

Murky waters: Dealing with estimation uncertainty in the new water regime

In its PR24 redeterminations, the CMA “aimed up” due to concerns about misestimation in the cost of capital. But focusing on uncertainty in cost of capital estimation alone risks missing the broader picture. Other aspects of the package also rest on inherently uncertain estimates, and regulators should be explicit in how they deal with this too.

Looking forward, the IWC’s proposed new supervisory regime for the water sector will change the approach to estimating price control packages, with a move away from econometric benchmarking. This may result in implicit aiming-up on costs.

As with aiming up on the cost of capital, this may be in customers’ interest. However, the government, in its new SPS, should be explicit about this and identify the potential for outperformance from the outset. The new regulator needs to be clear about its approach to implementing such steers. Failure to do so risks undermining the new regime.

Estimation sits at the heart of every price control. And a key choice that regulators make is how to deal with the uncertainty that estimation entails.

In this note, we recap the CMA’s rationale for aiming up in PR24 due to uncertainty over the cost of capital, and argue that it should have considered uncertainty in the package as a whole. We consider how risks around estimation of the price control building blocks may change under a supervisory regime, and suggest that an explicit framework for dealing with estimation uncertainty across the package is needed.

The CMA’s rationale for aiming up in PR24

The CMA recently published its redeterminations for the settlements of the five companies that appealed Ofwat’s decisions for the PR24 period. In its decision, it “aimed up” on the cost of capital. This reflected concerns about underinvestment due to misestimation in the cost of capital.

It noted that the cost of capital can only ever be estimated and the true value will always remain unknown. It expressed concerns that if it underestimated the true value, investors might be deterred. And that *“the consequences of underinvestment are likely to be asymmetric in the water sector. For example, if underinvestment increases the risk of serious pollution incidents or prolonged water outages, the costs to customers from these events could be significant and could exceed the direct costs of paying higher bills”*.¹

¹ Competition and Markets Authority, *PR24 Redeterminations Final Decision – Volume 4*, paragraph 7.766, page 170

Ofwat, and other regulators, aim to deter such underinvestment through potential fines or underperformance payments in the current and future price controls, as well as clawing back allowances. But the CMA was unsure whether these mechanisms would be appropriate or sufficient to ensure investment. It was concerned that in the face of lower returns to investing in the current price control period, existing investors might choose to take the risk of such penalties. Moreover, new investors might be put off investing in the water sector during PR24 altogether - at a time when new investment is critically needed.

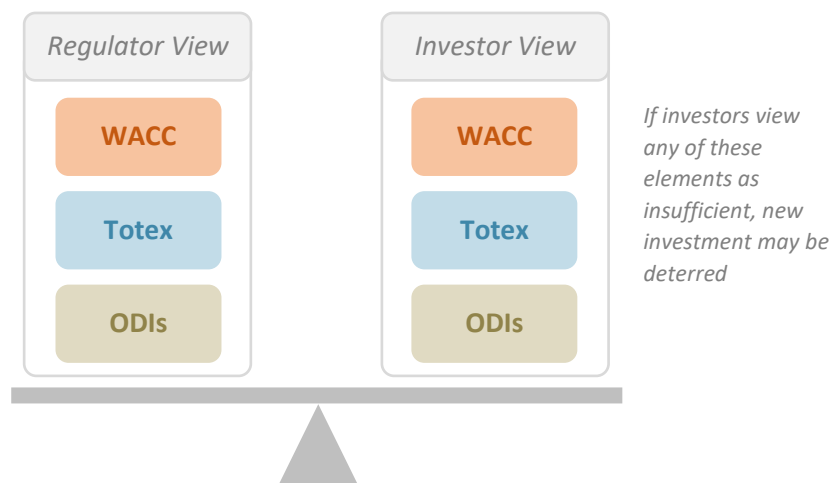
The CMA also noted that quantifying the impact was inherently difficult but stated that “externalities do not have to be large to justify a small difference in the WACC of, say, 0.1%, if that is expected over time to reduce the risk of underinvestment”.²

The CMA therefore exercised its regulatory judgement and aimed up by 30 basis points on the cost of equity, setting it at 5.70% as compared to a mid-point estimate of 5.39%. Indeed, Ofwat itself had already aimed up to a slightly lesser extent for similar reasons.

The CMA should have focused on uncertainty in the wider package

The CMA’s concerns were around the accuracy of models for the cost of capital. But investor returns are affected by all building blocks of the price control settlement, including totex and incentives, not just the cost of capital estimation. The estimation of these also face similar, if not more, uncertainty. And if investors are concerned about potential underestimation in these areas, it could also affect their appetite to invest. The concern could be that the central estimate is too low or that the risk is asymmetric with failure having potentially larger consequences than success.

Figure 1: Investment may be deterred by underestimation of any of the building blocks



² Competition and Markets Authority, PR24 Final Decision Volume 4, para. 7.766

The IWC's report and the Government's White Paper, which were published during the course of the CMA's review, expressed concerns about the accuracy of cost models, in particular. The IWC points to Ofwat's heavy reliance on econometric models, particularly for "base cost models" of the day-to-day running of the network. Companies can make claims for additional allowances if they provide good evidence that their specific circumstances weren't accounted for by the models. However, in practice, such arguments are rarely accepted meaning that base allowances of over £60 billion in PR24 are determined to a large extent by a handful of variables. Estimates for enhancement allowances of around £40 billion to improve the network in PR24 were also likely to be uncertain as the unprecedented scale of such requirements may have knock-on effects on costs through creating shortages. This means that there is significant uncertainty in both base and enhancement cost allowances.

The CMA stated that it saw no reason for there to be a systematic bias in the cost models, so it did not consider this to be a reason to aim up. But even without a systematic bias, there is nonetheless a risk that estimates for individual companies may be too low, and this may depress expected returns. This could then deter new investment into that company, in a similar manner to underestimation of the cost of capital.

The penalty and reward framework, including Outcome Delivery Incentives (ODIs), also has an impact on a company's expected returns. In PR24, the CMA did not consider there was any significant asymmetry in the risk of the overall package (a small downward skew in ODIs being offset by an upward skew in inflation). But risk modelling of ODIs is still an undeveloped area, and the CMA recognised the uncertainty and subjectivity within it. As with cost allowances or cost of capital, if investors take a different view on the estimation of risk, this could deter investment.

There may be reasons to distinguish uncertainty in the cost of capital from uncertainty in costs and risk modelling. In particular, investors may have a much clearer sense of the cost of capital required to invest in the industry. However, they will also be aware of views on other aspects of the package, and this will affect their appetite to invest. Indeed, investor (and rating agencies') reactions to the calibration of ODIs at the draft determination stage required Ofwat to make a significant recalibration of the package at final determinations. And, as cost estimates form a more significant part of allowances than the cost of capital, a 1% error in costs will have a bigger impact on returns than a 1% error in the cost of capital.

Uncertainty, and the risk of setting allowances that are too low (or too high), therefore needs to be considered across the package. It is hard to reconcile the CMA's wariness over the cost of capital models with its apparent confidence in other aspects of the modelling at PR24, particularly in the face of concerns expressed by the IWC in relation to cost modelling.

How could uncertainty over allowances change in the proposed new regime?

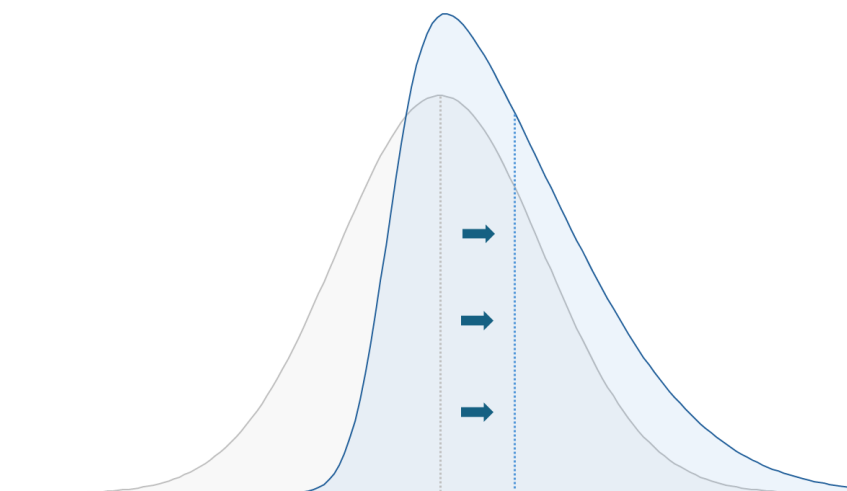
The underlying nature of future price controls is likely to change following the recommendations of the IWC and the White Paper. This will have an impact on the distribution of returns.

The move towards a more “supervisory” approach is intended to lead to a better understanding of company specific issues, and so more accurate cost allowances. In part, this may correct for concerns about allowances being too low overall because econometric models extrapolate past spending, which may not be a good guide to future needs. It is also intended to correct for econometric models being too crude to account for companies’ specific circumstances.

However, depending on how it is implemented, a supervisory approach could already entail an element of “aiming up” on costs. Much of the talk on supervision is about facilitating cost claims for companies which might otherwise get less than they need. However, if econometric models, however crude, are right on average across companies, allowances may be too high, as well as too low. Unless the supervisory approach has mechanisms to reduce allowances, it will act to increase total sector funding.

The IWC also signals that the water industry should return to a low-risk, low-return model, implying reduced rewards and penalties. It raised concerns about the use of penalties and, in particular, the risk of a “death spiral” in which financial pressures from penalties compound over time, exacerbating the situation rather than incentivising improvement. It suggests that, in extreme circumstances, companies could be placed into a “turnaround” regime, under which certain penalties may be waived in exchange for accepting additional requirements, such as tightened regulatory supervision. This lowers downside risk, although it may be offset if closer supervision means a greater risk of enforcement action.

Figure 2: The new regime may lower downside risk, introducing a degree of aiming up implicitly



Overall, therefore, there may be less downside risk in the allowances and potentially a positive skew if the IWC proposals implicitly aim-up on costs.

A clear framework for dealing with estimation uncertainty across the package

Given the continued requirement for large amounts of new investment in the water sector, such aiming up on costs, if appropriately calibrated, is in customers interests, as per the CMA's reasoning on the cost of capital.

But the government, in its new SPS, should be explicit about this and identify the resulting likelihood of outperformance as a potential outcome from the start. The new regulator should also have a clear framework for its approach to making such judgements, explaining how its settlements strike the right balance between incentivising investment and short term bill levels. Historically, such balancing has only been explicit for the cost of capital, but estimation uncertainty exists across the whole package. This is not simple but even basic modelling would help illustrate the likely trade offs.

Failure to make such judgements explicit risks undermining the new regime as elevated returns will be unexpected by the public and viewed as evidence of capture.