

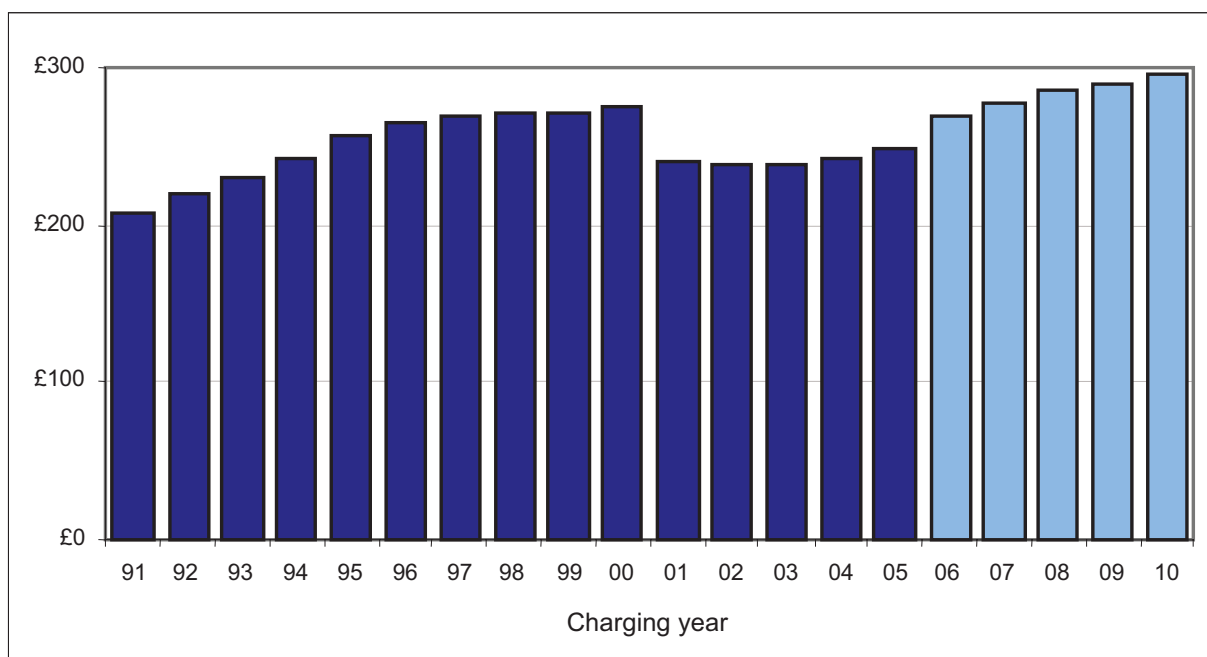
9. Price limits and bills

- Average household bills will rise by 18% in real terms over the period 2004-05 to 2009-10.
- The change in bills is a third less than companies' business plan proposals.
- Half of this increase takes place in 2005-06 to reflect the additional costs faced by the companies.
- The average household bill rise of 18% is lower than the increase of 23% implied by cumulative price limits, largely because of customers who switch to metered supplies.
- The regulatory capital value of the industry will increase from just under £35 billion to almost £41 billion.

9.1 The change in bills in context

Average household bills for the industry as a whole are projected to increase by 18% in real terms by 2009-10 compared with 2004-05. An increase of around 8.5% will occur in the first year of the new price limits, 2005-06. To put this in context, figure 4 shows the trend in average household bills since 1991.

Figure 4 Actual and projected average household bills 1991-2010



Customers' bills rose sharply in the first half of the 1990s but then rose more gradually following the price review in 1994. The price reduction in 2000-01 has been followed by further gradual rises. Overall, our price limits for 2005-10 mean that the average household bill would be 42% higher than at privatisation in 1989 – an increase of approximately 1.8% each year. Compared with bills a decade ago, they will be 7% higher by 2009-10.

This picture varies from company to company. For South West, which already has the highest bills, our price limits will increase its combined bill by 25% on average (in real terms) by 2009-10, and by 74% since privatisation (in real terms) by 2009-10. The largest bill increase since privatisation is for United Utilities, at nearly 81%. Excluding these two, the increase in bills since privatisation for the remaining water and sewerage companies will range from 15% to 50% by 2009-10.

Conversely, for two of the water only companies the bills at 2009-10 will, in real terms, be lower than at privatisation, despite increases for 2005-10.

By 2009-10, average household bills will have risen by 43% for water and sewerage companies and by 24% for water only companies since privatisation (excluding inflation). This largely reflects the greater impact of the quality improvement programmes on the water and sewerage companies.

The main components of customers' bills are:

- operating costs;
- capital charges, ie the costs of capital expenditure on improving and maintaining the asset stock (spread over the life of the assets);
- taxation;
- net interest; and
- profit after tax, ie the amount attributable to shareholders.

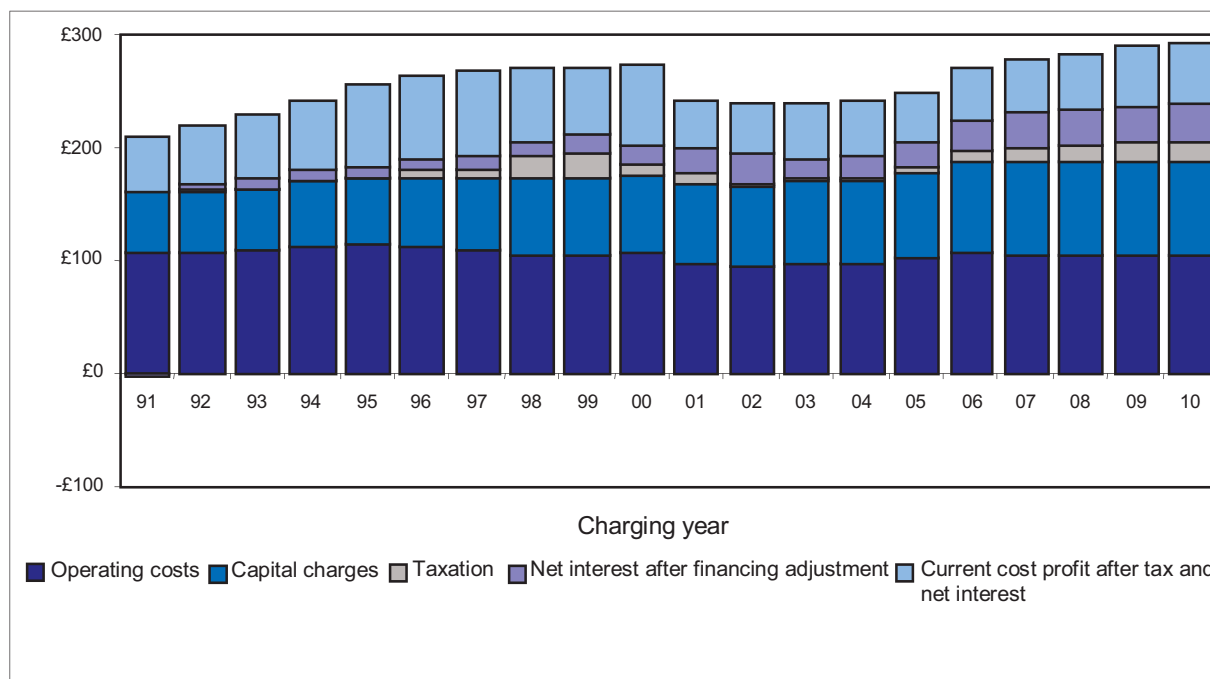
Figure 5 sets out how each of these have contributed to bills since privatisation.

This shows that operating costs as a proportion of bills are declining slowly. The capital charges (current cost depreciation and the infrastructure renewals charge) have risen since privatisation because of the significant capital programmes completed by companies. Business taxes paid by the companies were negligible until the mid-1990s but have risen steadily since then.

The return on capital is split into two components in figure 5 – interest payments and profit attributable to shareholders (including dividends). The former has risen sharply over time as debt has become a major element of companies' finances. Conversely, the proportion of the bill representing retained profits and dividends has fallen since privatisation.

By 2009-10, operating costs, at an industry level, will account for around 35% of the average household bill. At privatisation, it was over 50%. Capital expenditure (via capital charges) accounts for around 29%. Taxation accounts for a further 6%, leaving 30% for the providers of finance – debt and equity investors.

Figure 5 Components of the average household bill 1991-2010



Tables 14 and 15 set out in broad terms how each of these components break down between each area of expenditure. We have set this out for 2004-05 and also for 2009-10 to show how the picture changes over the five-year price review period.

Table 14 Components of the 2004-05 average bill

Output categories	Cost component drivers			Total	% of total
	Operating costs	Capital charges	Return on capital (including tax)		
Maintaining existing services and serviceability including sustaining <u>all</u> improvements delivered in AMP1 & 2 (1989-90 to 1999-2000)	£90	£55	£67	£212	85%
Plus additions during AMP3 – 2000-05 to:					
1. Maintain the supply/demand balance	£2	£0	£1	£3	1%
2. Deliver all the required improvements to drinking water quality and the water environment	£7	£11	£15	£34	14%
3. Deliver all the required service improvements	£0	£0	£0	£0	0%
Total bills	£99	£67	£83	£249	
% of total	40%	27%	33%		

Table 15 Components of the 2009-10 average bill

Output categories	Cost component drivers			Total	% of total
	Operating costs	Capital charges	Return on capital (including tax)		
Maintaining existing services and serviceability including sustaining <u>all</u> improvements delivered in AMP1, 2 & 3 (1989-90 to 2004-05)	£99	£71	£87	£257	87%
Plus additions during AMP4– 2005-10 to:					
4. Maintain the supply/demand balance	£1	£3	£5	£9	3%
5. Deliver all the required improvements to drinking water quality and the water environment	£4	£9	£14	£27	9%
6. Deliver all the required service improvements	£0	£1	£1	£2	1%
Total bills	£104	£84	£107	£295	
% of total	35%	29%	36%		

These tables are ‘snapshots’ but they can be seen as the start and finish points of this price review.

Table 6 in chapter 2 showed the breakdown of the £46 increase in the average household bill over the five years to 2009-10 increasing from £249 to £295. This is consistent with the total column in table 15 after taking into account our efficiency assumptions. For example, the increase in bills due to the costs of maintaining the supply demand balance is £11 in table 6 before we applied the efficiency improvement factors which reduces the net impact on costs to the £9 shown in table 15.

Tables 14 and 15 also illustrate both the continuing and cumulative impact on bills of the additions required in each price limit period. These additions are dominated by the costs of delivering the required improvements to drinking water quality and the water environment. Each time price limits are set the costs associated with sustaining the improvements made in the previous period are rolled up into the maintaining existing services and serviceability output category. Similarly at the next review in 2009 the ‘maintaining existing services and serviceability’ output category will incorporate the ongoing costs of sustaining all the improvements required in the five years 2005-10 (AMP4) as well as sustaining the improvements delivered in AMP1 (1989-95), AMP2 (1995-2000) and AMP3 (2000-05).

9.2 Price limits and household bills

The profile of price limits

The profile of price limits (and hence the profile of bills) is an important issue for customers. In economic terms, price limits and the changes in bills should reflect the changes in costs faced by the companies. Consequently, if changes in costs occur in the first year (or are first

recognised in price limits in that year), then this points to a larger rise in that year. If costs build up more evenly, then this would point to consistent rises in price limits each year.

Customers and the WaterVoice Committees would prefer that, where possible, increases in price limits are smoothed to ease affordability problems. They are particularly concerned about increases in 2005-06. Companies, on the other hand, are already bearing many of these costs and point to the pressures from financial markets to ensure that their covenants and lending conditions are not breached in the early years of 2005-10. They must remain financially stable and be able to raise capital to fund their investment programmes.

The final business plans proposed by the companies presented three general profiles:

- a steep increase in the first year (2005-06), followed by zero or small increases in the remaining four years;
- consistent rises in each year of the five-year period; or
- a significant increase in the first year (and sometimes in the second), followed by further rises in the remaining four years.

The profile of bills

A smoothed change in price limits and bills would mean that bills are higher at the end of the five-year period compared with a front-end loaded profile where prices are driven by the underlying costs. This is because not only would the companies collect less revenue in the early years, but the total revenue required by them would also increase to compensate for the additional risk. For example, the overall industry average from companies' final business plans showed an increase in the first year of 13% followed by declining increases from 7% to 3% in the next four years. This would result in an overall increase in average household bills of around 29% over the five years. Without assuming any additional revenue to compensate for risk, if this profile were smoothed, the overall increase by 2009-10 would be in the region of 38% – an additional 9% due to smoothing. This would be even higher if risk compensation were included. In the same way if we smoothed our final price limits, then the average bill would increase by 25%, rather than 18% – a 7% increase due to smoothing. Again this would increase further if risk compensation were included.

Our general principle is that the profile of price limits and bills should follow the underlying profile of the changes in costs. We noted the representations of WaterVoice Committees and customers but we consider that, in the long term, this principle is appropriate. We have therefore followed it at this review for the final price limits, with limited exceptions. Where costs and outputs can be rephased to later years (or deferred beyond the next review period), without jeopardising service levels or the financing of the company, we have done so. However, this has been possible only to a limited extent.

For South West, Bournemouth & West Hampshire, Cholderton and Folkestone & Dover we have smoothed price limits to a limited extent. South West had smoothed its price limits in its business plan because its bills are already the highest in the country, accepting that this would mean a lower than average return on capital in the early years. The rise in 2005-06 for South West would have been much higher, reflecting the cost pressures facing the company, but we have adopted the same approach and smoothed South West's price limits in the first two years. Folkestone & Dover had also smoothed its price limits over the whole five-year period, but we have followed the company's profile only in the first two years as our price limits are much lower overall than in the company's business plan. For Bournemouth & West Hampshire and Cholderton we have also smoothed price limits.

The links between price limits and bills

The increase in average household bills (ie measured and unmeasured households together) is likely to be less than that suggested by price limits for the period 2005-10. This is because price limits must be higher to allow for the loss of revenue that companies experience when household customers take up optional meters. Such customers switch to a meter because they will save money as a result of using less water or because their rateable value is higher than average or both. So companies lose revenue that must be recouped in price limits. The rate of optional metering means that, although the average household bill for the industry as a whole will rise by 18%, it is less than the increase of 23% implied by the cumulative price limits to 2009-10.

The price limits we set also take account of the change in the number of customers and the net impact that this change has on the costs and revenues of each company. For example, new customers will increase companies' revenue but this would be offset by the additional costs of supplying them. This is set out in further detail in chapters 12 and 14.

Changes in household bills and charges

The effect of some unmeasured customers opting for metered charges also means that the impact of price limits will be different for measured and unmeasured customers. Meter optants generally use less water than average and occupy properties with relatively high rateable values. This means that, relative to the group of unmeasured customers prior to switching, remaining unmeasured customers will have:

- a lower average rateable value; and
- higher average water use.

When customers with high rateable values and low consumption switch, this reduces the previous cross-subsidy to the remaining unmeasured customers – who have previously paid less than their costs of supply. Consequently, the removal of this subsidy means that they will pay more. The tariff basket mechanism ensures that this is what happens.

Bills will also be affected by changes in the way we assess the measured/unmeasured tariff differential. We use the differential to ensure a cost-reflective balance between measured and unmeasured charges. The changes we have made to the differential were set out in RD02/04, 'Measured/unmeasured tariff differentials: Conclusions', and aim to reflect more accurately the additional costs of measured charging for each company.

The revised approach means that, for most companies, measured bills are likely to rise by slightly more than the average price limit in 2005-06 and 2006-07, and for unmeasured bills by slightly less, while the new approach is phased in. Thereafter we expect measured bills to rise, on average, by slightly less than the price limit due to the impact of optional metering.

Table 16 illustrates the relative movement in the bills for typical unmeasured and measured households. The table illustrates the likely changes in bills for:

- a 'typical' measured customer, ie a measured customer whose water usage is constant over the period and is equal to the 2002-03 average for that company's measured customers; and
- a 'typical' unmeasured customer, ie an unmeasured customer occupying a property with a rateable value that is equal to the 2002-03 average for that company's unmeasured customers.

The presentation in table 16 does not take account of the savings that some customers will experience as a result of optional metering, or by reducing their water usage. For this reason, the percentage change figures show higher increases than those shown in table 4 in chapter 1 for average bills. The figures illustrate the bill impacts of price limits on these typical customers, assuming that they do not change property or their water usage. Average bills for measured and unmeasured customers will also change over time, but in a way that reflects the impact of the changing composition and water usage of these customer groups, as well as changes in charges.

Table 16 shows that in broad terms the effect of optional metering broadly offsets the changes to the measured/unmeasured tariff differential described above. As a result, for most companies, typical measured and unmeasured bills rise by similar amounts. However, there are some exceptions to this. For measured customers of Northumbrian, Severn Trent, Bristol and Dee Valley, the rise in bills is somewhat higher than for unmeasured customers. For measured customers of South West, Wessex, Bournemouth & West Hampshire, Folkestone & Dover and Mid Kent, the reverse position holds. We have set out in appendix 2 some further examples of the changes in bills for customers with differing characteristics. These figures and those in appendix 2 are illustrative only, because the precise pattern of charges is subject to a process of annual approval that we cannot prejudge.

Table 16 Change in typical measured and unmeasured household bills

Company	Household bills (£)				% change	
	2004-05		2009-10		Measured	Unmeasured
Water and sewerage companies						
Anglian	244	354	272	401	11	13
Dŵr Cymru	177	314	228	411	29	31
Northumbrian	211	251	245	289	16	15
Severn Trent	200	230	255	282	27	22
South West	273	442	375	636	37	44
Southern	239	271	311	356	30	31
Thames	196	215	239	270	22	26
United Utilities	246	279	305	349	24	25
Wessex	227	302	292	407	29	35
Yorkshire	205	259	247	319	21	24
WaSC average (weighted)	222	263	271	323	22	23
Water only companies						
Bournemouth & W Hampshire	90	117	101	143	12	23
Bristol	92	113	112	129	21	15
Cambridge	82	101	91	114	11	14
Dee Valley	78	121	87	119	11	-2
Folkestone & Dover	119	162	147	210	23	29
Mid Kent	112	141	128	168	14	19
Portsmouth	87	77	88	81	2	6
South East	114	137	137	165	20	20
South Staffordshire	90	92	105	110	17	19
Sutton & East Surrey	111	130	125	150	13	15
Tendring Hundred	135	199	130	197	-4	-1
Three Valleys	98	124	115	147	17	19
WoC average (weighted)	101	117	117	136	16	16
Industry average (weighted)	222	261	269	319	21	22

9.3 Water and sewerage price limits

We set a price limit for each of the ten water and sewerage companies but we expect the bills for water delivered and sewage collected to recover fairly the separate costs of providing each service. This is important as many customers receive their water and sewerage services from different suppliers. It is also particularly important where the costs of providing the respective services are changing at different rates because of the different elements of the investment programme. Table 17 contrasts the cumulative increases for

water and sewerage for the period 2005-10, distinguishing the first year and the four subsequent years.

The indicative changes in the price limits for water and sewerage over the period 2005-10 reflect, in the main, the respective investment expenditure, operating costs, demand and efficiency assumptions for each service. At an industry level, the indicative changes are broadly similar for water and sewerage. The majority of the quality investment relates to the sewerage service but the reverse is true for supply/demand investment. Operating costs are also higher for the water service. The indicative price limits reflect the specific requirements of each company. Over the five years, the indicative price limits for Northumbrian are broadly balanced between the services. Those for Anglian, South West, Thames and Wessex are weighted towards the water service, while those for the remaining water and sewerage companies are weighted towards the sewerage service.

The indicative price limits for each service for 2005-06 show, for the majority of the water and sewerage companies, greater increases for the water service than for the sewerage service. This largely reflects greater increases in the infrastructure renewals charge and depreciation for the water service. For Thames, the very heavy weighting towards the water service reflects its overall strategy which focuses on leakage and resource development to improve its security of supply.

To ensure that customers of one service do not subsidise customers of the other, the indicative price limits are consistent with water and sewerage companies achieving a similar rate of return on capital (measured by the regulatory capital value) for each service.

Table 17 Indicative changes in water and sewerage charges 2005-06 to 2009-10

Company	Price limit for first year 2005-06 (%)			Cumulative price limits for four years 2006-07 to 2009-10 (%)		
	Price limit	Indicative		Cumulative	Indicative	
		Water	Sewerage	Price limit	Water	Sewerage
Water and sewerage companies						
Anglian	3.8	10.7	-0.4	8.4	10.4	7.3
Dŵr Cymru	14.2	18.0	10.9	13.9	9.7	17.1
Northumbrian	6.5	7.1	5.8	8.7	8.9	8.5
Severn Trent	11.8	9.0	14.6	11.2	9.0	13.6
South West	12.5	19.7	7.7	24.3	32.6	18.4
Southern	12.6	22.2	9.3	16.7	1.8	22.5
Thames	14.9	31.3	2.2	6.2	8.1	4.4
United Utilities	5.0	-0.3	9.4	18.4	14.8	21.1
Wessex	8.9	16.8	5.3	18.5	23.5	16.3
Yorkshire	5.5	5.4	5.6	15.0	11.0	18.8
WaSC average (weighted)	9.4	13.6	7.0	12.8	11.4	14.3
WoC average (weighted)	12.4	12.4		3.6	3.6	
Industry average (weighted)	9.6	13.4	7.0	12.1	10.1	14.3

9.4 Profitability and price profiles

We have a duty to enable efficient companies to finance the proper carrying out of their functions. We have considered carefully the impact that the projected profile of prices will have on the returns, profits and cashflows achieved by the companies.

A summary projected profit and loss account for the industry is shown in table 18. The table shows both the expected outturn position for 2004-05 and what was assumed at the last price review in 1999. Despite higher revenues than anticipated in 2004-05, the return expected by companies in 2004-05, measured as the return on the regulatory capital value, is lower than was assumed in price limits at the last review in 1999. This is because of higher day-to-day costs (although offset by efficiency savings) and higher current cost depreciation charges.

The projections for 2005-06 and 2009-10 show an upward trend in operating profits as companies need to finance the growing capital base resulting from the continuing investment programme. The regulatory capital value increases from just under £35 billion at 31 March 2005 to almost £41 billion by 2009-10. The level of returns as a percentage of the capital base increases slightly from 5.1% in 2005-06 to 5.7% in 2009-10. The assumed cost of capital is 5.1%, excluding the small company premium.

Table 18 Financial projections 2004-05 to 2009-10

	Current cost profit and loss account (£ billion)			
	2004-05		2005-06	2009-10
	1999 review	Actual expected		
Turnover	6.723	6.880	7.502	8.330
Operating expenditure	2.669	2.797	2.966	2.954
Current cost depreciation:				
Base service	1.315	1.631	1.549	1.465
Enhancements	0.087	0.092	0.148	0.331
Infrastructure renewals charge	0.409	0.446	0.565	0.569
Current cost operating profit	2.256	1.928	2.286	3.014
Regulatory capital value (year end)	35.312	34.718	37.045	40.727
Return on capital (post-tax)	5.2%	4.5%	5.1%	5.7%

The financial projections for 2005-10 for each company, on a five-year aggregate basis, are set out in appendix 6.

Capital charges

Capital investment expenditure on above ground assets is recovered through customers' bills over the life of the asset (rather than immediately the investment is incurred) through depreciation charges. Table 18 shows separately the depreciation charges on the assets providing the base service and those arising from enhancement investment.

Figure 6 Current cost depreciation charges for base and total assets

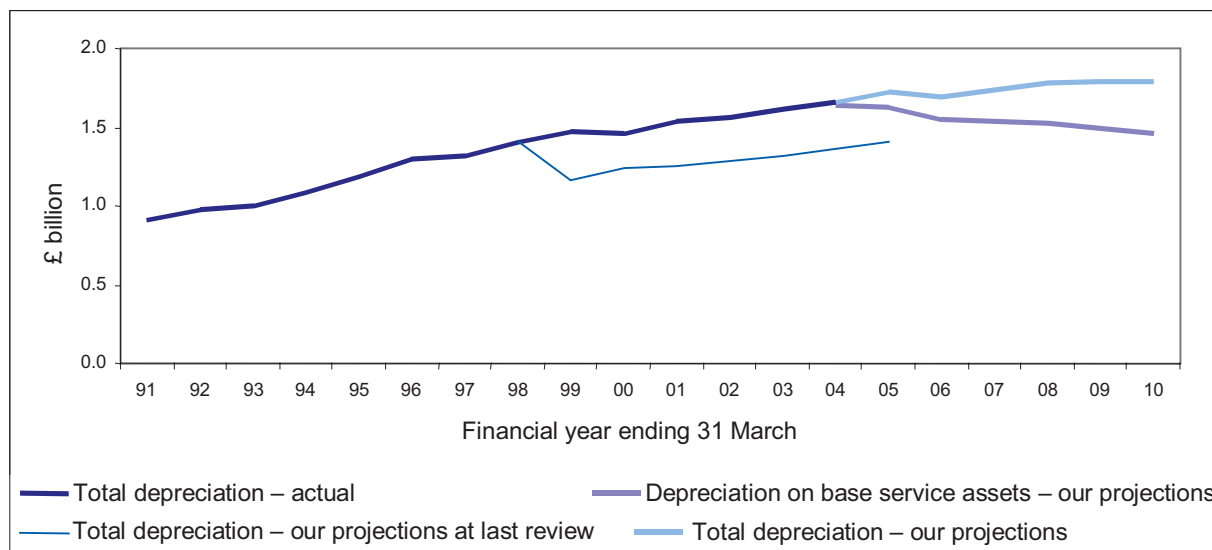


Figure 6 shows the trend in depreciation charges from 1991 to 2010. For the period of the final price limits, this shows depreciation on base services separately from total depreciation. It also compares depreciation assumed in price limits in 1999 with that charged in companies' accounts up to 2004. This shows that companies made significantly higher depreciation charges than allowed in price limits in 1999. This is a key factor in the lower than expected return on capital as shown in table 18. Most companies did not make any adjustment to their depreciation charges to reflect the long-term assessment of expenditure on maintaining serviceability to customers as was assumed in the price limits in 1999.

We have reassessed this comparison at this review and this is discussed in more detail in chapter 11. This accounts for the small dip in projected depreciation on base assets in 2005-06.

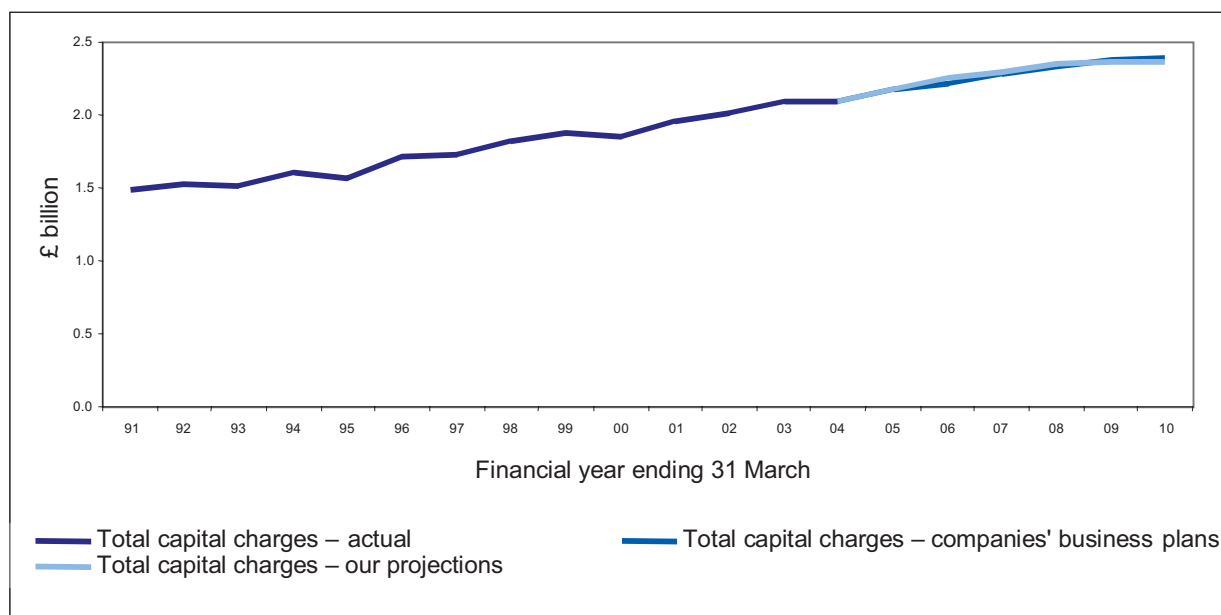
Total depreciation, however, increases because of the continued investment required for new enhancements, primarily the quality programme, which increases the capital base. Expenditure on capital maintenance and enhancements (from which the depreciation charges are derived) is discussed in chapters 11 to 13.

The projected infrastructure renewals charge reflects the average, over a 15-year period, of the infrastructure renewals expenditure required to maintain the underground network assets. It is significantly higher over the five-year period 2005-10 than in 2004-05. This is a direct consequence of the increase in proposed expenditure on underground maintenance. The serviceability to customers of the network assets and the need for increased investment is discussed further in chapter 11.

Together, current cost depreciation and the infrastructure renewals charges are called capital charges – and it is these that are reflected in customers' bills.

The trend in capital charges since privatisation is shown in figure 7. This shows the impact over time of the investment programme carried out since privatisation. In real terms, capital charges are projected to increase from around £1.5 billion at privatisation to just under £2.4 billion by 2009-10. Companies' business plans project a marginally higher trend – reaching just over £2.4 billion by 2009-10.

Figure 7 Comparison of actual and projected capital charges



Return on capital

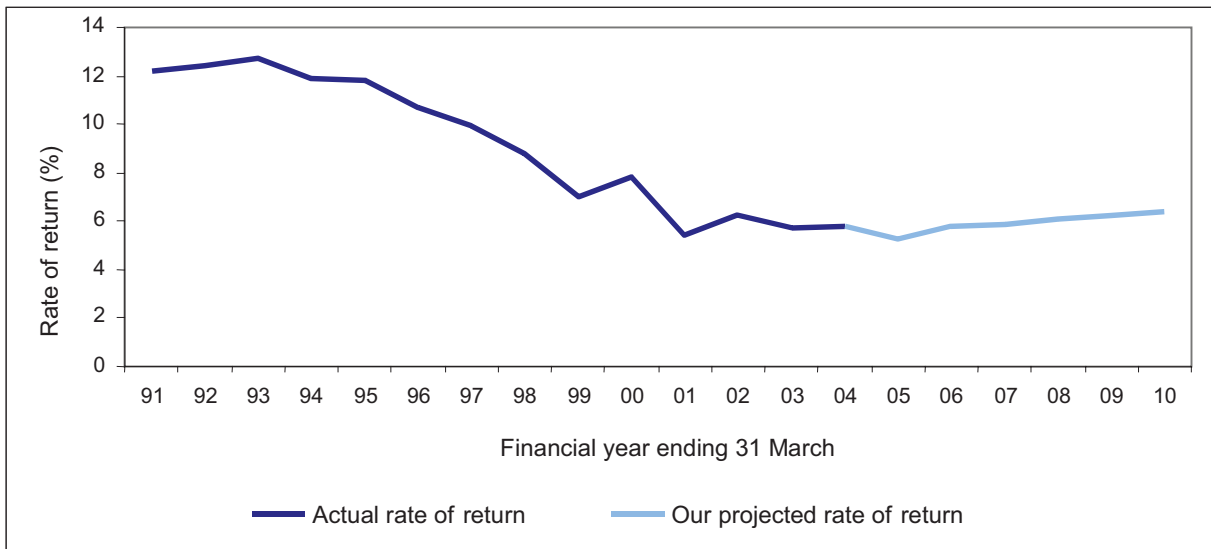
Since privatisation, there has been a steady fall in the return on capital from its high starting position as shown in figure 8. The price limits in 1999 incorporated an immediate step change in returns down to the cost of capital. The return on capital was expected to remain fairly constant at this lower level over the period 2000-05 but it has declined, largely because of higher depreciation charges than anticipated. For 2005-10, the price limits would allow returns slightly higher than our assumed cost of capital.

The cost of capital is not intended to guarantee shareholders' returns. A poorly managed water company might earn a lower return because it underperforms our assumptions, for example on efficiency savings. On the other hand, outperformance of our efficiency assumptions will increase returns. This is important for the preservation of incentives.

As well as future outperformance, there are other reasons why these price limits could result in a particular company earning a return above its cost of capital. For example:

- the effect of the incentive framework is such that companies which have made operating cost efficiencies in the later years of the current five-year period will earn returns above the cost of capital in the early years of the next one; and
- the effect of the service performance adjustment is to reward those companies providing a superior service by increasing their returns.

Figure 8 Post-tax rates of return¹



1 The post-tax rate of return shown is the WACC based on the pre-tax cost of debt/post-tax cost of equity, ie the so-called 'vanilla' WACC.

These effects influence returns in the earlier part of 2005-10. In addition, the continuing large capital programme and obligations of the companies that are included in price limits continue to place a financing strain on the companies. This increases towards the end of the period and the impact of financeability constraints are greatest at that time and hence returns are higher. This adds around 1.0% per year to the price limits in 2007-08, reaching around 1.3% by 2009-10. This is set out further in chapter 15.

Finally, any general smoothing of price limits (as distinguished from phasing of costs and outputs) will impact on returns. We have made smoothing adjustments for only four companies, South West, Bournemouth & West Hampshire, Cholderton and Folkestone & Dover, as set out in section 9.2 of this chapter.