cream-skimming entry – for the UK inland mails business of Consignia*", Consignia, June 2002.

[28] These assumptions will need to be reviewed once the liberalisation proposal for use in setting the price control is finalised.

[29] "*Volume Risk I: forecasting error – for the UK inland mails business of Consignia*", Consignia June 2002, where, subject to a number of assumptions, the appropriate structure involves a fixed portion of revenue of about 0.6 .

Table 5: Indicative values of a RPI-X format of control for 5 and 10-year periods to 1999/00, under pure price, pure revenue and hybrid control structures

	Period to 1999/00	
Cost	10-year	5-year
Volume growth	3.8	4.7
Real wage inflation	0.8	0.7
Subtotal	4.6	5.4
Efficiency savings		
Economies of scale	1.5	1.9
Productivity	1.0	0.8
Subtotal	2.5	2.7
Overall		
Total cost	2.1	2.7
Cost per unit	-1.6	-1.9
Hybrid average	0.6	0.9
Indicative RPI-X format		
Pure revenue control	RPI + 2.1	RPI + 2.7
Pure price control	RPI - 1.6	RPI - 1.9
Hybrid control	RPI + 0.6	RPI + 0.9

3.6 Conclusions

This paper reviews the historic performance of the UK inland mails business and international comparisons in the context of the price control review for 2003. It is necessary to take account of the historic performance of the UK inland mails business in the price control review for 2003.

During the two years to 2000/01 there has been a decline in the financial performance of the UK inland mails business. This has coincided with a significant reduction in real terms in the basic weight step price of Second Class public tariff and pre-sorted mail and, in addition, a reduction in real terms in the basic weight step price of First Class public tariff mail (see section 2). This has also coincided, though less significantly, with an annual improvement in efficiency (as measured by addressed letter items per employee gross hours) that is marginally lower than the historic long-term efficiency performance. In addition, the UK inland mails business remains amongst the most efficient by international comparison (see section 2). Hence efficiency improvements are more limited and the historic performance more relevant in the price control review than they might otherwise be.

A price control that reflects the historic, medium to long-term performance would include:

(a) an underlying productivity improvement of about 1 per cent per annum;

(b) a rise in postal workers earnings in line with increases above RPI in the external labour market; and

(c) annual efficiency improvement from economies of scale, relative to a case of no economies of scale, approximately equal to the product of 0.4 and the forecast volume growth per annum based on an estimate of the long-run marginal cost for mails services of 0.6.

In addition, the price control review will need to take account of, amongst other related factors, the initial value of revenue and prices, volume projections and the overlays relating to special projects and investments that could cause future values to differ from the historic values.