

Protecting consumers, promoting value and safeguarding the future



The UK experience of benchmarking

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Contents

- The water industry in England and Wales and the role of Ofwat
- Comparative competition
- Assessing relative efficiency
- Price setting
- Possible future developments

England and Wales water industry (1)



Water and sewerage companies

1. Anglian Water
2. Dŵr Cymru
3. Northumbrian Water
4. Severn Trent Water
5. South West Water
6. Southern Water
7. Thames Water
8. United Utilities
9. Wessex Water
10. Yorkshire Water

England and Wales water industry (2)



Water only companies (WOCs)

1. Bournemouth & West Hampshire
2. Bristol Water
3. Cambridge Water
4. Cholderton and District Water
5. Dee Valley Water
6. Essex and Suffolk Water (Northumbrian Water)
7. Folkestone & Dover Water
8. Hartlepool Water (Anglian Water)
9. Mid Kent Water
10. Three Valleys Water
11. Portsmouth Water
12. South East Water
13. South Staffordshire Water
14. Sutton and East Surrey Water
15. Tendring Hundred Water

England and Wales water industry (3)

- 23 million connected properties
- 53 million population
- Companies operate regional monopolies
- Competition restricted to large industrial users
- Prices have risen 25% above inflation since privatisation
- To pay for £70 billion investment programme to upgrade infrastructure and meet new quality standards

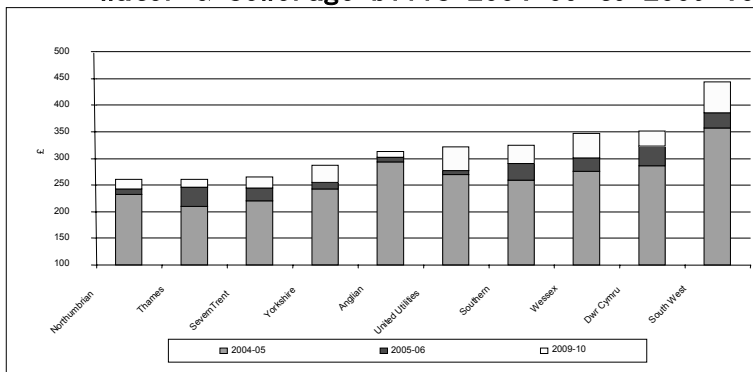


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England and Wales water industry (4)

Water & sewerage bills 2004–05 to 2009–10



Average metering = 30%
Range = <10% to ~65%

Average bills 2007-08:
Industry average:

£325 unmetered ~€420
 £285 metered ~€370

South West (highest):

£650 unmetered ~€845
 £378 metered ~€490



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Ofwat (1)

- Ofwat is an independent economic regulator
- We were set up to regulate the privatised water and sewerage industry in 1989
- We have statutory duties:
 - To protect customers
 - Make sure that the functions of the water companies are properly carried out
 - Set price limits that enable **efficient** companies to finance these functions
 - Promote efficiency

Ofwat (2)

- We set price limits for 5 year periods in our price reviews:

RPI +K

- Achieves reasonable medium term stability
- Continuous **comparative competition** where “the best set the benchmarks for the rest”
- Incentives for companies to out-perform and retain financial benefits for 5 years
- Outperformance feeds through into lower bills for customers

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Comparative competition (1)

- A powerful tool for improving and maintaining performance in a regulated monopoly environment.
- The movement of companies towards a common frontier of performance over time is clearly visible in the industry.
- Efficiency is dynamic: incentive-based regulation encourages the industry to move to new frontiers.
- At price reviews we assume that all companies will become more efficient. This is in addition to companies converging towards a common performance frontier.

Comparative competition (2)

- We monitor companies' performance each year
- Companies' annual returns (June return) to us set out:
 - **performance of regulated activities**
 - **service to customers**
 - **expenditure**
- We publish our analysis of the June return information

Comparative competition (3)

- Our five annual reports:
 - **Tariff structure and charges**
 - **Financial performance and capital expenditure**
 - **Levels of service to customers**
 - **Security of supply**
 - **Relative efficiency assessment**

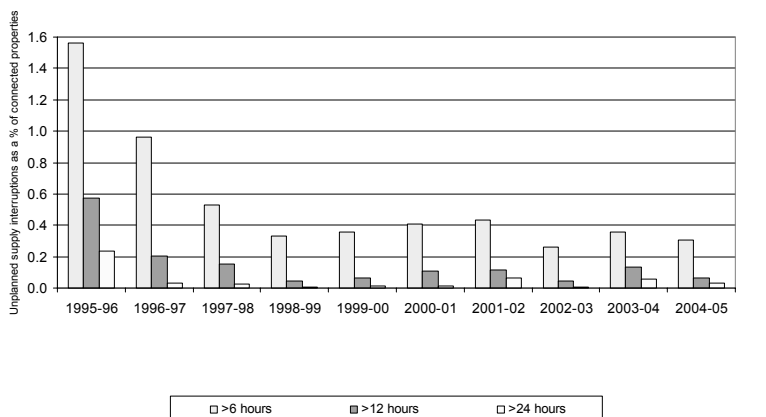
Comparative competition (4)

At the centre of our regulatory approach

- simple metrics
 - eg, interruptions to water supply
- more complex compound measures
 - eg, the overall performance assessment (OPA)
- advanced modelling of expenditure and procurement efficiency

Comparative competition – simple metrics (5)

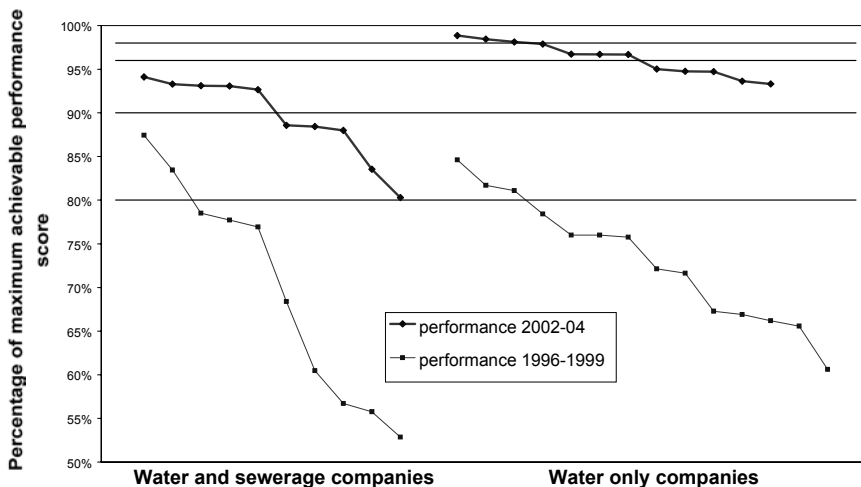
Figure 6 Unplanned supply interruptions for three timebands as a percentage of connected properties 1995-96 to 2004-05



Comparative competition – compound measure (6)

- The overall performance assessment (OPA) covers a broad range of services to customers
- Includes all of the levels of service indicators
- Also includes information about
 - environmental performance
 - quality of drinking water
 - leakage
 - quality of customer information
- We use the OPA to make an adjustment to price limits

Comparative competition - OPA (7)



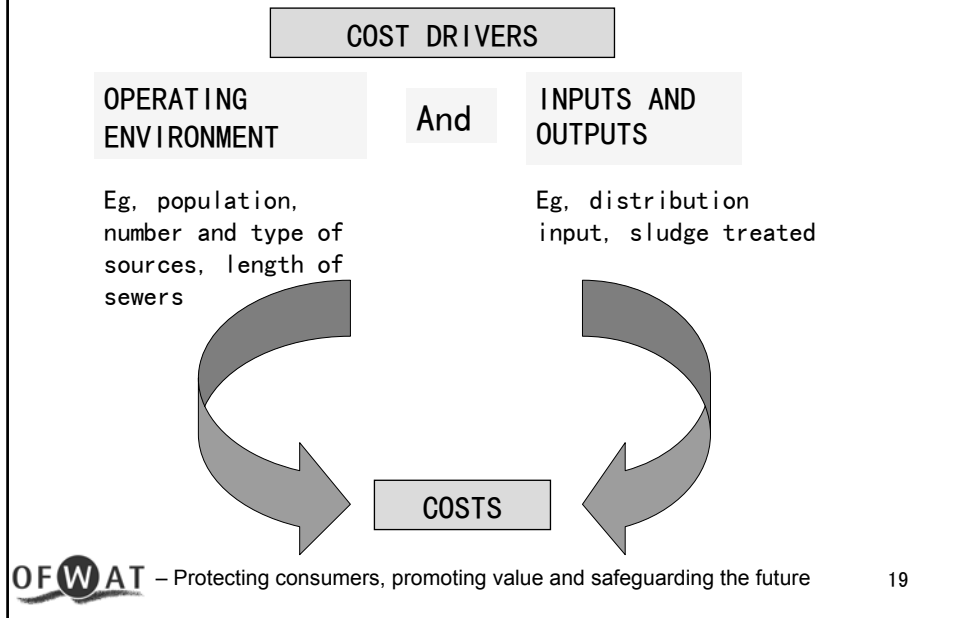
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Assessing relative efficiency (1)

- We use econometrics to measure the relative efficiency of the water and sewerage companies
- Costs vary because of
 - differences in operating environments which are outside of the companies' control
 - differences in efficiency

Assessing relative efficiency (2)

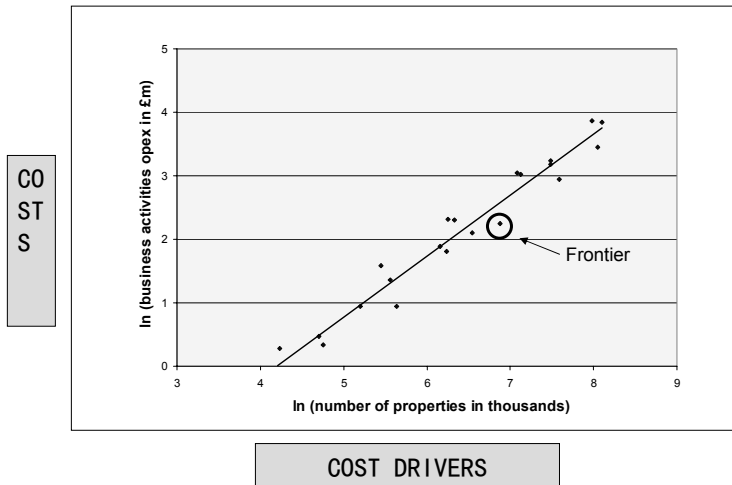


Assessing relative efficiency (3)

- We use regression analysis to derive a range of econometric models for each area of the business
 - water service (operating and capital expenditure)
 - sewerage service (operating and capital expenditure)
- Each model describes the relationship between costs and cost drivers
- Models, data and methodology are on our website

Assessing relative efficiency (4)

• Business activities model – operating expenditure



Assessing relative efficiency (5)

- We combine the results from all the models for water and do the same for all the sewerage models.
- We then take account of any company specific special factors (those that are outside the companies control and that cannot be incorporated into the models)
 - Higher salary costs in the South East of England
 - High meter penetration
 - Poor quality sources of water
 - Legal Requirements

Assessing relative efficiency (6)

- We then derive an efficiency banding for each company (A being the most efficient, and E being the least efficient), relative to the most efficient company
- We publish the bandings annually
 - Relative efficiency assessment 2006-07
- We use these bandings together with other information to produce the efficiency targets for each company at a Periodic Review.

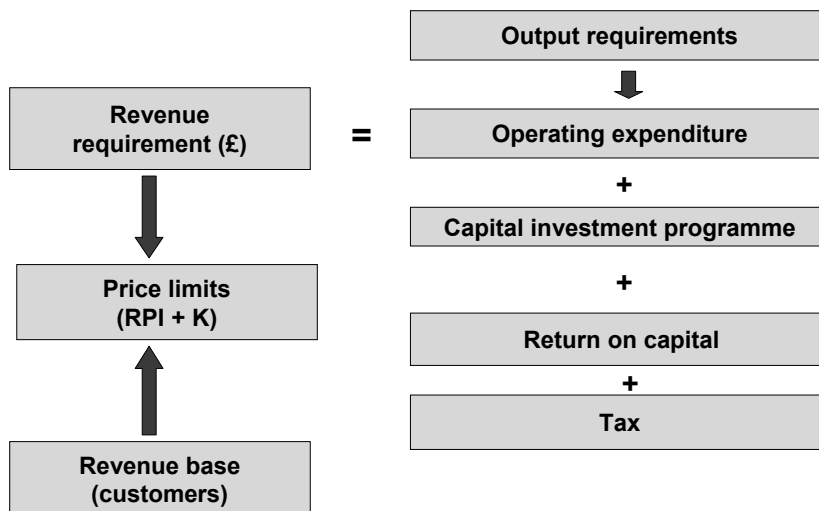
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Price setting (1)

- The most powerful regulatory tool.
- Ofwat sets price limits every five years.
- A separate price limit for each company for each year. The price limit is called the K factor.
- $RPI \pm K$. K limits the annual average increase in customers' bills to the rate of inflation plus the K factor.

Price setting (2)



Price setting (3)

- When we set price limits, we include challenging efficiency improvement factors for operating and capital expenditure
- Our overall efficiency factors have two components
 - Catch-up improvement
 - Continuing improvement

Price setting – Incentives (4)

- Incentives are the key to efficiency
- mix of benefits and penalties with the emphasis on the former
- allow companies to earn extra returns if they do better than regulatory assumptions
- in a comparative regime this benefits customers and the environment

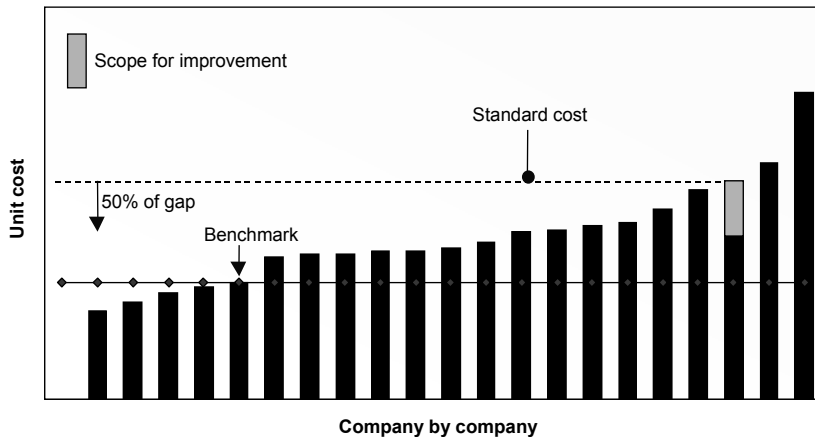
Price setting – tools (5)

- **Tool 1 Cost base**
 - applied to capital expenditure (maintenance and enhancement)
 - **Tool 2 Econometric models**
 - applied to operating and capital expenditure (maintenance)
 - **Tool 3 Continuing efficiency assessment**
 - applied to all
- } Catch-up

Price setting – cost base (6)

- Over 120 ‘standard costs’ representative of capital expenditure e.g.
 - unit cost of mains laying etc
 - idealised projects - e.g. new treatment works, refurbished pumping stations etc.
- each associated with standard cost specification
- Common price base
- Priced using company historic data wherever this available
- Cost base reporting requirements are on our website

Price setting – cost base (7)



Price setting – econometrics (8)

- Operating efficiency: mixture of econometric models and unit expenditure models
 - 4 water service
 - 4 econometric models
 - 5 sewerage service
 - 2 econometric models
 - 3 unit expenditure models
- Capital efficiency: mixture of econometric models and unit expenditure models
 - 4 water service
 - 3 econometric models
 - 1 unit expenditure model
 - 5 sewerage service
 - 2 econometric models
 - 3 unit expenditure models

Price setting – econometrics (9)

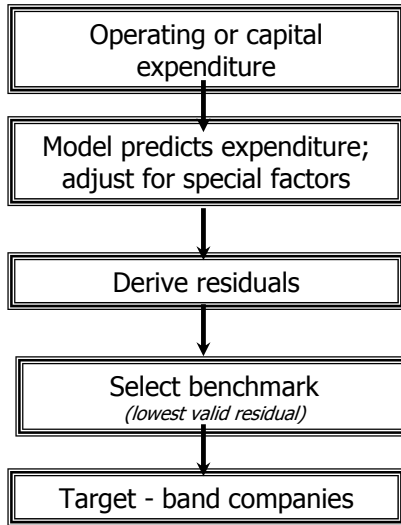


Figure 3: Relative operating and capital maintenance efficiency
– water service 2000-01

Operating efficiency banding	A Leading companies			Southern		
	B Above average efficiency	Yorkshire	Wessex	United Utilities, Northumbrian, Thames	Portsmouth	
	C Average efficiency	Anglian	Savern Trent	South West, Bournemouth & W Hants, Dee Valley, Sutton & East Surrey	South Staffordshire	Cambridge South East
	D Below average efficiency		Mid Kent		Bristol, Tending Hundred	Folkestone & Dover, Three Valleys
	E Least efficient companies				Dŵr Cymru	
		E Least efficient companies	D Below average efficiency	C Average efficiency	B Above average efficiency	A Leading companies
Capital maintenance efficiency banding						



Figure 4 Relative operating and capital maintenance efficiency – water service 2003-04

Operating efficiency banding	A Within 5% of benchmark			Southern	Severn Trent, Wessex, Cambridge	Yorkshire, Bournemouth & W Hampshire, Portsmouth, South Staffordshire
	B Between 5% and 15% of benchmark			Dee Valley	Anglian, Dŵr Cymru, United Utilities, Mid Kent, Sutton & East Surrey, Tendring Hundred	Northumbrian, South East, Three Valleys
	C Between 15% and 25% of benchmark				Bristol	South West, Thames, Folkestone & Dover
	D Between 25% and 35% of benchmark					
	E Greater than 35% of benchmark					
	E Greater than 40% of benchmark	D Between 30% and 40% of benchmark	C Between 20% and 30% of benchmark	B Between 10% and 20% of benchmark	A Within 10% of benchmark	
Capital maintenance efficiency banding (combined)						



Price setting – continuing efficiency (10)

- Applied to all companies
- Independent assessment of potential efficiency gains in comparator industries nationally
- Review of recent water industry efficiency gains and prospects for further technological and management improvements
- Split equally between company and customer
- Ranged from 0.6% p.a (water operating expenditure) to 8.8% p.a (capital enhancements)



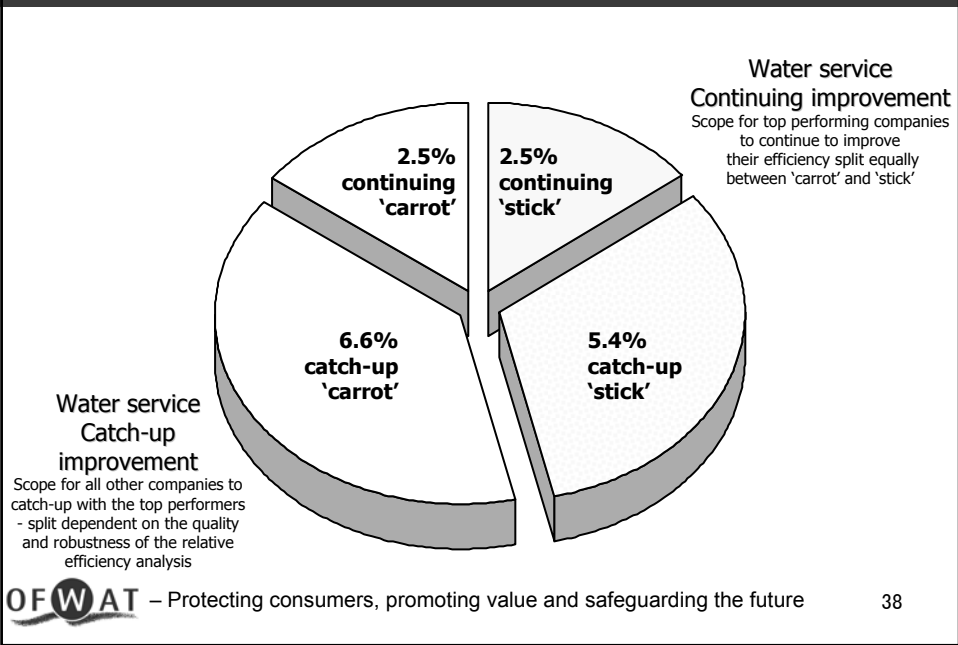
Price setting – combination of tools (11)

- Operating expenditure
 - Econometrics (60% catch-up to benchmark)
 - plus continuing efficiency
- Capital maintenance expenditure
 - 50% cost base (50% catch-up to benchmark)
 - plus 50% econometrics (40% catch-up to benchmark)
 - plus continuing efficiency
- Capital enhancement expenditure
 - Cost base (75% catch-up to benchmark)
 - plus continuing efficiency

} **Catch-up**

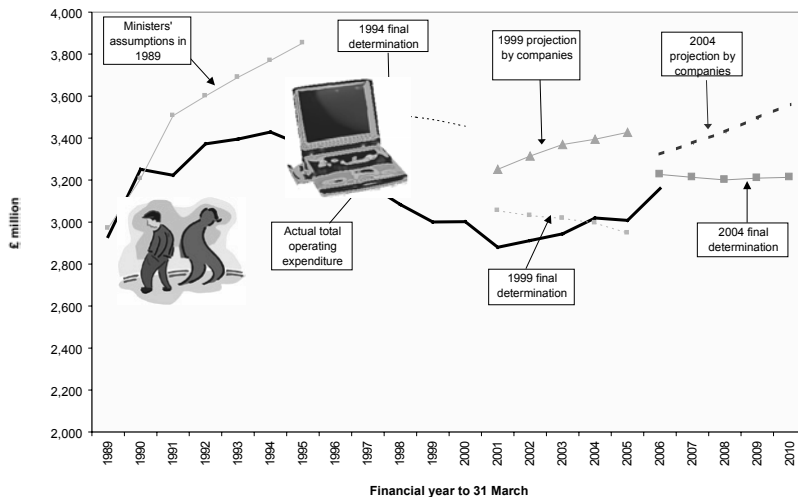


Price setting – efficiency target (12)



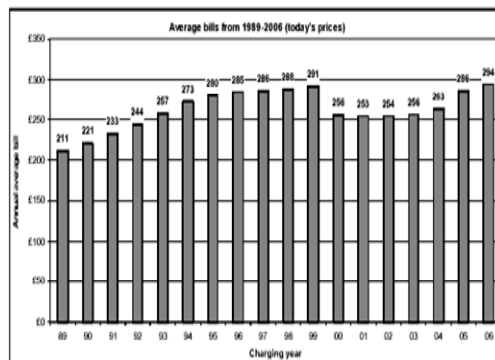
Price setting – impact of regulatory regime

Comparison of total water and sewerage operating costs (2005-06 prices)

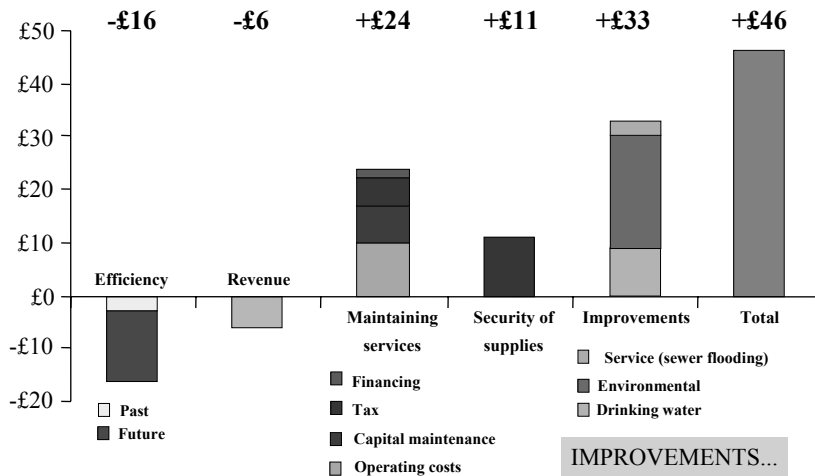


Price setting – impact of regulatory regime (14)

- Bills £100 less that they might have been in 2009 – 10
- Over 10 years 2000-10, the increase in bills will be 7% in real terms nationally.
- Customer service significantly higher
- Environmental and drinking water quality improved
- Greater static efficiency
- Leakage down by one third since its peak in 1994-95



What is driving the change in average bills from 2004-05 (£249) to 2009-10 (£295)



Company business plans total change £72 - our FD only £46



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Possible future developments (1)

Priorities for PRO9 are to support and encourage a sustainable water and sewerage sector by:



- Providing incentives for companies to deliver efficiency, innovation and give consumers value for money
- Implementing a framework that will deliver long-term planning that balances local and global priorities, and
- Promoting the development of a competitive market



Possible future developments (2)

- Operating expenditure
 - Refine approach (time series data, econometric model for sludge, special factors)
- Capital expenditure
 - Menu regulation
- Revenue correction mechanism
- Overall performance assessment



Contact me: sally.birse@ofwat.gsi.gov.uk
 (international comparisons work)

For more information: www.ofwat.gov.uk



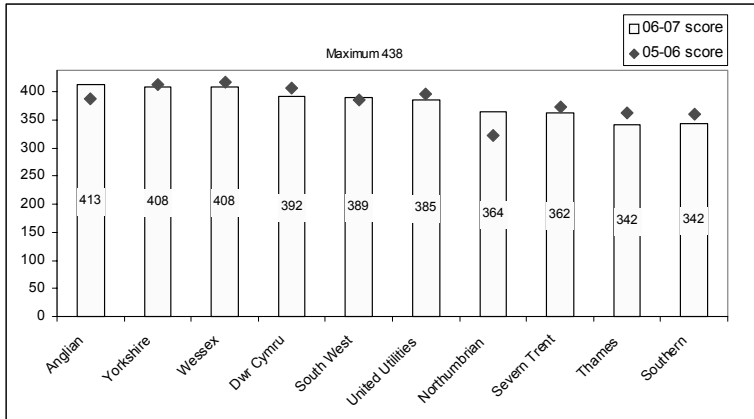
OPA adjustments to price limits

Performance band	Adjustment to K factor in 2005-06	Company
>98% and significantly higher than average	0.4	SST, THD
>98% and within average	0.3	FLK, PRT
>96%	0.2	BRL, CAM, MSE
>90%	0.1	ANH, WSH, SVT, WSX, YKY, BWH, DVW, MKT, SES, TVN
<90% and within average	0	NWL, SRN, TMS
<90% and significantly lower than average	-0.1	SWT, NWT



Comparative competition (7)

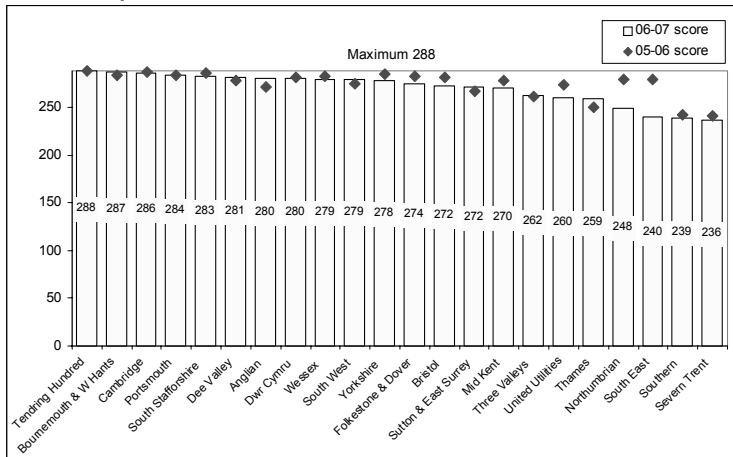
Overall performance assessment – water supply, sewerage service and customer service for water and sewerage companies 2005–06 and 2006–07



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Comparative competition (8)

Overall performance assessment – water supply and customer service for all companies 2005–06 and 2006–07



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