HOW DO WE SET COSTS AND OUTCOMES WITH A SUPERVISORY APPROACH?

September 2025

Background and objective

Moving to a supervisory approach is the most fundamental shift to economic regulation of the water sector that the Cunliffe review has recommended. This is an exciting shift in economic regulation, and we have discussed the wider implications here.

One particular aspect of the supervisory approach that raises interesting questions is the Cunliffe review's recommendations for the supervisory approach to be given "broadly equal weight" as the benchmarking approach. However, the report does not provide details on how an equal weight can be achieved in practice. In the best case, the supervisory approach will combine the benefits of central benchmarking with a detailed understanding of companies' local needs to deliver better investment decisions to the benefit of current and future customers, the environment and investors. At the same time, the worst-case scenario could lead to final cost allowances and performance targets that are subjective, inconsistent and based on an approach that is not transparent and creates significant additional regulatory burden. It is therefore important for the industry to think about how the combination of a supervisory approach and benchmarking can best be implemented.

In this note, we set out a number of tools and options for cost and performance modelling that combines traditional benchmarking with potential supervisory approaches and discuss the opportunities and risks that arise from different approaches. Our recommendation is to continue the debate, and to conduct a more detailed assessment of these options to inform the future regulatory approach.

We have interpreted benchmarking as the general approach of comparing performance and costs (applying to opex, capital maintenance and enhancement). As the Cunliffe review also recommended changes to the cost setting approach we interpret the term benchmarking as a wide range of current and improved methods. More details on the types of modelling that would work best with a supervisory approach and what an alternative outcomes approach to the Cunliffe recommendations might look like will be the subject of later papers.

The underlying challenge

In the real world without complete information, regulators can observe company performance, but they cannot be sure what leads to differences between company performance, and how much is due to inefficiency and how much is due to exogenous factors that are different across companies. Companies also do not have full information about what is possible in future and what operating challenges they may face, so they themselves cannot forecast their performance with perfect certainty. Regulators therefore need to decide how to overcome asymmetric information and uncertainty, and increase the chances that they identify genuine efficiency differences across companies when setting cost allowances and performance targets.

Econometric benchmarking and other techniques such as unit cost comparisons, DEA and SFA can provide valuable insights on companies' relative efficiency if models enable a "fair" comparison. This is the case if explanatory variables can capture the most important drivers of performance (cost or service quality). Given the relatively small sample size that any regulator of water companies in England and Wales is faced with, econometric benchmarking can only go so far in explaining differences in efficiency between companies. A supervisory approach has the potential to provide an important perspective that is currently missing as the supervisory team can develop a bottom-up understanding of how local needs and circumstances affect costs. This can apply to opex, capital maintenance and enhancement and also to the interaction between costs and performance, with dedicated expertise and examination of each of these areas.

The issue with the current approach is that too much of the difference is assumed to be inefficiency and this leads to allowances and performance targets that are unrealistic. The policy shift recommended by the Cunliffe review is to use the supervisory approach broadly equally with insights from comparative assessment to set allowances and performance targets. A successful combination of the supervisory approach and the benchmarking approach should enable the regulator to develop better targets for costs and performance that are closer to the true split between inefficiency and company-specific factors.

Combining the supervisory approach and benchmarking: Cost modelling

Combining the best of both worlds could result in a powerful tool to set cost allowances but raises a number of questions:

- How should the insights from both approaches be combined?
- Should they run in parallel or in sequence?
- Should they be integrated at the outset or be independent?
- How do they interact in practice?
- Should the weights be different across cost categories (i.e. some costs could be well suited to benchmarking, but enhancement could be well suited to deep dives through supervisor)?
- Would the supervisory teams be the same as those which monitor companies during the period?

- Would the split between benchmarking and supervisory approach be announced to companies in advance?

The current benchmarking approach already includes various processes to account for company-specific factors such as cost adjustment claims and deep dives. An obvious consideration is therefore how these processes should interact with the supervisory approach. And while the Cunliffe review suggested a 50/50 overall weight between benchmarking and supervisory approaches, the weights for different element need not necessarily all conform to this 50/50 ratio. Opex, for example, could be set with a greater weight towards benchmarking while capital maintenance and enhancement costs could be more based on the supervisory approach, assuming that opex activities are more standard across the board but capital maintenance and enhancement have company and region-specific features that would require bespoke assessment. Similarly, the supervisory approach could look at the optimal mix of activities and costing methods for enhancement schemes while the benchmarking approach could focus on identifying efficient unit costs.

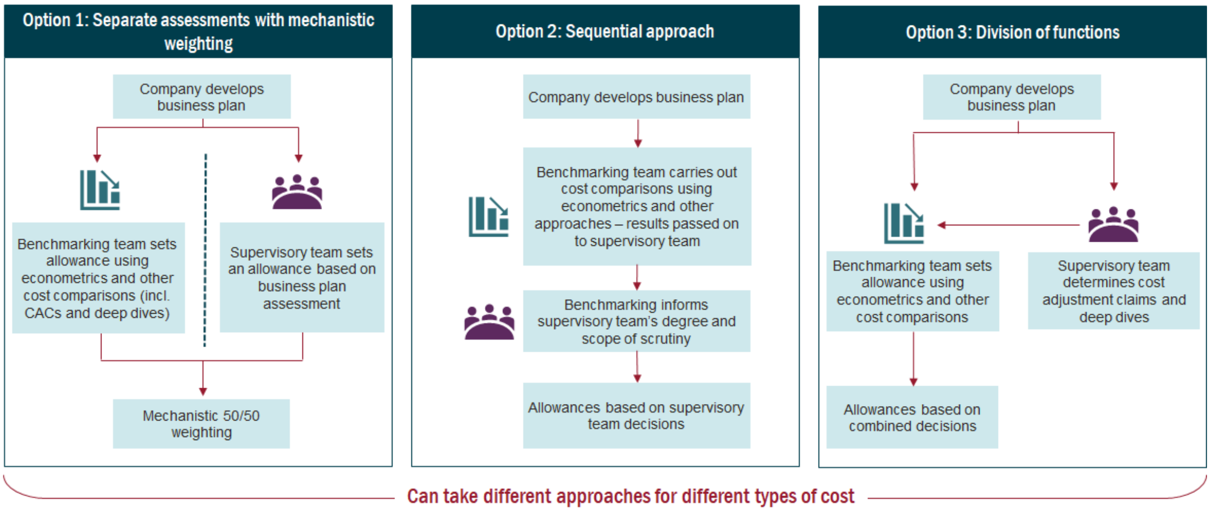
We have identified 3 overarching high-level options shown below. All of the options can be developed in more detail but at this stage we have kept the descriptions deliberately simple to illustrate the directions of travel. In practice, it will be possible to apply different options to different elements of a future price control.

Option 1 describes an approach where the supervisory function and the economic benchmarking approach run in parallel but independently. The benchmarking team comes up with its view of a company business plan based on econometric models while the supervisory team develops its own view based on interactions with the company. Both develop a set of cost allowances and performance targets, and the final decision is the average between both approaches.

Option 2 describes a sequenced approach where the econometric benchmarking is carried out first and the results are provided to the supervisory team. The supervisory team then takes a decision on how closely aligned the final cost allowances and performance targets need to be to the econometric models. The team would be guided by the 50/50 principle but would use its views of the company's specific circumstances.

In **Option 3** the econometric benchmarking is carried out as a central analysis, but the supervisory team makes the decision on how far the allowance of company specific factors needs to go. This could be via items that are similar to the PR24 cost adjustment claims or deep dive assessments. In this option, the econometric benchmarking is the starting point, but adjustments are then made by the supervisory team.

Figure 1 Overview of high-level options for allowance setting



Source: *Frontier Economics*

Risks and opportunities of cost modelling options

Moving away from a central, desk-based approach clearly presents great opportunities to capture the needs of individual companies in a much better way. However, introducing a new approach also brings risks:

- **Lack of consistency and transparency** – while the supervisory approach will follow a common "manual", supervisory teams for different companies will need to tailor their approach. This could lead to final decisions that are subjective, inconsistent and not transparent. This is particularly relevant for option 2 as the supervisory team has the highest level of discretion in this option. In option 3, consistency and transparency are ensured by a clear process, but this option runs the risk of constraining the supervisory team's remit and putting the focus back on benchmarking analysis.
- **Risk of increased regulatory burden and "doubling" up of evidence provided by companies** – this is most problematic in option 1 where separate teams could request the same information in different formats or different types of information. This could happen in option 2 if cost adjustment claims and deep dives are conducted by the benchmarking team ahead of passing information to the supervisory team. Option 3 is unlikely to increase the regulatory burden but also limits the additional value from the supervisory approach.
- **Supervisory teams tell companies what to do** – there is a general risk that the supervisory team may feel that it knows best what the company should do. This is likely to be highest under option 2 where the ultimate decision sits with the supervisory team.
- **Not resulting in a broadly equal weighting in the round** – Option 3 runs the highest risk of attributing more weight to benchmarking whereas Option 2 could potentially end

up with higher weights on the supervisory approach. Option 1 would lead to a 50/50 weighting but with the downside of not integrating the insights from both approaches.

Combining the supervisory approach and benchmarking: Setting performance targets

How do we set performance targets in a world where we are using comparative information as well as the supervisory approach, and where the aim is to set performance targets which are a 'fair bet'? We have identified the following tools that could be used for setting performance targets in this world.

- **Supervisory deep dives:** One of the Cunliffe review's other recommendations in relation to outcomes is to rationalise the set of performance commitments, with a suggestion of a list of around 10 performance commitments. If the list is rationalised down significantly, say closer to 5-8 performance commitments, then it should be possible for the regulator to carry out a deep dive into each company's proposed performance on these performance commitments. The purpose of the deep dive would be to fully understand the company specific challenges with performance in each of the 5-8 areas. The benefit of this approach would also be that the outcomes deep dives could be carried alongside deep dives into cost submissions. This should then mean that there is a clearer understanding of company specific circumstances, as well as the costs that are needed to deliver particular service levels. This would also be a good way to reflect the recommended resilience standards in how performance targets are set, and to conclude on whether any exclusions would be needed if exogenous factors such as the weather are outside of what companies are required to meet through the resilience standards. The challenges with this approach are that it is likely to be very time intensive and also need specific expertise. In addition, this approach would ultimately be determined based on expert judgement, which risks inconsistencies in approach across companies.

- **Third party expert judgement:** Related to this first suggestion, performance commitments could be set using third party expert judgement. The third party could be chosen to have the relevant expertise and be independent to both companies and the regulator and supervisory teams. The third party could analyse both comparative information, company submissions on what cost and performance levels are achievable, and come to a conclusion on what is a fair performance commitment target. As with the first option, this option is likely to be time intensive, and risks inconsistencies across companies.

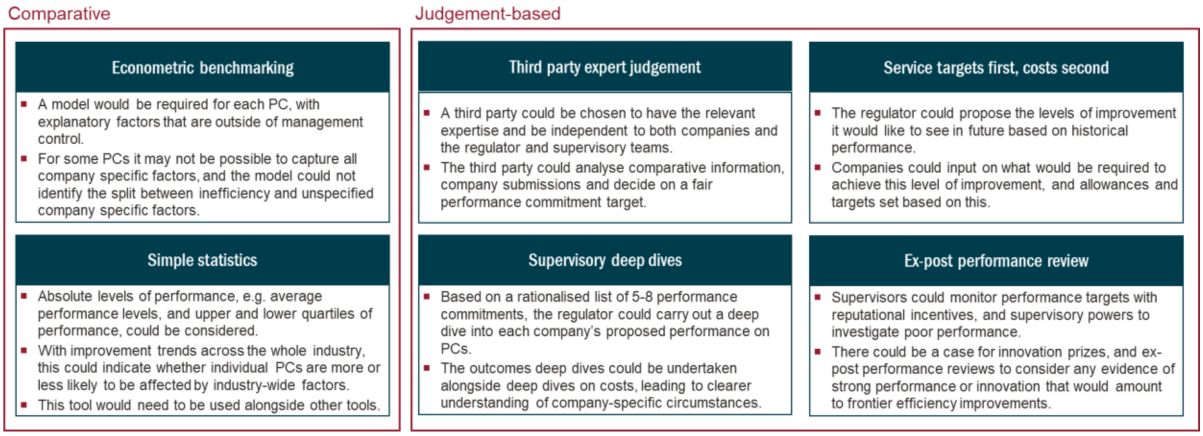
- **Service targets first, costs second:** The current approach is based on companies submitting proposals for costs and performance targets, and then the regulator reviewing this and finalising the allowed costs and performance targets. This approach could be turned on its head. The regulator and supervisory teams could review historical information on performance targets, and then propose what average levels of improvement it would like to see in future. It could then ask companies what they would need in order to deliver this level of improvement. The regulator could then review what companies have proposed and make decisions about what each company should be required to achieve in terms of performance targets. The benefit of this approach is that companies are clearer upfront in terms of what levels of service performance are expected. The companies and regulators can then have focused discussions on what is needed across companies to achieve that level of performance, and allowances could be made on either the cost or performance side to reflect company specific circumstances. This shift in approach may help in some ways but it ultimately does not increase the chance of overcoming the asymmetry of information, and to be effective it would likely need aspects of tools one or two.

- **Simple statistics:** Comparative information on company performance can be used to calculate relatively simple statistics. This could include statistics about absolute levels of performance, such as average performance levels, and upper and lower quartiles of performance. This could also be combined with statistics on improvement trends, and an assessment of whether there has been an improving, declining or stable trend. This could also be used to assess whether individual performance commitments are more or less likely to be affected by factors that affect the whole industry (e.g. are there bad years for the whole industry due to the weather). The advantage of this tool is that it is relatively straightforward and simple to do. However, on its own, this tool is not particularly useful and would likely need to be used alongside one or more other tools.

- **Econometric benchmarking:** Comparative information on company performance could also be assessed using econometric benchmarking. A model would need to be developed for each performance commitment, with a set of explanatory factors that are outside of management control. For some performance commitments, it may be possible to take account of all the company specific factors within the modelling, and then the model should estimate the catch-up efficiency that each company needs to deliver. However, for other performance commitments it may not be possible to take account of all company specific factors, and then in this case the model would struggle to identify the split between inefficiency and remaining, unspecified company specific factors. The potential benefit of modelling in this way is that performance targets would be set in a more objective, evidence-based way rather than being based more on judgements. However, the challenge would be in developing the models and deciding whether all of the company specific factors have been appropriately factored in. The likelihood is that it would be similar to cost modelling and off-model adjustments would still need to be made to reflect company specific factors.

- **Ex-post performance review:** A final option would be to carry out an ex-post review of performance. In a future paper we will consider whether future outcomes metrics should have financial incentives attached. One option we are considering is a world in which the supervisors monitor performance targets with reputational incentives, and supervisory powers to investigate poor performance. In this world we think there could be a case for innovation prizes, and one option for implementing this is an ex-post review of performance to see where there is evidence of strong relative performance and potentially innovation that would amount to frontier efficiency improvements. The benefit of this approach would be that targets for financial rewards would not need to be set in advance. However, the downside of this is that companies would not know in advance how much improvement they would need to deliver, which is likely to weaken the incentive to improve.

Figure 2 Overview of high-level options for performance target setting



Source: Frontier Economics

In practice we think a combination of these tools is likely to be needed, and the most appropriate tools are likely to depend on decisions that are made elsewhere in the outcomes framework (i.e. how many performance commitments are set, and what is decided in relation to financial incentives).

Looking at costs and outcomes together

These wide-reaching changes in water regulation also offer an opportunity to change how we consider costs and outcomes. These two elements of the price control are intrinsically linked, with allowances for new projects and maintenance activities directly impacting various outcomes (e.g. supply interruptions, water quality, sewer flooding etc.). Historically, costs and outcomes have been considered in conjunction, but not by using tools or models that capture these two elements jointly.

In principle, it is possible to capture the impact of cost allowances on the outcomes that are achievable for water companies, or the cost allowances that are required for performance improvements from a starting point that is different for different companies. This could be done with analytical techniques, but the supervisory approach also provides an opportunity to look at cost allowances and performance targets together in a more qualitative way, through deep dives and a thorough understanding of each company's position.

Among the options and tools that we have identified for setting cost allowances and performance targets, there are some that could clearly be linked and used together for costs and outcomes to be set jointly. An example is the use of option 2 for cost allowance setting, along with econometric benchmarking and supervisory deep dives for performance targets.

Implications for water companies

Combining the benchmarking and supervisory approaches means that companies need to:

- **Be clear about the objective that the final combined approach needs to fulfil** – companies need to consider how much weight they place on different areas such as transparency, consistency, etc;
- **Understand their own costs and performance relative to others and be ready to engage with the supervisory teams on the benchmarking results and explain areas of costs and performance that look relatively better or worse** – on costs, this can best be achieved by comparing more disaggregated costs where differences can be more easily explained than for the large base cost models; and
- **Develop a clear picture of the data and evidence flows** that the new approach will require and consider how this can be streamlined to reduce regulatory burden – for example, submission of cost adjustment claims could be standardised and simplified.

Next steps

The Cunliffe review's recommendation for the benchmarking and supervisory approaches to have broadly equal weight presents an exciting challenge for the design of the future regulatory methodology. In this note, we have discussed different high-level options, the pros and cons of those, and considered how we might be able to model cost allowances and performance targets more consistently. We recommend that the industry works together to develop the options further to inform regulatory design.

Once the high-level choices have been made then further work will be needed to develop the tools that are needed to set performance targets and cost allowances, and further thought given to potential implementation issues.

AUTHORS

Anna Northall

Manager

Anna.northall@frontier-economics.com

Aurora Phillips

Manager

Aurora.phillips@frontier-economics.com