Centre City Tower, 7 Hill Street, Birmingham B5 4UA
21 Bloomsbury Street, London WC1B 3HF

Meeting note

Tuesday 14 September 2021
11:00 am to 1:00 pm

Cost assessment working group (CAWG)

Attendees

Anglian Water	Richard Goodwin
Dŵr Cymru	Daniel Davies
Hafren Dyfrdwy	Nathaniel Sear
Northumbrian Water	Crawford Winton
Severn Trent Water	Robert Holdway
South West Water	Judith Corbyn
Southern Water	Michael Kearns
Thames Water	Carlos Pineda Bermudez
United Utilities	Sam Crook
Wessex Water	Harriet Cutts David Peacock
Yorkshire Water	Daniel Chubb Christian Speedy (Baringa)
Bristol Water	James Holman
Portsmouth Water	Jamie Jones
SES Water	Van Dang
South East Water	Matt Hersey
South Staffs Water	Daniel Haire
Ofwat	Tim Griffiths, Daniel Mitchell, Paul Martin, Simon Harrow, Gilda Romano, Beckie Paterson, Jake Wood, David Watson, Matthew Greetham, Shivani Lad.

Introduction

Ofwat opened the meeting, introduced the team and set out the agenda:

- PR19 background and context, Ofwat;
- a potential framework for exploring the cost service link at PR24, Yorkshire Water and Baringa;
- capturing the cost-service relationship inside or outside the base models, Thames Water and SES Water;
- closing remarks;
- bonus session: a short deep dive on sewer flooding, Ofwat.

Ofwat stated that establishing a link between cost and service quality is an issue regulators have been grappling with for the past 25 years. We recognised the challenges to establishing a robust link, and that we must be pragmatic in our ambitions.

PR19 background and context

Ofwat presented a recap on the PR19 approach to setting efficient cost allowances and stretching performance commitments, and summarised the key arguments presented by companies and Ofwat in this area during PR19. Ofwat also set out the conclusions the CMA reached during the PR19 appeals, which broadly supported Ofwat's approach to setting costs and outcomes. The CMA comments and approach in relation to the setting of leakage allowances were specifically recapped as this was a complex area where the CMA approach varied from the Ofwat final determinations.

Ofwat moved on to summarising the content of its PR24 May 2021 consultation 'PR24 and beyond: Creating tomorrow, together' and the feedback received from stakeholders. It also set out a high-level framework for exploring the cost-service relationship.

A potential framework for exploring the cost-service link at PR24

Yorkshire Water and Baringa presented on a framework for exploring the relationship between cost and service at PR24. They explained they are seeking feedback from companies as this will feed into a paper for the Future Ideas Lab, which they plan to submit in October.

The presentation set out which tools are available in principle to Ofwat to make adjustments for the cost-service relationship – performance targets, totex allowances and ODI incentives. Baringa explained the presentation would only cover the first two levers.

Baringa went on to set out a framework for identifying where performance or cost adjustments may be appropriate. It explained two potential approaches to quantifying the relationship between cost and performance, i.e. a top-down approach based on industry modelling and a bottom-up approach based on companies providing their view of the cost-performance relationship. It explained that under either approach, performance measures could be investigated individually or in combination where costs could not easily be mapped to individual performance areas. The concept of a 'composite index' was introduced, whereby a composite indicator of performance would be calculated.

Questions for the breakout groups were:

- Any further comments or feedback on the framework proposed by Yorkshire Water / Baringa?
- Can costs be accurately mapped to key performance commitments (PCs)? Is it more feasible for some PCs than others (i.e. where there is limited interaction with other PCs)?
- Where costs can't be mapped to individual PCs,
    - What PCs could be considered for a composite measure?
    - What costs should be included for these PCs?
    - How would we calculate the weights?

Feedback from the discussion groups

Overall, there was consensus that exploring the cost-service relationship will be difficult. Challenging areas mentioned included:

- different factors driving costs up or down when improving performance, and the challenge in identifying and accounting for them;
- allocating costs to individual services/PCs – this may be possible to some degree, but it may not be enough to inform Baringa's proposals. There are already cost allocation issues between price controls, any granular allocation across PCs would further compromise the reporting accuracy. Tight definitions would be essential;
- even if tighter definitions were to be developed, significant time and resources would be required to ensure consistency of reporting across companies;
- difference in companies' starting points, which may impact how much "spare capacity" a company has to improve performance by implementing the easier, lower cost solutions. This may be a result of differences in companies' asset base and how this has been maintained, or difference in companies' historical allowances;
- time lag between spending and impact on performance – some spending may be to avoid future costs and would not give rise to performance improvements at first (lumpy investments vs ongoing cost solutions);

- identifying what expenditure is in base and what is in enhancement and accounting for how companies historically dealt with this split, will be important for any two-sided adjustments outside of the base models.

It was said that it is important to be clear on what the problem we are trying to solve is and assess whether the benefits of this work outweigh the cost, before starting to work on complex data requests. However, it was also said that this debate will be informative for the sector as a whole, as individual companies are also grappling internally with the question "how much does it cost to improve performance".

There was limited feedback on performance areas that may lend themselves to be modelled individually, as a reflection of the challenge to map costs to individual PCs:

- it was said that some progress has been made on leakage reporting but it is proving difficult;
- there was some discussion around sewer flooding but no consensus on whether it may lend itself to individual modelling of performance-cost, e.g. due to the overlap with storm overflows;
- resilience was mentioned as one area where mapping costs to performance is likely to be very challenging.

Overall, there was more support for testing composite measures, although a few companies did not support this approach. Points made included:

- a composite measure could reflect trade-offs companies make across performance areas, and would also reflect the current cost assessment approach;
- a composite measure set at price control level would mitigate for reporting inconsistencies between companies, although some support was also shown for sub-price control composite measures (eg treated water distribution);
- a composite measure might be a more sensible approach for PR24, while the work on individual PCs could be explored as an ambition leading to PR29, giving more time for improvements in the reporting;
- it may be appropriate to model water and wastewater separately;
- the weights of a composite index could be based on company specific ODIs rather than notional industry weights, which may better reflect company specific circumstances. But this approach could make interpretation of results challenging versus notional industry weights.

An additional point made on Yorkshire Water's proposed framework was that if common levels PC were changed to reflect company circumstances, it would defeat the point of having a common level PC. On this point, Ofwat noted that the adjustment made to Hafren Dyfrdwy's pollution incidents PC level at PR19 was by exception because of the company's small

sewerage system, which would have led it to being restricted to having very low numbers of category 3 pollution incidents.[1]

It was also mentioned that the productivity challenge set at the price review would need to reflect the improvements made on service.

Capturing the cost service relationship inside or outside the base models

Thames Water presented on two potential approaches for including service quality in the base models, i.e. output quality adjustments or building a quality index.

SES Water presented on the issues an in-model approach would raise and on a potential approach for making adjustments for the link between cost and performance outside of the base models.

Questions for the breakout groups were:

- Is there any merit in testing the inclusion of performance variables in the base models?
- Is there merit in developing separate adjustments for cost/quality outside of the base models?
- Should we prioritise a subset of PCs to explore cost performance models? For example:
    - Leakage;
    - PCC;
    - Sewer flooding.

Feedback from the discussion groups

There were mixed views on whether an in-model approach or an out-of model approach should be the way forward.

Points raised in favour of an in-model approach included:

- an in-model approach is worth exploring and consulting on if required, albeit accounting for time and resources constraints;
- the idea of a composite index is worth exploring although we should be mindful of multicollinearity issues;

[1] Ofwat, 'PR19 Final Determinations: Delivering outcomes for customers policy appendix', December 2019, p. 24.

- the composite index would need to take into account that the PCs have different measurement units (e.g., litres per day versus number of mains repairs). Options may include the use of geometric means to combine different PCs, or by using Ofgem's composite scale variable approach (e.g., $PC1^{weight\ 1}$ x $PC2^{weight\ 2}$ x $PC3^{weight\ 3}$);
- excluding service quality variables from the base models may lead to omitted variable bias.

Points raised against an in-model approach included:

- service is endogenous;
- because enhancement expenditure drives service improvements, and such expenditure is not included in the base models, including service quality variables in the base models may lead to spurious coefficients. However, companies had reservations over addressing this by reverting to totex models;
- adding one driver to the base models would not capture all the complexity of the elements impacting on cost and performance. This complexity would require a lot more drivers to be captured, but a high number of drivers may lead to overfitting issues in the base models. This may worsen the models rather than improving them;
- a potentially better approach may be to model a subset of costs, such as water quality costs with water quality performance drivers.

Points raised on an out-of-model approach included:

- the idea is worth exploring;
- the lagged performance is a key point which is not currently accounted for – although question whether the lag should be the same across all companies or reflect the different investment solutions adopted by companies;
- the separate models could be used to assess cost adjustment claims, rather than being used to make direct adjustments to the base allowances, although this would lead to one-sided adjustments which may not be appropriate.

It was noted that the preference is to use either an in-model or an out-of model approach, rather than using a mix of the two approaches across different measures, as this would complicate the assessment of the cost-performance relationship further.

Points raised on the key performance areas to focus on included:

- leakage, PCC and sewer flooding appear to be the right performance areas to start from;
- it would be more appropriate to model performance areas where all companies are affected, rather than areas where a small number of companies with specific circumstances are impacted;

- the areas of focus should be where the biggest changes are, e.g. storm overflows, and any areas with a challenge similar to the leakage PR19 challenge;
- a leakage model would need not to consider metering or replacement rates alone, but should reflect all the possible options and solutions to address leakage – although it could result in quite a complicated model;
- it was noted that the pandemic has impacted the ability to model PCC robustly;
- it was also noted it would be appropriate to align with the outcomes working groups.

Closing remarks

Ofwat outlined the schedule for forthcoming Cost Assessment Working Group (CAWG) meetings:

- Forward looking capital maintenance (SWB and tbc) – 28th September
- Growth cost assessment (ANH and tbc) – 12th October

Ofwat also mentioned that meeting notes for this CAWG meeting and previous CAWG meetings will be uploaded onto our website at the following location:

https://www.ofwat.gov.uk/regulated-companies/price-review/2024-price-review/pr24-working-groups-and-workshops/

Ofwat also asked companies to let us know if they are currently working on any relevant cost assessment papers for the Future Ideas Lab and would like to present an overview of the paper at a forthcoming workshop.

One company asked whether Ofwat has already set a date to publish its December consultation and whether the consultation would cover the breadth of cost assessment issues. Ofwat said there is not a set date yet but the ambition is to publish a document to reflect on the CAWG meetings that have taken place in the preceding months and close some options off to make some progress.

Bonus session: sewer flooding deep dive

Ofwat presented a recap of the cost drivers companies mentioned during PR19 as drivers of sewer flooding, and a recap of the data currently collected that is related to sewer flooding performance.

Ofwat opened the following questions for a group discussion:

- what are the key drivers of sewer flooding costs?

- which of the drivers mentioned in question 1 do you think are not captured by the base models, and which should we consider symmetrical adjustments for?
- what additional data do you think we need?

Ofwat clarified no decision had been made yet on whether sewer flooding would be retained in the base models or modelled separately.

Ofwat set a deadline of one week to send any additional thoughts in this area to the cost assessment inbox or to Jennie Seymour.

Feedback from the discussion

Points made included:

- United Utilities said they have carried out extensive analysis in the last months to look at the root causes of sewer flooding, which they intend to share with Ofwat. No details of the work were given yet although United Utilities mentioned a lot has to do with the types of businesses in the area – this relates to fats, oils and grease being disposed of down the sewer (FOGs);
- climate change events are impacting sewer flooding – there is a question regarding what information should be gathered and what scenarios should be considered;
- in particular, increasingly frequent and heavy rainfall events impact sewer flooding performance – these can be defined in many ways, but it would be interesting to look at the differentiation across companies and the increase over time;
- impact of sewer flooding would need to be considered alongside harm from storm overflows, in the context of hydraulic capacity and operation of the wider system;
- it was noted that, apart from population growth, none of the potential drivers included on the slide are currently covered in the botex models.