Introduction

1.1 In our response to the Disputing Companies' (DCs) statements of case we recommended that the CMA deprioritised the redetermination of the base cost models.[1] We developed the base cost models through extensive engagement with the sector, and we continue to stand behind them. As set in our response to the provisional determinations we consider that the CMA has taken a pragmatic and proportionate approach to selecting base cost models.

1.2 We note that the use of LASSO is novel in the water sector, and in regulatory determinations in the UK more widely. Nevertheless, we consider that the CMA should continue its use of LASSO models for its Final Determinations, after having addressed the coding mistake identified by Ofwat and the DCs.

1.3 The DCs have raised several issues with the CMAs approach. As set out in our response, we are supportive of the CMA's ambition to develop their base cost models, and have focused our response on responding to some of the main issues raised by the DCs.

Process and consultation

1.4 Some respondents have suggested that the CMA's process has failed to provide them with sufficient time and opportunity to engage with the LASSO approach and influence the CMA's modelling.

1.5 The CMA noted its intention to use LASSO for the purpose of developing base models in May 2025. This has given all stakeholders six months to engage with and assess the approach. We note that the concern is raised only in the context of the use of a new econometric technique for base models which has generally resulted in lower allowances for some companies, but not where the CMA has used new econometric techniques (not indicated in May) in enhancement modeling which have broadly increased allowances for appealing companies.

Developing models using LASSO

1.6 The DCs have raised many detailed points of critique on the CMA's LASSO-based models. We note the efforts made by the DCs insofar as they are providing constructive feedback to the CMA, but we also note that it is very challenging to identify 'perfect' benchmarking models which satisfy all parties involved.

[1] [OF-RTPD-043], Ofwat, PR24 redeterminations - overview of our response to the statements of case [REDACTED], p.31, para 5.2

1.7 Some of the DCs have suggested that the fact that the CMA's models result in lower sector allowances than in our final determination, is an indication of an error. As we noted in our response, the CMA's models produce allowances greater than PR19 allowances, and are in-line with current expenditure.[2] That they result in lower allowances for some companies is not evidence of an issue the CMA needs to address.

1.8 Some of the DCs have suggested that alternative approaches to developing LASSO models might lead to different results. In the context of developing an approach for the next price review, we would look to examine a broader range of regulation tools as well as approaches to calibrating those models, alongside alternative means of assessing costs. However, the CMA has to conduct its redetermination including a wide ranging consultation within the limited time available. The question we consider the CMA must seek to answer is whether its refined models can be further improved at its final redetermination, and if so, are the resulting models the best basis for setting allowances.

1.9 Some of the DCs have suggested that dropping companies results in significant changes which implies that the models are not sufficiently robust for setting the control. We have not yet reviewed the evidence provided by the companies but consider the following points relevant to the discussion. First, in recent mergers, we and the CMA have found that the loss of a comparator negatively impacts the models. It would not be consistent to require the CMA to produce models which are robust to that finding. Secondly, it is important to compare the models on a like-for-like basis. LASSO both selects explanatory variables and estimates their coefficients. If the respondents have dropped companies prior to running the LASSO, rather than the OLS, then variations may arise from dropped explanatory variables.

1.10 Some of the DCs have suggested that the models may capture erroneous relationships through the inclusion of variables with no engineering or economic rational. We disagree with this position, as the CMA began only with variables that are considered to have economic or engineering rationale for LASSO to choose from. It also seems that the respondents have simply replaced one autoregressive variable with another. That they were able to find another autoregressive process that LASSO would select should not be a surprise.

1.11 Overall, we recommend that the CMA carefully considers how best to adapt its Provisional Determinations models to give itself the highest confidence that the allowances it sets are sufficient for each company without risking customers overpaying.

[2] Ofwat (2025), Response to CMA s Provisional Determinations – Base and Enhancement, p.3, para 1.3

The CMA should continue to set the efficiency challenge at the upper quartile

1.12 Northumbrian Water stated that an upper quartile efficiency challenge is not justified and would result in an unachievable challenge, as it considers the CMA's use of LASSO has resulted in "over-fitted models with a higher degree of uncertainty in the estimates of modelled costs than Ofwat's approach".[3]

1.13 We disagree with Northumbrian Water's view. The upper quartile is a widely used benchmark by regulators across different sectors for setting an efficiency challenge. Setting a less stringent catch-up efficiency benchmark compared to our Final Determinations would be inconsistent with the CMA's view that its base cost models are statistically more robust than our Final Determinations models.

The CMA should continue setting the efficiency challenge based on the efficiency scores from its base cost models

1.14 Southern Water stated in its response that the CMA has inappropriately set a significantly stronger catch-up efficiency challenge than adopted by Ofwat by "mechanically applying Ofwat's approach from the FD".[4] The company considers that it is wrong for the CMA to use the modelled upper quartile efficiency score to set the catch-up efficiency challenge because "in its FD, Ofwat explicitly decided that a smaller challenge was appropriate given the additional financial headroom needed in AMP8".[5] Instead, the company asks the CMA to adopt the same or similar efficiency challenge level as set by Ofwat.[6]

1.15 First, we disagree with Southern Water's characterisation of our decision on the catch-up efficiency challenge. Southern Water refers to a section of our PR24 Final Determinations which describes the decision to use data from the last five years of the historical sample period to set the catch-up efficiency challenge, instead of data from the entire period. While doing so resulted in a less stringent catch-up efficiency challenge, this was not the rationale behind our decision. Rather, we chose to use the last five years of the sample period to set the catch-up efficiency challenge because it places greater weight on recent years to reflect recent efficiency levels and cost pressures faced by the sector.[7]

1.16 Second, we disagree with Southern Water's proposal that the CMA should set the efficiency challenge at the same or similar level as in our Final Determinations. To do so would introduce an inconsistency between the base cost models used to benchmark company costs, and the efficiency challenge applied to them, which may be considered arbitrary in this context. Our view is

[3] Northumbrian Water (2025), Northumbrian Water Response to CMA Provisional Findings, p.37, para 102
[4] Southern Water (2025), Response to the CMA's PR24 Provisional Determination, p.60, para 3.30
[5] Southern Water (2025), Response to the CMA's PR24 Provisional Determination, p.60, para 3.30
[6] Southern Water (2025), Response to the CMA's PR24 Provisional Determination, p.60, para 3.31-3.33
[7] [OF-OA-022] Ofwat (2024), PR24 Final Determinations: Expenditure allowances, p.27

that the catch-up efficiency challenge should be set using a benchmark which is calculated using efficiency scores from the same set of models as are used to calculate predicted costs.

The CMA should not exclude companies from calculation of upper quartile without strong evidence

1.17 Southern Water states that the upper quartile companies identified in the CMA's base cost modelling are inappropriate for setting the efficiency benchmark, as they either appeared to be in a capital maintenance trough or a period of poor performance. Southern Water suggests that the CMA should exclude these companies from the calculation of the efficiency challenge, claiming this would be in line with Ofwat's approach.[8] We disagree with the company's position.

1.18 We disagree with Southern Water's characterisation of our approach for setting the catch-up efficiency challenge, and the implication that this analysis would result in the removal of companies from the setting of the challenge. Rather, we consider that, in principle, it is sensible to consider whether the companies setting the efficiency benchmark are representative of cost performance that can be achieved by the sector, and this could involve consideration of the company's performance on outcomes or capital maintenance cycles. However, we disagree that such analysis would necessarily warrant mechanistic exclusion of companies from the calculation of the upper quartile benchmark.

1.19 Southern Water has presented its own analysis from which it concludes that several companies are in a capital maintenance trough, and should therefore be removed from the setting of the challenge. We disagree with the conclusions drawn by the company, and have already addressed many of these in our draft determination. For example, decreasing costs during the PR19 period for United Utilities are associated with efficiency as the company was considered inefficient at PR19.[9] Southern Water has also drawn other conclusions based on the latest year of outturn data which is not currently influencing allowances.

1.20 It is inherently difficult to distinguish between reductions in expenditure due to a capital maintenance trough versus efficiency improvements. We do not consider it appropriate to assume that all companies with expenditure reductions during AMP7 are in a capital maintenance trough. Instead, it would be more appropriate for the CMA to consider whether the catch-up efficiency challenge resulting from its models is appropriate in the round.

Data quality concerns for APH

[8] Southern Water (2025), Response to the CMA's PR24 Provisional Determination, p.61, para 3.37-3.40
[9] [OF-CA-025] Ofwat (2024), P24 Draft Determinations: Expenditure allowances, p.27

1.21 Northumbrian Water and Southern Water have both raised concerns regarding the quality of average pumping head (APH) data used as a cost driver in the CMA's models. Both companies have requested that the CMA assess the data quality of APH before deciding to include it in the list of candidate variables used in the LASSO process.[10] [11] As part of a targeted set of changes, Southern Water also suggested that APH should be removed from the set of the candidate variables in the water model.[12]

1.22 In response, we reiterate that we have worked collaboratively with the sector and our consultants Turner & Townsend since PR19 to improve the quality of APH data. [13] At PR24, we considered enough improvement had been made to warrant consideration of including the variable in our models. APH has strong engineering rationale that is supported by several companies in the sector, including some of the DCs. At PR24, we balanced these considerations by placing 50% weight on models that included APH, and 50% weight on models that included booster pumping stations per length of mains as an alternative cost driver. We maintain that this is an appropriate approach.

1.23 We note that there are a range of views on this topic across the sector, and companies are likely to favour the stance that best serves their own interests. Simply excluding APH from the list of potential cost drivers will not necessarily resolve these differences in views. We would therefore welcome the CMA conducting its own independent assessment of data quality to help reach its own conclusion on its suitability for inclusion as a cost driver.

Final remarks

1.24 We understand that some of the main parties' responses to its provisional determinations suggest that further engagement is needed on this area. Whilst we are not convinced this is necessary, if the CMA considers appropriate we would also recommend similar treatment for risk and return issues, given the novel nature of certain elements which were not tested by the CMA in hearings (e.g. Stable-ERP approach), and which have been responded to with new evidence. We consider this would be helpful in assisting the CMA to come to an informed view on these issues for its final determinations, and would evidence a full and thorough consultation process.

[0] Northumbrian Water (2025), Response to CMA Provisional Findings, p.22 (Figure 5), p.48, para 142
Southern Water (2025), Response to the CMA's PR24 Provisional Determination, p. 64, para 3.51-3.56
[2] Southern Water (2025), Response to the CMA's PR24 Provisional Determination, p.66, para 3.67
[3] Ofwat (2025), Response to Statement of Case, pp.34-37, para 2.87-2.99