

PENNON'S RESPONSE TO COMPETITION AND MARKETS AUTHORITY PROVISIONAL FINDINGS REPORT:

OVERVIEW

SUMMARY COMMENTS ON PROVISIONAL FINDINGS

On 29 September 2015, the Competition and Markets Authority (CMA) shared its provisional findings report. This document provides our response to the provisional findings.

We are pleased to see that the CMA has provisionally concluded that the adverse impacts it identified are not significant enough, either individually or in combination, to amount to a prejudice to Ofwat's ability to make comparisons between water enterprises.¹ As per our previous submissions, we agree with this conclusion, and have previously set out our reasons for concluding this to be the case so we do not repeat them in this response to the provisional findings.

We also agree with the approach carried out by the CMA, which considers the assessment to be a matter of judgement based on the evidence as a whole.

Given the extent of the CMA's review to date, in which third parties have been actively involved, we do not believe that there are any reasonable grounds for the CMA's final decision to reach a view contrary to the provisional findings. However we request that, should any material third party comments be received by the CMA or should the CMA be minded to make material changes to the provisional findings, we are given an opportunity to submit comments in advance of any final decision being taken by the CMA.

We note the CMA approach regarding efficiencies, which proposes that 'a full assessment of efficiencies should occur only after a baseline assessment of whether the merger is likely to result in a prejudicial impact on Ofwat's ability to make comparisons without taking efficiencies into account, and only if we are of the view that the acceptance of efficiencies are likely to lead to a different finding.' We consider that a consideration of the efficiencies resulting from the merger should be included within the comparative analysis as these efficiency benefits would not only be passed back to customers but would give rise to a better comparator – and are thus fundamental to analysing the position of the merged entity.

While the headline position of no prejudice aligns with our assessment, there are a number of important points of detail that we wish to make on the provisional findings specifically, for the CMA's consideration for its final report.

¹ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 67.

WHOLESALE BENCHMARK

While we agree with the CMA on a number of points, we consider that its provisional conclusion does not reflect the most likely outcome of this merger:

- we consider that the most likely outcome is reflected in the CMA's scenario 1, under its forward-looking approach, where the business plan rankings is used for PR19. Based on the CMA's calculation under this assumption, and the evidence presented in our submissions, we consider that this merger is most likely to result in a beneficial outcome
- we consider that Bournemouth Water's (BW) PR14 historical rank should not be considered in the analysis, even as a sensitivity, and, thus, should not be given any weight
- the impact on the wholesale benchmark should consider the most likely outcome in the treatment of the merged entity. To that extent, merger efficiencies – which have been independently assured to be highly certain, timely and merger-specific – should be directly included in the analysis and should not be treated as an afterthought in the analysis
- given the timeframe of analysis, we consider that likely convergence should be accounted for and that evidence of convergence from previous regimes is relevant for informing reasonable assumptions about convergence.

PRECISION

We agree with the CMA's conclusion that the merger 'is unlikely to affect either Ofwat's ability to set stretching cost benchmarks or its susceptibility to certain water companies' requests to account for specific cost factors'.² Indeed, there are a number of points that further support the provisional finding of there not being any adverse impact (see below).

RETAIL BENCHMARK

We agree with the CMA that 'the merger is likely to result in a reduction in the price control for the industry (i.e. a more stringent price control that will benefit customers)'.³ However:

- we disagree that 'this should not be interpreted as a benefit to Ofwat's ability to regulate, as Ofwat has the option of removing companies that it views as bad comparators'.⁴ Ofwat does not remove a comparator in practice just because it was estimated to be inefficient. Such an approach would bias the calculation of the benchmark upwards. In addition, we consider that the CMA's approach of disregarding a beneficial outcome is inconsistent with previous merger inquiries

² Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 29 and 6.168.

³ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 41 and 6.204.

⁴ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Appendix F', para 25.

- we consider that the CMA should recognise that there is likely to be an additional benefit with regards to bad debt adjustments. Even if upper quartile (UQ) or external benchmarks were used, Ofwat would still need to adjust for external factors that cause differences in bad debt. As such, a possible change in Ofwat's future approach in this area does not mean that a benefit is not likely to occur.

OUTCOME DELIVERY INCENTIVES (ODIs)

The CMA considered that mitigating factors (such as the retention of separate reporting and set out good reasons why this is the case) would mitigate the adverse impact. While we agree that separate reporting will avoid any potential detriment, we consider that the pre-mitigation figure the CMA derived overstates the potential detriment (for the reasons set out in the attached appendices).

SERVICE INCENTIVE MECHANISM (SIM)

The CMA's estimated impact closely aligns to the range we estimated in our Initial Submission. We agree with the CMA's assessment of convergence. Indeed, this is further evidenced by the newly available data for 2014/15.

CONCLUSION

We set out below further detail on the above points, along with further analytical points for the CMA's consideration in the attached appendices.

In summary, while we are pleased that the CMA has provisionally concluded that the merger is unlikely to prejudice Ofwat's ability to make comparisons, we do not consider that the CMA's report on the provisional findings sufficiently reflects the beneficial effects of the merger. Even though the conclusion means that this technically may not need to be considered, the findings as they stand do not communicate the full range of benefits that the acquisition plan (and the panel in reaching the findings) considered. Our analysis demonstrates that the merged company will provide a better comparator, and therefore will benefit all customers and the overall regulatory regime.

Therefore, we request that the CMA considers our response to the provisional findings in reaching its final conclusions.

If the CMA requires further clarification on any matter, we are more than happy to discuss further.

PENNON'S RESPONSE TO COMPETITION AND MARKETS AUTHORITY PROVISIONAL FINDINGS REPORT:

WHOLESALE BENCHMARK

SUMMARY COMMENTS ON PROVISIONAL FINDINGS

On 29 September, the Competition and Markets Authority (CMA) shared its provisional findings on estimating the impact of the merger on the setting of the wholesale benchmark.¹ In its working paper shared with us last month, the CMA employed a static and forward-looking approach to assess the wholesale benchmark impact. The CMA has undertaken a similar approach in its provisional findings but has considered an additional scenario in terms of starting point under the forward-looking approach. The CMA has made the following observations:

- under the backward-looking static approach, which is a 'hypothetical test of the impact of the merger', there is a 0.654 percentage point worsening in the industry upper quartile (UQ) efficiency target resulting in a detriment of £112m NPV over five years. However, there may be good arguments as to why the efficiency ranking of Bournemouth Water (BW) may be overstated in PR14. To reflect this point, it has considered a couple of sensitivities under the static approach both of which result in a benefit of around £37m NPV over five years
- under the forward-looking approach, the impact depends on the starting point assumption of the merging parties and is either not adverse (a benefit of £61m) or that the adverse is small (£9m).

The CMA has provisionally concluded that this merger is likely to lead to '**no adverse impact or a small adverse impact**' with respect to the wholesale benchmark effect.

While we agree with the CMA on a number of points,² we consider that its provisional conclusion does not reflect the most likely outcome of this merger. We consider that the most likely outcome is reflected in one of the starting position options the CMA has considered under its forward-looking approach where the business plan rankings is used for PR19. Based on its calculation under this assumption and the evidence presented in our submissions, we consider that this merger is most likely to result in a beneficial outcome.

We believe that there are five key points that the CMA should consider in developing its final report:

- **starting ranks:** we agree with the CMA that the appropriate starting ranking of the merging parties should reflect the most likely outcome which depends on how well this is reflected in past and future estimated performances. We view that the use of PR14

¹ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, Section 6 and Appendix F.

² In particular, its view that the efficiency ranking of BW may be overstated in PR14 for the purposes of assessing the impact of this merger and considering alternative approaches to address this; and recognition of the relevance of synergy savings for the calculation of the impact on the wholesale benchmark.

historical ranking where BW's rank position is not amended to reflect the performance it is currently delivering and predicting does not reflect a likely outcome, absent the merger. The CMA has also noted that it is 'persuaded by the evidence of the impact of Ofwat's supply-demand balance model on BW's future efficiency ranking (which meant that BW would be ranked outside of the UQ)'.³ As such, we consider that BW's PR14 historical rank should not be considered in the analysis, even as a sensitivity, and, thus, should not be given any weight. This applies to both the static and forward-looking analysis

- **most likely outcome / merger synergies:** the impact on the wholesale benchmark should consider the most likely outcome in the treatment of the merged entity. To that extent, a correct comparison of the outcomes in the factual and counterfactual scenarios is possible only if the merger efficiencies - which have been independently assured to be highly certain, timely and merger specific - are directly included in the analysis. We consider that the savings passed onto South West Water's (SWW) and BW's customers are separate from the benchmark impact and these have not been included in our analysis. However, we note that the prejudicial assessment itself, as far as the impact on the benchmark is concerned, cannot be undertaken correctly unless the pure effect of synergies on the wholesale benchmark is considered in the baseline calculation. This should reflect the CMA's view as to the most likely position of the merged entity going forward. We consider that this should be done on the basis of the CMA's view of the merged firm, and not by separating out efficiencies and requiring 'compelling evidence'⁴ of them in a way that it is not expected of any other part of the comparative prejudice analysis.⁵ We note that consideration of synergies in the analysis leads to a different finding in the CMA's central case that uses business plan ranks and applies a changes matrix in PR19 (namely, a benefit rather than a small adverse effect)
- **ignoring beneficial outcomes:** the CMA's use of simplifying scenarios in its forward-looking approach results in an underestimate of the merger benefits. CMA's framework assumes that scenarios where the merged entity represents the new UQ benchmark has no impact. While we agree that this modelling choice simplifies the analysis, in such cases the synergy savings would directly improve its efficiency thereby set a more stringent benchmark for the industry
- **convergence:** the CMA states explicitly that its results do not assume convergence in efficiency scores over time. It has noted that 'it is difficult to quantify the scale of any convergence, particularly given the move to a new totex approach at PR09'. The difficulties involved in making such assumptions are similar to that involved in other elements of its analysis - for example, the difficulties involved in deriving rank movement probabilities. We also note that the assumption of no convergence is not consistent with the way the CMA and Ofwat has considered convergence when

³ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 32.

⁴ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, Appendix E, para 25.

⁵ For further detail on this point see: Pennon (2015), 'Pennon's response to competition and markets authority working paper: impact of the merger on Ofwat's wholesale benchmarks'.

assessing the impact on other areas (for example, the retail benchmark or ODIs), especially as the CMA has also noted that there is little direct evidence for such assumptions in other areas.⁶ In addition, the CMA has considered a longer timeframe of analysis in assessing the wholesale benchmark compared to other areas, and in this context, we consider that evidence of convergence from previous regimes is relevant for informing reasonable assumptions about convergence.

In summary, while we agree with the CMA that this merger is unlikely to have a prejudicial impact on the wholesale benchmark impact, we note that some of the assumptions considered in its analysis has resulted in an underestimate of the likely benefit from the merger. We consider that the analysis presented in our submissions reflect robust available information, in terms of BW's appropriate starting position and merger efficiencies, or conservative assumptions in terms of reasonable convergence in cost performance over 25 years. In light of this evidence, and upon consideration of our abovementioned key points, we consider that this merger is most likely to result in a beneficial outcome.

DETAILED COMMENTS ON PROVISIONAL FINDINGS

LIKELIHOOD OF BENEFICIAL OUTCOME

The CMA's analysis indicates that the outcome of the merger is likely to be beneficial in the vast majority of outcomes.⁷ Our simulation model quantifies the likelihood of benefit under various scenarios and confirms this. We note that the likelihood of beneficial outcomes calculated by the CMA are roughly in line with those obtained from Oxera's simulation model, except for the understatement of the likelihood of benefit with synergies from PR24 onwards. This is shown in the table below:

Likelihood of beneficial outcomes from CMA's calculations and Oxera's simulation model (with Ofwat's changes probabilities)

Price control review	Synergies		Excluding synergies	
	CMA	Oxera	CMA	Oxera
PR19	72%	71%	65%	65%
PR24	69%	77%	64%	65%
PR29	70%	77%	66%	65%
PR34	71%	78%	67%	67%
PR39	70%	77%	67%	66%

Note: Oxera's probabilities are from the last two columns of Table 4.2 of the Technical Annex. The CMA's probabilities are calculated by summing the 'Both NUQ' and 'SWT NUQ SBW UQ merger benefit' and 'SBW NUQ SWT UQ merger benefit' rows in the Output UQ FORECAST SYNERGY tab and Output UQ FORECAST tab, respectively of the CMA's spreadsheet model.

⁶ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, Appendix F, para 8

⁷ On a related point, the CMA highlights the asymmetry with respect to the UQ benchmark. We note that asymmetry is not a necessary feature of the UQ benchmark, and only holds necessarily when there is an even number of firms in the industry.



As such, we consider that it would be helpful also to report the accompanying probabilities of benefit and detriment.

PENNON'S RESPONSE TO COMPETITION AND MARKETS AUTHORITY PROVISIONAL FINDINGS REPORT:

PRECISION

SUMMARY COMMENTS ON PROVISIONAL FINDINGS

On 29 September the Competition and Markets Authority (CMA) shared its provisional findings on estimating the impact of the merger on the precision of Ofwat's wholesale cost models. In its provisional findings the CMA made the following observations:

- the level of additional imprecision as a result of the merger is estimated to be around £350,000 for the average water company (or £6.3 million across the industry as a whole), based on its general approach. Although the merger will result in some adverse impact, the CMA does not think that it is significant and it is unlikely to affect Ofwat's ability to set stretching cost benchmarks¹
- no weight was placed on results of the specific approach because of the issue of conflating changes in precision with changes in relative efficiency²
- because of the technical econometric concerns, the CMA has not relied on any bootstrapping results.³

We agree with the CMA's provisional conclusion that the merger 'is unlikely to affect either Ofwat's ability to set stretching cost benchmarks or its susceptibility to certain water companies' requests to account for specific cost factors'.⁴

We also note that £350,000 is negligible compared to the cost base of the companies that set the upper quartile (UQ).⁵

We also agree with the CMA that its general approach, which it uses to quantify the impact, suffers from a number of limitations and overestimates the impact.⁶ In particular:

- it does not quantify how the merger might impact the precision of the UQ benchmark
- there is no threshold for which the impact on precision in Ofwat's overall econometric totex estimate can be judged

¹ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 25 and 29.

² Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 6.86–6.90 and Appendix D, 60–64.

³ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 6.99–6.100 and Appendix D, 80–84.

⁴ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 29 and 6.168.

⁵ Between 0.1% and 0.3% of their cost base.

⁶ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 6.79 and Appendix D, Para 47

- the approach is likely to overestimate the impact on precision due to econometric limitations.

We also agree with the CMA that its general approach is not specific to this merger.⁷ As such, the results from this approach need to be treated with caution.

Given its provisional conclusions in this area, the CMA has considered that it is not necessary to conclude on any options available to Ofwat for mitigation.⁸ While we agree, we would like to reiterate that we continue to believe that, in the event of a significant loss in precision, there are many viable options available to Ofwat to mitigate such an impact.

Finally, we note that there are a number of points that further support the CMA's provisional finding of there not being any adverse impact.

In addition to the limitations, and its likely overestimation, noted by the CMA, there are other limitations with the CMA's general approach which further result in overestimation:

- the approach conflates precision and efficiency. Though it does not refer to this issue specifically in its list of limitations with the general approach,⁹ the CMA acknowledges that it is not possible to completely isolate the precision effect from changes in inefficiency under Ofwat's framework.¹⁰ We agree: the general approach does not account for changes in the relative efficiency variation between companies (indeed, almost half of the company rank positions change upon perturbing the predictions).¹¹ As such, there is a conflation issue with this approach (as well as with the specific approach)
- the general approach simply examines the standard error by amending the degrees of freedom for one less comparator,¹² which is assumed to be 5 observations.¹³ That is, it is assumed that a merger results in losing one observation in every year of the panel data set. However, the 'loss' of 5 observation only occurs in the case of using a balanced panel. Thus, any estimates on this basis are an upper bound, as Ofwat can choose to use an unbalanced panel (in which case, data on Bournemouth Water (BW) and South West Water (SWW), pre-merger, can be used)¹⁴

⁷ See: Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 6.58 and Appendix D, Para 21. We also note that the General Approach is not a measure of the impact on precision of this merger as precision measures how 'good' the predictions are, while perturbations (e.g. +/- 1 standard error) do not indicate how precise the predictions are.

⁸ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 6.118.

⁹ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 6.58 and 6.79, and Appendix D, Para 21 and 47.

¹⁰ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, Appendix D, Para 17.

¹¹ After perturbation, the distribution of the residuals changes. This changes the relative efficiency and ranking of the firms. The UQ will also change.

¹² Strictly, we do not lose a company—two data points are replaced by a merged data point, so the data is also changed. So it is not true that one should focus only on the loss of degrees of freedom in measuring precision. One also needs to account for the specifics of the merger. (See: Kumbhakar, S. and Horncastle, A. (2010), 'Improving the Econometric Precision of Regulatory Models', *Journal of Regulatory Economics*, 38:2, October).

¹³ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, Appendix D, Para 10 and 19.

¹⁴ For further discussion on unbalanced panel estimation, see: Oxera (2015), 'Comments on Ofwat's response to the CMA's precision working paper'.

- we have shown in our submissions how such a ‘general’ impact (a reduction in degrees of freedom) could be easily mitigated by extending the timeframe of the econometric modelling or simplifying the models by dropping counter-intuitive or insignificant variables (both of which increase the degrees of freedom).¹⁵

The results from our specific approach should also be considered:

- all the precision measures we use provide the total impact (i.e. both precision and efficiency).¹⁶ As these show no significant impact, then there can only be a concern if conflation is such a significant issue that it completely overturns these results. This is extremely unlikely given that BW is not a particularly efficient or inefficient company (see below)
- we previously submitted that BW is not a particularly efficient or inefficient company under the majority of Ofwat’s PR14 econometric models and, as such, conflation is not a significant issue. We still consider this to be the case: BW is close or reasonably close to median efficiency in all the totex and botex models.¹⁷ With regards to the two enhancement ‘unit cost’ models, we note, as the CMA has,¹⁸ that these models only represent a small part of Ofwat’s modelling. As such, any conflation issue will be small. In addition, we have also submitted the issues with regards to the supply-demand balance (SDB) model prediction for BW, so we do not consider that this result should be given any weight in this regard. Thus, if there is an issue of conflation, it is unlikely to be material
- the one limitation that the CMA highlights with our approach (namely, conflation)¹⁹ equally applies to its general approach (as discussed above). Hence, we consider that the CMA should not entirely dismiss our approach on this basis. That is, we consider that, if the CMA attaches any weight to its general approach, then it should also attach weight to our specific approach
- we note that in the standard econometric context, our specific approach does not conflate changes in precision with changes in efficiency.²⁰ As such, this approach provides a good indication of the impact on precision in the current context or if Ofwat were to change its approach going forward. Conflation could be an issue due to Ofwat’s ad hoc approach of determining efficiency (but see next bullet). Our amended specific approach results, where the technology is fixed, are the closest

¹⁵ See: Oxera (2015), ‘Annex B: Oxera – Precision’; Oxera (2015), ‘Annex D: Oxera response to Ofwat’s initial submission – precision’; and Oxera (2015), ‘Comments on Ofwat’s response to the CMA’s precision working paper’.

¹⁶ In addition to the standard measures of precision, we also fixed technology in one approach in order to isolate inefficiency from precision under Ofwat’s framework.

¹⁷ The CMA argues that BW is some distance away from the median in certain models (see: Competition and Markets Authority (2015), ‘Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report’, September, Appendix D, Para 72). However, we note that BW is ranked 8th or 9th in three of the botex/totex models, and where BW is ranked sixth, its efficiency score is only 1.5% and 3.5% away from the median efficiency. Across all five models, BW is less than 1.5%, on average, away from the median efficiency. Overall, adjusting for its position on the SDB model, BW is not a particularly efficient or inefficient company.

¹⁸ Competition and Markets Authority (2015), ‘Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report’, September, para 6.62 and Appendix D, Para 40.

¹⁹ Competition and Markets Authority (2015), ‘Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report’, September, Appendix D, Paras 60-64.

²⁰ See section 3.1 of Professor Subal Kumbhakar’s Expert Statement on Precision, August 2015.

one can get to isolate inefficiency from precision under Ofwat's framework.²¹ By fixing the technology, the inefficiency of all the companies are unchanged. The only additional parameters estimated are the linear prediction and the associated uncertainty of the merged company. Clearly, pre and post merger we have three different entities. We note that, in this case, the only ranking change is due to SWW and BW moving to the position of the merged entity, which is generally closer to that of SWW, and all other companies maintain their relative position with the exception of this impact (moving by up to two ranks). Similarly, in the CMA's general approach, almost half of the rank positions based on triangulated efficiency scores change due to perturbing the predictions (moving by up to six ranks under some econometric models)

- we note that Ofwat's approach does not formally model efficiency. Technology (i.e. the cost model) is first estimated under ordinary least squares (OLS) (or random effects (RE)), under the assumption that the model residual is pure noise. Since inefficiency is not modelled directly, efficiency does not affect the precision of the estimated cost model. Only after the cost model has been estimated is efficiency estimated by arbitrarily drawing a benchmark at the UQ. As such, our standard precision measures are sufficient to consider the impact of the merger on the precision of Ofwat's modelling
- the general approach suffers more issues and, indeed, more serious issues than our specific approach. Furthermore, we have mitigated the conflation issues to a larger extent in the specific approach, the results of which show that there could be a small improvement in precision due to this merger.

The qualitative approach:

- the measures of precision that we have examined will already take the change in the variation in the data into account, as such there is no need to separately examine the variation in the data. This is why we consider that the specific approach to be the most appropriate approach as it explicitly takes into account the impact of this specific merger on the variation in the data (in contrast, the general approach ignores this aspect of the merger)
- both within and between variation is taken into account by both OLS and generalised least squares (GLS). So we see no need to separate the two^{22,23}
- we disagree with paragraph 98 of Appendix D. The 'loss'²⁴ of one company is not represented by the loss in between-company variation. The loss of one company represents the loss of $1 \times T$ observations if Ofwat uses a balanced panel estimation

²¹ Professor Subal Kumbhakar's Expert Statement on Precision, August 2015.

²² Separating the two does not provide any additional insight. In OLS, the precision of the parameters depends on the total (i.e. the sum of within and between) variation. In RE model (GLS), the precision of the parameters depends on the weighted average of within and between variation. In any case, the estimation takes both forms of variation into account.

²³ We consider that there is no additional insight provided by examining the impact on within and/or between variation. First, there are many regressors, so the individual impact is difficult to isolate and, second, there is no simple way of translating how a change in the within/between variation of a regressor affects precision. Instead, the estimation process takes both into account, and is reflected in the precision measures that we examined.

²⁴ Strictly, we do not lose a company (see above).

approach. That is, Ofwat would 'lose' both variations. Alternatively, if Ofwat were to use an unbalanced panel, then only one observation would be 'lost', and the impact on precision is much smaller than estimated by the CMA (i.e. the general approach should be based on one less degree of freedom and not five)²⁵

- if we are to examine the variation in the data, we should be examining the change in the standard deviation of the variables, not the logarithmic transformation of them.²⁶

DETAILED COMMENTS ON PROVISIONAL FINDINGS

Paragraph 38 (footnote 24) – the CMA notes that we have not explained why we have only chosen these two specifications. In our submissions, we have explained that we did not consider the 'lead reduction' model as BW was not considered in the analysis at PR14 (it did not have cost / activity for the model to be considered). So there is no impact from the merger on that model. The CMA also notes this in footnote 23. The other enhancement models are unit cost models (and are equivalent to their econometric counterpart).

Paragraph 101-104 – Fawley affects the water usage variable as well. As the CMA points out, Fawley, for which it was granted a special factor in PR14, and favourable topography explains the factors on which BW stands out.

²⁵ For further discussion on unbalanced panel estimation, see: Oxera (2015), 'Comments on Ofwat's response to the CMA's precision working paper'.

²⁶ See: Oxera (2015), 'Comments on Ofwat's response to the CMA's precision working paper'

PENNON'S RESPONSE TO COMPETITION AND MARKETS AUTHORITY PROVISIONAL FINDINGS REPORT:

RETAIL AVERAGE COST TO SERVE

SUMMARY COMMENTS ON PROVISIONAL FINDINGS

On 29 September the Competition and Markets Authority (CMA) shared its provisional findings on estimating the impact of the merger on the setting of the retail benchmark. In its working paper the CMA employed a static and forward-looking approach to assess the retail impact. In its provisional findings the CMA made the following observations:

- it does not consider that it is useful to model the static approach and as such have only conducted a forward-looking analysis for retail, and
- the merger will result in a benefit of £2 million (over five years) or £27 million (over 20 years), depending on the rate of convergence assumed.

We agree with the CMA's provisional conclusion that **'the merger is likely to result in a reduction in the price control for the industry (i.e. a more stringent price control that will benefit customers)'**.¹ We note that Ofwat concluded similarly in its Initial Submission.²

However, the CMA goes on to say that 'although the analysis suggests that there would be a benefit to customers, this should not be interpreted as a benefit to Ofwat's ability to regulate, as Ofwat has the option of removing companies that it views as bad comparators from its analysis absent a merger. Therefore, we find that there is no adverse impact on Ofwat's ability to set the wholesale price.'³

We disagree with the CMA not interpreting 'a reduction in the price control for the industry' as 'a benefit to Ofwat's ability to regulate', unless this reasoning is part of its consideration of whether the impact is significant, prejudicial or not (however, the CMA's reasoning does not appear to be based on the issue of significance of impact or prejudicial consideration). The reason the CMA provides is that 'Ofwat has the option of removing companies that it views as bad comparators'. The definition of 'bad' in this instance is simply that the comparator has been estimated as inefficient, however:

- Ofwat does not do this in practice and, as far as we are aware, has never removed a company from a benchmark calculation just because it was estimated to be inefficient⁴

¹ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 41 and 6.204.

² See Appendix A3.4 of Ofwat (2015), 'Ofwat's initial submission to the Competition and Markets Authority following the acquisition of Bournemouth Water Investments Limited by Pennon Group plc', June.

³ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, Appendix F, para 25.

⁴ Where Ofwat has removed companies from defining the benchmark, it has been from the set of companies helping to define the benchmark but not considered robust due to concerns over: data; having special characteristics outside the management control that significantly reduce costs relative to the industry norm; being too small to be considered representative; having poor

- such an approach would bias the calculation of the benchmark upwards. If Ofwat did drop an inefficient company, then the calculated upper quartile (UQ) would not be the industry UQ but a more challenging benchmark⁵
- this approach is inconsistent with how the Competition Commission accounted for benefits in the South Staffs Water / Cambridge Water merger inquiry. In that case, the Competition Commission (CC) explicitly accounted for the merger benefit.⁶

We also note that prior to its consideration of whether the impact is significant, prejudicial or not, the CMA appears to have positioned its estimated wholesale benchmark benefit of £61m in a similar way to this retail benefit (in contrast to its positioning of an estimated wholesale benchmark detriment of around £9 m).⁷

As such, we would appreciate additional clarity as to whether the CMA's reasoning on this issue is part of its consideration of whether the impact is significant, prejudicial or not (rather than the subsequent step).

We believe that there are three further key points the CMA should consider:

- the CMA explicitly has disregarded the **benefit of the merger on the bad debt adjustment**.⁸ The CMA's reasoning being that Ofwat told the CMA that 'it might use alternative approaches in the future...or the use of UQ benchmarks' and that Ofwat observed 'that none of the companies subject to bad debt adjustments at PR14 were in the UQ'.⁹ However, it is not clear to us why it is then 'not appropriate to make any adjustments for bad debt' under such circumstances. Even if UQ or external benchmarks were used, Ofwat would still need to adjust for external factors that cause differences in bad debt. We note, for example, that Ofwat makes adjustments for special factors for wholesale costs, for which Ofwat uses a UQ benchmark.¹⁰ Indeed, such adjustment are essential, whatever benchmark methodology is used, in order to make comparisons like-for-like. As such, we consider that the CMA should

performance in other areas (see, for example: Ofwat (2003), 'Setting Price Limits for 2005–10: Framework and Approach', March). Thus, in the South Staffs/Cambridge merger, the CC argued against the estimated benefit on precision from the merger as Cambridge Water was a statistical outlier and Ofwat could be justified in dropping such a statistical outlier from econometric modelling

⁵ This is also true if Ofwat were to maintain the average as its retail cost benchmark but remove a company that was estimated to be below the average. In addition, as we noted in our response to Ofwat's initial submission, we do not consider that it is reasonable to expect Ofwat to change to a pure frontier approach (see: Oxera (2015), 'Annex E: Oxera response to Ofwat's initial submission – retail cost to serve').

⁶ See Competition Commission (2012): 'A report on the completed acquisition by South Staffordshire Plc of Cambridge Water PLC', May, H2-3, para 9 and table 2, the net impact from which feeds through to page 5, para 11(a), and page 53, para 5.121, of the main report

⁷ We note that the CMA states that there is "no adverse impact" when it quantifies that there is a benefit of £61m, while, under an alternative scenario, it considers its estimated adverse impact equivalent to a customer detriment of around £9m (although, subsequently, when considering its significance/prejudicial impact, it did not consider this adverse impact to be significant). Source: Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, para 6.159, 6.170, 6.171.

⁸ para 13-16 in appendix F

⁹ We also note that Ofwat is expecting convergence in cost performance of companies to the UQ over AMP6; to that extent, companies that set the benchmark at PR19 could be different to that determined in PR14.

¹⁰ Similarly, as water companies cannot cut off water supplies to customers, external comparisons would need adjusting in the area of bad debts, along with the adjustments for other external factors that have been used when comparing bad debts across water companies.

recognise that there is some likelihood of a benefit in this area (as noted in our Initial Submission, the benefits from the bad debt adjustment could be around £16m over PR19 in 2010/11 prices)

- **the benefits from retail merger efficiencies** have not been recognised by the CMA. In our Initial Submission, we noted that these synergies would bring additional wider comparative benefits to the whole industry on top of those already estimated by the CMA.¹¹ Such synergies should be an integrated part of the main analysis and not part of a second phase analysis ‘only after a baseline assessment of whether the merger is likely to result in a prejudicial impact ... without taking efficiencies into account, and only if [the CMA is] of the view that the acceptance of efficiencies is likely to lead to a different finding’. The synergy savings are highly certain and their inclusion would represent the most likely outcome of the cost base of the merger company. Having said that, we accept that, in the circumstances of this case, the inclusion of synergy savings is not ‘likely to lead to a different finding’ than the merger not being prejudicial
- we agree with the CMA ignoring results from **the hypothetical static analysis**.¹² The CMA dismiss the static result ‘due to the changes in Ofwat’s regulatory approach, and in particular its stated intention to move to a UQ or frontier benchmark in PR19, coupled with Ofwat’s and Pennon’s submission setting out a high level of convergence’. We consider that similar issues affect the hypothetical backward-looking static approach in other areas.

In summary, the CMA has agreed with both Pennon and Ofwat in assessing the retail cost to serve impact of the merger to **result in a more stringent price control that will benefit customers**. The CMA’s forward-looking analysis indicates that the benefits from the merger on retail cost to serve is likely to be about £2 million (over five years) or £27 million (over 20 years), depending on the rate of convergence assumed. This is without considering the additional benefits from bad debt adjustments and retail synergies. We consider that the CMA should interpret this as a benefit to Ofwat’s ability to regulate in this area.

DETAILED COMMENTS ON PROVISIONAL FINDINGS

THE ASSUMPTION ON CONVERGENCE

We note that there is considerable uncertainty around the convergence assumptions and thus the estimated benefit. Unfortunately, there is little direct evidence for either convergence assumption.

The CMA states that both Pennon and Ofwat assume a high level of convergence.¹³ However, we note that the CMA’s assumption is convergence occurs sooner. We also note that ‘Oxera’s assumption’ is simply Ofwat’s assumption in its merger consultation report, which itself was based on Ofwat’s PR14 impact assessment.¹⁴

¹¹ Oxera (2015), ‘Annex D Oxera – retail average cost to serve 250615’, May, p. 3.

¹² Competition and Markets Authority (2015), ‘Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report’, September, Appendix F, para 3.

¹³ Competition and Markets Authority (2015), ‘Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report’, September, Appendix F, paras 3, 6

¹⁴ See Ofwat (2015), ‘Consultation on Ofwat’s approach to future mergers and statement of method’, p. 71.



As the CMA has acknowledged,¹⁵ there is significant uncertainty surrounding the rate of convergence; as such, we believe that, without any evidence to the contrary, the 'Pennon assumption' is reasonable and that if the CMA considers alternative assumptions, it should also consider convergence rates lower than those of Ofwat's and Pennon's (i.e. Ofwat's merger consultation assumption).

RETAIL EFFICIENCIES

In paragraph 13 the CMA states that 'Pennon did not submit an explicit figure for the merger retail efficiencies'. We note that in our business case we discussed merger retail efficiencies, which Ofwat reviewed in their Initial Submission.

¹⁵ Competition and Markets Authority (2015), 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', September, Appendix F, para 8

PENNON'S RESPONSE TO COMPETITION AND MARKETS AUTHORITY PROVISIONAL FINDINGS:

OUTCOME DELIVERY INCENTIVES

SUMMARY COMMENTS ON PROVISIONAL FINDINGS

On 29 September 2015, the Competition and Markets Authority (CMA) shared its provisional findings report.

With regard to Outcome Delivery Incentives (ODIs), the report concluded that given a number of mitigating factors (such as the retention of separate reporting), the CMA was not persuaded that the adverse impact was likely to be significant.¹

We agree with the assessment that any impact is unlikely to be significant, and are pleased to see that the CMA has taken on board a number of the analytical points we made. We note that there are a number of additional points that further support the CMA's provisional finding of there not being reason to expect any adverse impact:

- comparative performance of ODIs can lead to sub-optimal outcomes for customers and, with the expected convergence in ODIs, the likelihood of sub-optimal outcomes increases. As such, there may only be an impact, prior to accounting for mitigating factors, to the extent that it is considered likely that some companies would remain significantly adrift from the upper quartile (UQ) benchmark in PR19, and that it is considered that their performance commitments might need to be challenged through the use of comparators
- the impact of convergence is greater than assumed by the CMA, further reducing any potential benefit from a comparative approach, and making the drawing of comparisons more difficult:
 - recent evidence suggests that performance will converge at a greater rate than assumed by the CMA
 - evidence from other water service performance measures with financial incentives suggests that performance will converge at a greater rate than assumed by the CMA
 - the CMA's assumed rate of convergence implies that the majority of companies would significantly miss their performance targets. Given the new financial incentives, this seems an unlikely scenario

¹ CMA (2015) 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', para 6.268.

- the change matrix applied by the CMA uses performance measure data that was not subject to financial incentives, and, therefore, may overstate the likelihood of Bournemouth Water (BW) remaining in the UQ
- the CMA's analysis did not apply a performance glide path to give companies three years to achieve benchmark performance (as Ofwat did at PR14).

We provide further detail on these and a number of other analytical points below. In the round, the evidence strongly suggests that there will be no adverse impact of the merger on ODIs.

DETAILED COMMENTS ON PROVISIONAL FINDINGS

SEPARATE REPORTING

We agree with the CMA that separate reporting would avoid any potential detriment for ODIs:

- there are no plans to remove **local operating staff**
- **local factors**, as well as local management, will remain in this instance²
- each operating area has **separate performance targets** that Pennon will continue to be **incentivised** to achieve (and outperform). As penalty rates have been set to deter companies from missing their targets, there is a clear incentive for companies to achieve their targets
- the **separate independent consumer challenge groups** will be monitoring performance in each area and holding Pennon to account.

Thus, if Ofwat chooses to set comparative-based ODIs at PR14, then it could use the separately reported data in its assessment.

THE APPROPRIATENESS OF QUANTIFYING AN IMPACT

In the provisional findings, the CMA stated that it considered it to be appropriate to quantify the impact of a merger on the ODI benchmark, as the merger could potentially affect the benchmark.³

However, as we detailed in previous submissions,⁴ outcomes are derived by company-specific customer engagement and research on their willingness to pay. To the extent that

² We note, as we submitted in our initial submission, that the CC has previously recognised the importance of local factors and local management in maintaining a degree of independence. See, for example: Competition Commission (2002), 'Vivendi Water UK PLC and First Aqua (JVCo) Limited', para. 2.134; and Competition Commission (2012), 'South Staffordshire Plc/Cambridge Water PLC merger inquiry: A report on the completed acquisition by South Staffordshire Plc of Cambridge Water PLC', p. 66.

³ CMA (2015) 'CMA (2015) 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', para 6.212.

⁴ Oxera (2015) 'Annex F: Oxera – Outcome delivery incentives', and Oxera (2015) 'Oxera response to Ofwat's initial submission on ODI'.

comparative analysis delivers different outcomes to this, a comparative approach will produce sub-optimal outcomes.⁵ Indeed, we note that, in its provisional findings for the Bristol Water price determination, the CMA considered that: “for Ofwat to consider that upper quartile performance (historical or otherwise) would match economic levels appears unlikely to us in general.”⁶

This is especially the case when further convergence has occurred such that the remaining differences may be due to legitimate regional variations. For example, we agree that comparative performance in this area is perhaps appropriate when there is a significant gap for certain companies compared to the rest of the industry (as was the case at PR14) and when alternative approaches to challenging performance are not available. However, when differences are relatively small, as is expected to be the case at PR19 as a result of convergence, the likelihood of sub-optimal outcomes increases.

Therefore, while, in a hypothetical scenario where the companies did not maintain separate reporting, the merger could theoretically have an effect on the UQ benchmark, any such effect may not correspond to a detriment to customers, as the outcome could be sub-optimal. There may only be an impact to the extent that it is considered likely that some companies would remain significantly away from the benchmark, and that it is considered that their performance commitments might need to be challenged through the use of comparators.

CONVERGENCE

The convergence rate is a key input into the model used by the CMA to quantify the impact.

Convergence: the implication of the CMA’s assumption

In quantifying an impact, the CMA assumed a convergence rate⁷ of 35% for supply interruptions, and 50% for water quality contacts. However, we note that, with regards to the CMA’s convergence assumptions:

- assuming a 35% convergence rate for supply interruptions results in 10 companies missing their performance targets for the control period
- assuming a 50% convergence rate for water quality contacts results in 13 companies missing their performance targets for the control period.

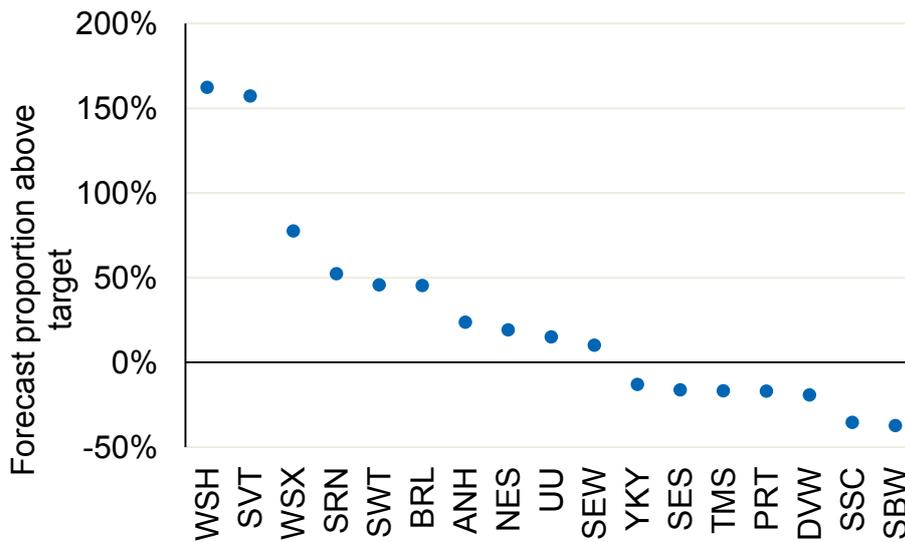
The CMA’s forecast relative to companies’ performance targets is presented graphically below. Performance is above the target means that the target has been missed as with both measures lower figures represent better performance.

⁵ For example, if SWW had been set the UQ target for drinking water contacts at PR14, this would have resulted in a net detriment to its customers, as the cost of the service improvement would have exceeded the benefit gained by its customers from the service improvement.

⁶ CMA (2015) ‘Bristol Water plc price determination: Provisional findings’, para 9.16.

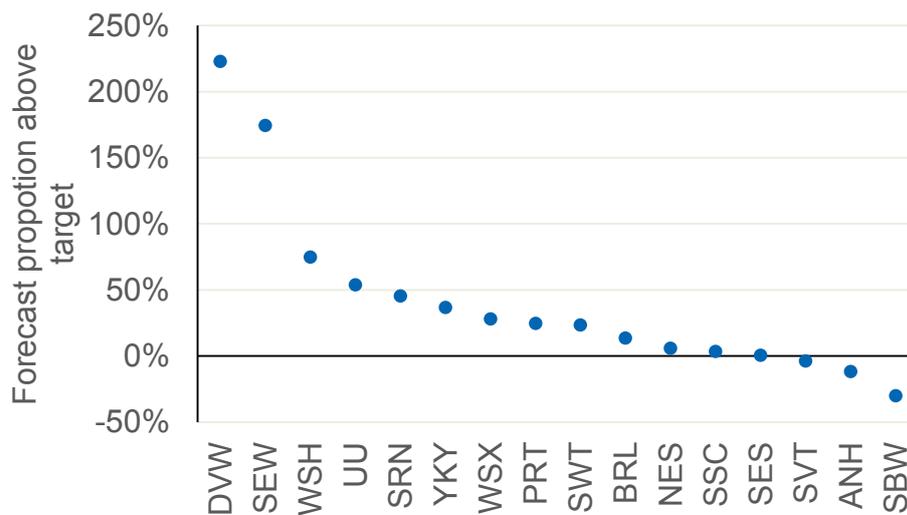
⁷ The proportion of the gap from the worst performing company’s performance level at PR14 to the UQ target.

Figure 1 – supply interruptions - forecast to target



Note: Affinity Water has been excluded as the method for converting its company-specific target into the standard metric was not published.

Figure 2 – water quality contacts - forecast to target



Note: Affinity Water has been excluded as the method for converting its company-specific target into the standard metric was not published. Thames Water does not have a water quality contacts performance target.

It is unlikely that the majority of companies would significantly miss their performance targets: as a result of PR14, companies have been given strong financial and reputational incentives to achieve their performance commitments, and most companies will receive rewards should they outperform their commitments.

Convergence: evidence from other water service performance measures with financial incentives

We note that previously Ofwat considered that, by the middle of the 2015 - 2020 period, all companies would reach current UQ performance.⁸ We recognise that it is theoretically possible that not all companies will achieve that in practice, therefore, we have also assessed evidence from historical precedent. We have previously provided evidence of convergence in the industry's previous performance metric (the Overall Performance Assessment (OPA)) where all companies closed the gap to UQ performance over a five year period.⁹ This evidence suggests that a convergence rate of around 100% would be an appropriate assumption.

Convergence around the UQ is key and this is likely to be more significant than assumed by the CMA

When modelling convergence, Ofwat and the CMA examined the worst performing company, its gap to the best performing company, and how quickly it might catch up.¹⁰ In addition, the CMA noted that there had not been an improvement in performance by all companies since PR14,¹¹ and that, for supply interruptions, overall convergence appeared less significant if Bristol Water and Welsh Water were both excluded. We agree that Bristol Water's 2014-15 performance for supply interruptions should be excluded from the convergence analysis given this atypical outcome.¹²

However, this does not suggest that a convergence rate of 35% by 2020 is appropriate in the analysis. This is because the approach used by Ofwat, and subsequently the CMA, is to forecast scores for all of the industry based on the convergence rate assumed between the worst performing company and the UQ position at PR14. Therefore, if such a low convergence rate were to be used, it would need to be applied to the worst performing company that was not excluded from the assessment that informed the convergence rate. The rest of the industry's scores would then need to be distributed within the range from the best performing company, to the worst company that informed the convergence. This would ensure that consistency is maintained within the analysis.

However, we also note that convergence around the UQ is key when assessing whether the loss of a comparator will impact on the UQ benchmark.¹³ While it may be possible that one or two companies may not perform as expected, these should not affect the UQ position. The overall trend should be for companies to converge towards their performance commitments.

⁸ Ofwat (2014) 'Final price control determination notice: annex 3 – benefits assessment of an uplift on the cost of capital', p 44.

⁹ Oxera (2015) 'Oxera response to Ofwat's initial submission on ODI'

¹⁰ Future industry scores are forecast to be in the range between the forecast worst performing company and the best performance score in the industry. The effect on the UQ is then assessed based on these scores.

¹¹ CMA (2015) 'CMA (2015) 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', para 6.236.

¹² The company experienced the largest interruption events in the recorded history of the company, and is over 3.5 standard deviations away from the next worst performing company, having consistently been an average performer in previous years.

¹³ This is because, if a UQ company is 'lost', its impact on the industry will be dependent on the impact on the UQ, which in turn will be dependent on the position of the company that was just below the UQ before the UQ company was lost.

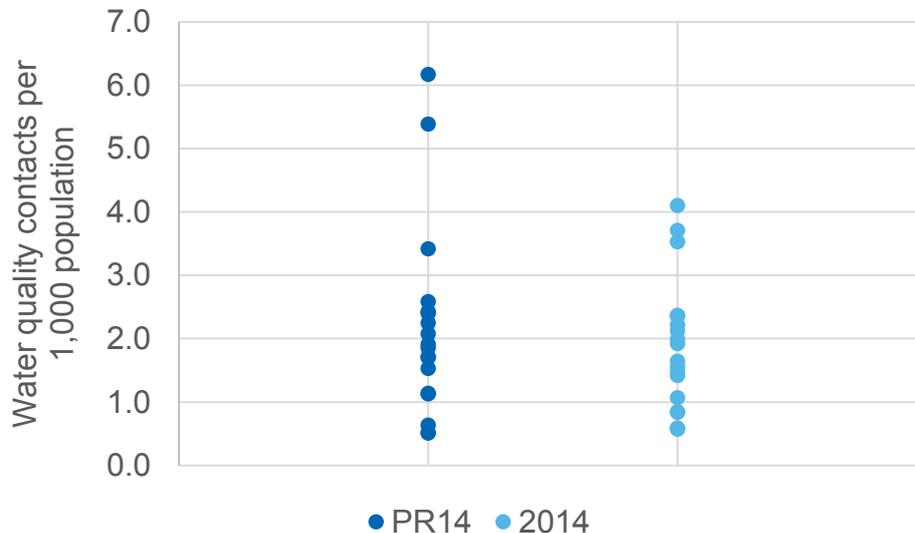
Thus, it is critical to consider the expected degree of convergence in terms of companies around the UQ (i.e. UQ companies and those companies just below the UQ). We note that since PR14:

- the UQ for supply interruptions improved from 12 minutes per property to 9 minutes per property in 2014/15. *This is already below 10, the UQ target forecast in the CMA’s analysis*¹⁴
- for water quality contacts, the UQ improved from 1.23 to 1.16 contacts per 1,000 population in 2014. As such, the industry has already made good progress towards the CMA’s forecast for 2019-20 of 0.92,¹⁵ with five years still to go.

In terms of companies’ closeness to the UQ:

- at PR14, the difference between the UQ and median positions was 5 points for interruptions to supply. By 2014-15, the range had fallen to 2 points
- at PR14, the difference between the UQ and median position was 0.65 points for interruptions to supply. By 2014, the range had fallen to 0.63 points. While this may be less of a significant improvement as supply interruptions, there has been some increase in the bunching of companies. This is shown graphically below.

Figure 3 – water quality contacts - forecast to target



As can be seen from the above, the two previous worst performing companies have made significant improvements, the third worst performing company has remained broadly the same, and the rest of the industry has further bunched together.

¹⁴ Using a convergence rate of 35%.

¹⁵ Using a convergence rate of 50%.

In terms of the impact on the UQ benchmark from losing a potential comparator:

- at PR14, for supply interruptions, the loss of a UQ company would have led to a worsening of the UQ benchmark by 0.30. In 2014-15, a loss of a UQ company would have had an effect of only 0.08
- at PR14, for water quality contacts, the loss of a UQ company would have led to a worsening of the UQ benchmark by 0.29. In 2014, a loss of a UQ company would have had an effect of 0.26.

Clearly with further convergence, these impacts will become even smaller.

Therefore, the evidence suggests that, not only is there expected to be significant convergence going forward, but there has been a notable degree of convergence to-date. This is despite the fact that the price review was ongoing for most of 2014-15, so companies would not have received clarity of their targets, and the incentive rates have not yet applied (this is particularly relevant for water quality contacts, as the measure is reported by the DWI on a calendar year basis, rather than by financial year).

As such, we consider that, if an impact is to be quantified, higher convergence rates should be used.

THE CMA'S CHANGE MATRIX MAY OVERSTATE THE PROBABILITY OF BW REMAINING IN THE UQ

We are pleased to see that the CMA has used a change matrix in its analysis. Structuring the analysis with a clear factual and counterfactual position weighted by likelihood appears to be a robust approach, and in line with precedent. It also addresses the points raised in our previous submissions – i.e. that the Ofwat assumption of there being a 100% chance of BW, absent the merger, remaining in the UQ for the next price review is not realistic. However, we note that the change matrix has been developed by the CMA from using historical water quality contacts data. This data comes from before companies had ODIs for this measure. Therefore, it may overstate the probability of BW remaining in the UQ, absent the merger. Using performance data for which there has been a financial incentive to perform¹⁶ may give a more realistic assessment (to the extent that companies have the ability to deliver equivalent dynamic improvements in performance).

Thus, this may provide a further reason why, if there is any detriment (pre-mitigation), such a detriment is likely to be small.

GLIDE PATH

At PR14, a three-year glide path was applied for companies to move from their current performance levels to the benchmark. Having a glide path for any service improvements in the future is likely to be even more important, as it should become increasingly difficult to deliver incremental improvements to service.

¹⁶ For example, OPA or SIM.

In its analysis, the CMA did not apply a performance glide path. Applying a glide path effect reduces the impact by two-thirds in the first year, and one-third in the second year (over a 20% reduction in total).

Thus, we consider that, if an impact is to be quantified, an adjustment for a performance glide path should be applied.

PENALTY AND REWARD RATES

We agree with the CMA that using both reward rates and penalty rates, when quantifying the impact, should be interpreted as indicative, and that using a value in between the two is more appropriate than solely using penalty rates.

However, we note that there are some clear reasons why penalty rates overstate the impact on customers:

- as the CMA noted in the provisional findings, penalty rates take account of both customers' willingness to pay *and* company incremental cost, and therefore do not provide a pure measure of customers' willingness to pay.¹⁷ Therefore, in many cases penalty rates should be above customers' willingness to pay
- furthermore, as improved performance is generally expected to result in diminishing returns to customers, all else being equal, rewards should not be bigger than penalties, as customers experience greater loss from a reduction in service than the benefits of an improvement in service. Since the purpose of a future UQ benchmark would be to drive further improvements in the industry, using the penalty rates from the final determinations to estimate the value of a higher benchmark is likely to overstate the impact.

Thus, we consider that, if an impact is to be quantified, greater weight should be placed on the reward rates than penalty rates.

¹⁷ CMA (2015) 'CMA (2015) 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Appendix G', para 17.

PENNON'S RESPONSE TO COMPETITION AND MARKETS AUTHORITY PROVISIONAL FINDINGS REPORT:

SERVICE INCENTIVE MECHANISM

SUMMARY COMMENTS ON PROVISIONAL FINDINGS

On 29 September 2015, the Competition and Markets Authority (CMA) shared its provisional findings report.

With regard to the Service Incentive Mechanism (SIM), the CMA stated that it expects there to be a reduction in industry penalties of £1.9m, with the impact falling in the range of £0.5m to £3.8m and that it provisionally considers this impact to be small.¹

This closely aligns to the range we estimated in our Initial Submission,² which was that, if there is a detriment, it may be, at most, between £1m and £4m. In addition, we:

- agree with the CMA that using the midpoint of the control period is more appropriate than considering impact from the beginning of 2016/17
- agree with the CMA's assessment that convergence is likely to continue such that the impacts in SIM beyond 2020 are likely to be relatively small
- note the CMA's base case assumption of using a weighted average of the two companies' performance levels. As one of the key benefits of the merger is expected to be learning from the best of both companies, we consider that the CMA's approach may somewhat overstate the impact of the merger.

There are a number of analytical points set out below. In the round, the evidence strongly suggests that if there is an adverse impact of the merger on SIM, the impact will be small.

When impacts should be assessed from

We agree with the CMA that using the midpoint of the control period is more appropriate than considering impact from the beginning of 2016/17.

To assume that the SIM is negatively affected from the start of 2016/17 (Ofwat's assumption) is equivalent to assuming that (i) South West Water's (SWW) and Bournemouth Water's (BW) operations will have been fully integrated by 1 April 2016; and (ii) all comparative benefits from BW would be completely lost. However:

¹ CMA (2015) 'Completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited: Provisional findings report', para 6.296 and 6.298. https://assets.digital.cabinet-office.gov.uk/media/560c012de5274a0369000029/Pennon_PFs_report.pdf

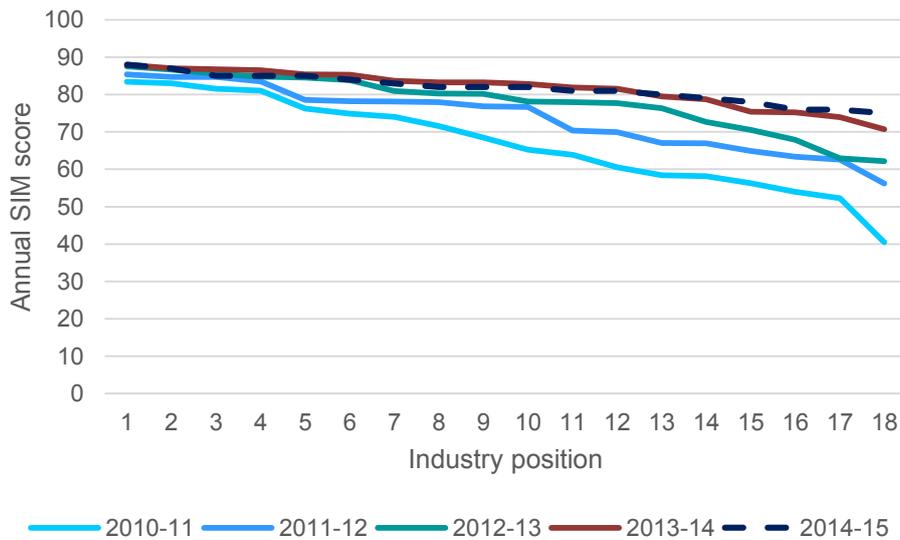
² Oxera (2015) 'Annex E: Oxera – The Service Incentive Mechanism' https://assets.digital.cabinet-office.gov.uk/media/55965820ed915d159200001d/Pennon_Group_-_Annexes_A_to_F.pdf

- integration is not starting until March 2016 (dependent on Licence changes) and will not be concluded until October 2016 at the earliest
- as part of the final determinations, both BW and SWW will need to maintain separate reporting of their SIM scores during the control period. This will provide two separate data-points for Ofwat's SIM analysis.

In undertaking our analysis for the Initial Submission, we took a conservative approach in order to estimate an upper bound impact of the merger in this area. To reflect the fact that it would take time for operations to be fully integrated, and that SWW and BW would maintain separate reporting throughout the control period, we assessed that detriments resulting from the merger would begin from the middle of the price control period onwards.

When impacts should be assessed to

We agree with the CMA's assessment that convergence is likely to continue such that any impacts in SIM beyond 2020 are likely to be relatively small. This is further evidenced by the newly available data for 2014/15 (in our response to the CMA's working paper, we had examined the provisional SIM data, this has now published by Ofwat).³



³ Ofwat (2015) 'Companies' performance 2014-15: Customers' http://www.ofwat.gov.uk/regulating/casework/reporting/rpt_los2014-15customer - It should be noted that some companies used the new SIM methodology that changes some of the weightings of the components that make up the SIM. A more definitive analysis would require all the scores to be calculated on the same basis.

The below table shows summary statistics for the industry-wide SIM data to date:

Table A1.1 Industry SIM data statistics

	2010-11	2011-12	2012-13	2013-14	2014-15
Min	40	56	62	71	75
Mean	67	74	78	82	82
Max	83	85	88	88	87
Range	43	29	25	17	13
Standard deviation	12.3	8.8	7.8	5.0	3.8

As can be observed from the above, there has been significant SIM convergence to date. *The standard deviation of 3.8 is already lower than the standard deviation of the Overall Performance Assessment (OPA) in its last year of use (in 2009-10 the OPA had an overall standard deviation of 4.8⁴). The OPA was discontinued at the end of AMP4. Ofwat has previously stated that the bunching of companies' OPA scores suggested that the OPA would not drive further significant service improvements.⁵*

Using the standard deviation data observed to date, different forecasts can be obtained. These are summarised below:

Table A2.1 Standard deviation forecast

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Ofwat's forecast ⁶	3.0	2.3	1.7	1.3	1.0	0.8	0.6	0.4	0.3	0.2
Forecast using the latest data (log linear)	2.9	2.1	1.6	1.2	0.9	0.7	0.5	0.4	0.3	0.2

As per Ofwat's approach to establishing their convergence assumption, the second line in Table A2.1 is based on a regression of the industry standard deviation, but extending the data using the latest data.⁷ While this evidence is not definitively conclusive, it is worth noting that it supports Ofwat's forecast and shows *the standard deviation of SIM scores falling below a single SIM point for the entire of AMP7*. Indeed, it suggests a slightly faster rate of convergence than Ofwat's forecast.

⁴ Oxa analysis of Ofwat (2010), 'Service and delivery – performance of the water companies in England and Wales 2009–10'.

⁵ Ofwat (2010), 'Putting water consumers first – how can we challenge monopoly companies to improve?', p. 5.

⁶ Ofwat (2015) 'SIM benchmark_forward looking', 'trend' worksheet

⁷ This regression has an adjusted R² of 0.972, and p-values below 0.01 for both the intercept and the variable estimator.



Ofwat may also be able to make use of benchmarks from other sectors, as it has indicated that it may do with respect to retail services, which further supports the SIM being of limited use beyond 2020.