1 NORTHUMBRIAN WATER RESPONSE TO THE CMA WORKING PAPER ON 2019/20 COST DATA

1.1 SUMMARY

(1) On 12 January 2021 the CMA published a Working Paper on the use of 2019/20 data for base cost models (**19/20 Working Paper**). This is Northumbrian Water's (**NWL's**) response to that Working Paper.

(2) We do not agree with the CMA's provisional decisions to exclude the 2019/20 cost data from its assessment of the efficient costs for both the water and wastewater service. We consider that most observers of this process will struggle to understand why the CMA has chosen not to set the allowed costs based on the most recent and relevant information. This is inconsistent with the CMA's own well-established precedent in that regard, which it has followed elsewhere in the redetermination.

(3) If regulators appear free to deviate from the precedent and pick and choose which data to use this will undermine confidence in the CMA's process. Whilst the CMA indicates in the 19/20 Working Paper that it does not support approaches that "*seek specific outcomes*"[1] it would be reasonable to view the CMA's proposals to not use 2019/20 data as doing precisely that: i.e. seeking the outcome of avoiding an increase in companies' cost allowances.

(4) As we set out in this, and previous, submissions, we consider that the CMA's concerns about the use of the 2019/20 data are unfounded:

- whilst there is clear evidence that some expenditure has been brought forward to meet AMP 7 performance levels, this does not introduce the degree of upward bias envisaged by the CMA:
  - we estimate that **the likely scale of the brought forward investment is around £100-200m out of a total annual expenditure of £4,043m (c.2-5% of the totex for the year)**. Whilst we can understand the overall scale of the brought forward AMP 7 investment with reference to company reporting commentaries and changes in annual expenditure with some certainty, quantifying it precisely and for individual cost lines is not possible;
  - the volume and value of that expenditure is, however, likely **immaterial** by reference to Ofwat's own thresholds; and
  - it is **consistent with observations from the previous transition year** at the end of the last control period, 2014-15.
- analysis of forecast and actual expenditure in 2019/20, either independently or relative to 2018/19, **does not support a conclusion that the overspends in 2019/20 were significantly atypical** or any deductions about the level of potential bias in the 2019/20 cost data; and
- the **data is accurate** and has been subject to all appropriate quality checks.

(5) As the CMA acknowledges **there are significant benefits to the inclusion of this data** which, we consider, outweigh any disadvantages:

- it **improves the robustness of the CMA's cost estimates** for both water and wastewater services by providing more observations for the modelling and a full AMP cycle for efficiency benchmarking;

1 CMA 19/20 Working Paper para. 67.

- it **reflects the significant increasing overspend in the water service** against companies PR14 allowances that can be observed right across AMP 6, noting that this was highly material and a trend which began before AMP 7 targets were even known;
- **not using this most recent data results in a clear downward bias which contributes to the existing asymmetry in the package** that the CMA has recognised.[2] If this is not addressed it will place significant pressure on the water service and the delivery PCs throughout AMP 7, driving asymmetry in the package beyond what the CMA has recognized in its Provisional Findings (PFs), likely overspending and leading to a detriment in the financeability of the sector which will ultimately be reflected in customer bills; and
- the downward bias arising from excluding this data is far higher than any upward bias resulting from its inclusion, meaning that the CMA's provisional approach would, in fact, result in a much greater degree of distortion. Analysis shows that **the downward bias is materially larger (c.£800-900m) than the risk of bias from including brought forward AMP 7 expenditure (c.£100-200m).**

(6) In acknowledgement of the CMA's concerns we have considered whether there are any viable alternatives to the straight inclusion of the 2019/20 data but our analysis indicates that this is the best option in the round. Using the 2019/20 data but adjusting it back to 2018/19 levels softens the increase in allowed totex and involves a reduction in 2019/20 totex of a similar magnitude to the likely brought forward AMP 7 investment, but this fails to use the most up to date data and is arbitrary.

(7) In reaching its final determination we consider that the CMA should:

- use the 2019/20 data in setting its base costs allowances for both water and wastewater, not just the revised cost drivers;
- apply the frontier shift from 2020/21;
- address the impacts of the merger of Severn Trent and Dee Valley as suggested in the 19/20 Working Paper; and
- set an upper quartile efficiency challenge based on the quality of the econometric models.

(8) This will support, rather than damage, the long-established regulatory precedent of using the most up to date information in decision making. As such it will maintain regulatory certainty in relation to the most material of all the building block elements and therefore preserve ongoing confidence in the regulatory regime.

(9) Customers will continue to be well protected in this scenario. Service and performance levels are being set based on the toughest targets in the sectors' history. The application of a strong catch-up challenge requires three quarters of the companies in the sector to reduce their costs against the allowances: this challenge is much higher than the CMA has set in the past.[3] This would be combined with strong incentives for innovation and frontier shift as well as efficiency through the application of more balanced cost sharing rates. Overall the package would still result in significant bill reductions for customers relative to 2019/20 charges greater than those we proposed in our business plan, which was itself the largest reduction across the sector.

1.2 THE CMA'S PROPOSED APPROACH IS INCONSISTENT WITH PRECEDENT

(10) Using the most up to date data is a key point of principle in regulatory determinations. Recent cost information will better reflect the cost pressures companies are facing and the scope for efficiency in the time period that is the subject of the price control. As such there are

2 e.g. para 58 of CMA's Cost of Capital Working Paper, January 2019
3 SOC336 Bristol Water PR14 CMA Decision, para. 4.233.

numerous examples where the CMA and other regulators explicitly support the use of the best and most recent data. We provide an overview of these examples in Appendix 1, including general statements about the use of the best available data, as well as consideration of the specific datasets actually used this is clearly partial given the time to respond but we do not consider that expanding the sample would do anything but confirm the conclusions made.

(11) Moreover, the base totex allowances are by far the most material element of a price control settlement: at PR19 base totex allowances account for 47% of revenues. This makes it particularly important that those allowances are set correctly and are based on the most up to date information.[4] The CMA is effectively saying that its concerns with the 2019/20 cost information are so significant that the cost information from 2011/12 (which is nine years old) is more relevant to companies' allowed costs and efficiency for the 2020-25 period. We find this very hard to believe. In that context, rather than the debate focusing on whether the data should be included at all, the starting point should be that it is used. We consider that there should be a very high bar for concluding that the data should be excluded, which would require robust evidence and reasoning: this bar has not been met based on the analysis presented in the CMA's Working Paper.

(12) We also note that the CMA uses the most recent data extensively elsewhere in its provisional conclusions. This includes, for example, using 2019/20 APR data extensively in its Cost of Capital Working Paper and also using several datasets in its setting of the allowed return (e.g. the information on Index-Linked Gilts). This data is used even though the Covid-19 pandemic has driven significant volatility in the markets and, therefore, impacted the quality of those datasets.[5]

(13) Finally, as set out in more detail in Appendix 1 Section A1.2, we do not consider that the CMA's decision to exclude the latest expenditure data in its 2015 redetermination for Bristol Water is valid precedent for this redetermination. That decision can be distinguished on its facts: indeed, the application of the CMA's rationale in that decision to these facts would support the inclusion of the 2019/20 data.

1.3 INCLUSION OF THE 2019/20 DATA WILL IMPROVE THE COST ASSESSMENT

(14) The CMA's cost assessment approach in the PFs notably suffers from a small number of data-points in the panel data.[6] Including the 2019/20 information would:

- increase the length of the panel and the number of observations, therefore improving the robustness of the model coefficients;

4 In this context the CMA's reference to giving less weight to post-2008 data to determine the frontier shift (19/20 Working Paper, para. 61) is not a comparable precedent.

5 Follow up observations on cost of equity, Gregory, 9/10/20 (accompanied NWL post PFs hearing submission).

6 CMA PFs para 4.34b. In its 2015 determination for Bristol Water the CMA noted that Ofwat's PR14 translog models "seemed overly ambitious" in the context of "the relatively small sample size", noting that "in practice, it seems to have compromised the results" (SOC336 Bristol Water PR14 CMA Decision, para. 4.50(c)). The role of comparators in providing panel data to be used within Ofwat modelling, and the concerns about reductions in the available number of data points, was a key consideration in the Cave Review discussion about a potential relaxation of the special merger regime which, under WIA s33A(1), explicitly requires assessment of whether a merger might prejudice Ofwat's ability to carry out comparative regulation (Independent Review of competition and innovation in Water Markets, November 2008, pp. 56-8: https://webarchive.nationalarchives.gov.uk/20091106091312/http://www.defra.gov.uk/environment/quality/water/industry/cavereview/documents/cavereview-report.pdf.

Indeed, the CMA's merger guidance for water mergers (CMA49, 2015) notes that "The number and quality of comparators is of particular importance to econometric modelling since its statistical robustness depends on the number, independence, and degree of variation of observations." (para. 4.8); and "Any reduction to the number of comparators can have an impact on the robustness of Ofwat's analysis by reducing the number of independent observations. Ofwat currently has a higher number of water comparators 18 than sewerage comparators 10, so the loss of a water comparator is likely to have less impact than the loss of a sewerage comparator. The CMA will consider the impact of a merger on the number and quality of comparators, and whether this is likely to make Ofwat's analysis less robust, for example by reducing the precision of its cost modelling. Other things equal, the impact from the loss of a comparator may be expected to increase for each successive merger that occurs, as fewer comparators would remain." (para. 4.19).

- minimise the impact of atypical years by increasing the overall number of years represented; and
- allow a full AMP period to be considered, including in the five year efficiency challenge. This has clear advantages given that companies' price control packages are set on a five year basis and there is always a degree of movement across the years of the control which can make it difficult to distinguish efficiency from delay in spending across the control period.

(15) This is borne out in the results of the analysis where the statistical performance of the models is strong when the 2019/20 data is included with all of the model coefficients being statistically significant. This is an improvement over the FD19 and PF models where the density squared variable is not statistically significant in the WRP2 model.

1.4 THE RISK OF UPWARD BIAS IN WATER COSTS IS IMMATERIAL

(16) We have provided clear analysis in our submissions, as flagged in our December hearing, which show that the uplift in 2019-20 expenditure is modest and can at least partly be explained by factors other than just bringing forward AMP 7 expenditure.[7] Indeed, as the CMA accepts in its working paper, wastewater costs have not risen in 2019/20 and yet Ofwat's philosophy and approach to setting the 'stretch' in PCs has been consistent across the two services, further suggesting that there are other factors at play.

(17) According to our analysis as set out in our post-PFs hearing submission, these other factors driving the difference between 2018/19 and 2019/20 include: existing capital maintenance work being delayed to the last year of the AMP; investment to meet existing AMP 6 PCs; and HS2 diversion costs.[8] We provided analysis of this previously and this is summarised in Table 1 below.

Table 1: Summary analysis of 2019/20 water costs (£m, 17-18 prices)

Item	Result (£m in 17/18 prices or % of total)
Wholesale Botex 18/19	3,902
Wholesale Botex 19/20	4,043
Water increase	**141**
Increases that are demonstrably not related to bringing forward AMP 7 investments from our analysis	
Thames AMP 6 leakage catch up	8
Affinity HS2	24
Increase that could be attributed to AMP7	**110**
Proportion of 19/20 costs	2.7%
Underlying increase from 18/19 to 19/20	2.8%
Simple sum of values from company reports (water and waste) from p.6 of CMA working paper	**168**
Comparative transition expenditure in 14/15	**407**

Source: NWL Analysis - NWL Post PFs Hearing Submission, Appendix 1

(18) This analysis shows that the costs incurred by companies to invest in meeting AMP 7 PCs and ODIs in the water service is c.£110m out of a total 2019/20 base expenditure of £4,043m or around 2-3% (of 2019/20 totex).

(19) Indeed, even if we were to simply add up all of the reported additional investment by companies that the CMA references in its working paper and assume that all of that investment occurred in the water control (which would not be consistent with company statements that at least some of this expenditure occurred in wastewater) it still only amounts to c.£165m. For the avoidance of doubt this total excludes Anglian's reported £165m

7 NWL Reply to PFs Responses (November 2020) Section 4.1; NWL Post PFs Hearing Submission, Section 2.1 and Appendix 1

8 NWL Post PFs Hearing Submission, Appendix 1: In this we set out analysis of water company APR cost reporting including the types of cost, what they relate to and an analysis of how much of the cost might reasonably relate to bringing forward investment to support AMP 7 performance.

resilience reinvestment[9] which Anglian has made clear was over AMP6 as a whole, so does not relate to bringing forwards AMP7 investment to 2019/20:[10]

"This commenced in 2017/18 and in total we reinvested £165.0 million over AMP6 to improve resilience and enhance our service to customers."[11]

(20) This level of cost impact would have been classed as immaterial by Ofwat at PR19 based on its materiality thresholds.[12] Similarly it would not be material enough for various re-openers that companies are subject to.[13] As such we do not consider that these costs are likely to be material in any event.

1.5 THE CMA ANALYSIS IS ONE-SIDED AND INTRODUCES DOWNWARD BIAS

(21) The CMA's concerns about bias are entirely one-sided, focussing exclusively on the risk of 'upward' bias: i.e. that including the data could provide cost allowances that are not efficient requiring customers to pay higher bills than they should.

(22) The CMA does not attempt to calculate the potential value of expenditure which companies have brought forward from AMP 7 to meet service performance targets in order to consider the materiality of this risk. This is a fundamental weakness in the CMA's rationale. Instead the CMA effectively assumes that the degree of risk of 'upward bias' in the 2019/20 costing data is so significant that the dataset cannot be used.

(23) The CMA's working paper makes no consideration of the risk that cost allowances are 'downward' biased: i.e. that allowances are insufficient and companies are required to spend more, thereby driving a deterioration in financeability. This is surprising given that we and other companies have consistently argued throughout the redetermination process that this is the case[14] as recognised by the CMA itself in its PFs.[15]

(24) A simple examination of the trends in industry base expenditure over time shows clearly that the decision does introduce a 'downward bias' in wholesale water cost allowances. In Figure 1 below we show total industry water totex over the current modelled period (2012-19) with the figures for 2019-20 both including and excluding the costs that can reasonably be attributed to PC and ODI investments based on the analysis summarised in Table 1 and the average for the modelled 2012-19 period.

9 CMA 19/20 Working Paper, para. 10, seventh bullet.

10 The reported information on this reinvestment makes it clear, per se, that this investment was not to support AMP 7 performance. In addition, Anglian's public statements about the reinvestment into the business pre-date Ofwat clearly setting out its AMP 7 commitments.

11 Anglian Water APR 2020, p.110.

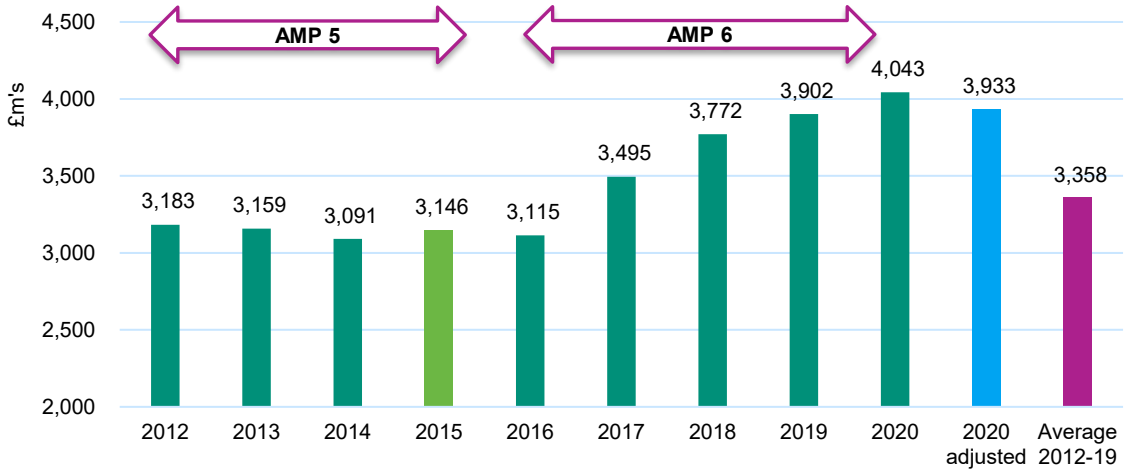
12 Ofwat Delivering Water 2020: Our final methodology for PR19, p. 149. https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Final-methodology-1.pdf Note Ofwat set its materiality threshold at 1% of the 5 year totex, which is 5% of 1 year of totex. At £4bn totex for 19/20, £100m is 2.5%.

13 Interim Determinations of K set materiality thresholds at 10% of annual turnover. See: https://www.ofwat.gov.uk/regulated-companies/price-review/interim-determinations/ and Substantial Effect Determinations set materiality thresholds at 20% of annual turnover. See: https://www.ofwat.gov.uk/regulated-companies/price-review/substantial-effect-determinations/

14 See, for example, NWL SoC Section 5.4; NWL Response to PFs Section 3; Anglian Water SoC Section 4; Bristol Water SoC Section 3; and Yorkshire Water SoC Section G paras. 130-151 and 188-215.

15 PFs, para. 2.133 (a) and (b).

Figure 1: Actual base water totex expenditure (2012-20) with 2019-20 ('2020') adjusted



Source: NWL analysis of APR data from companies

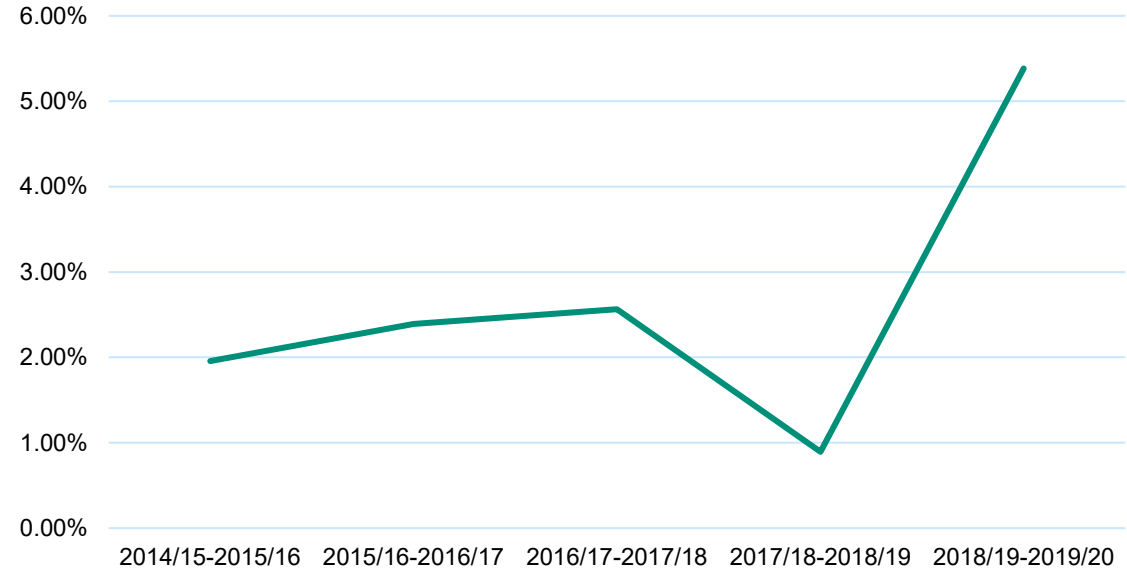
(25) This shows that:

- **there is an obvious and clear step up in base expenditure between the end of AMP 5 and throughout AMP 6.** The average expenditure for 2012-15 (AMP 5 modelled) is £3,145m compared to 2016-19 (AMP 6 modelled) of £3,571m. On average in more recent years industry expenditure has been c.£427m higher and the step up is clearly observable over most of the years of AMP 6. This step-up is also reflected in 2019-20 expenditure;
- 2019-20 water totex is £4,043m. Adjusting for the expenditure that could be reasonably identified as related to AMP 7 PC and ODI investments based on our own analysis, this figure is £3,933m. Both of these figures are shown in Figure 1; and
- Ofwat and the CMA have set the efficiency scores based on the last five years of the modelled period. **If the 2019/20 data continues to be excluded, the AMP7 allowances will only not be reasonably subject to downward bias if industry totex for the last five years of the 2015-19 modelled period is similar to the 2016-20 period. This effectively means that the 2019/20 year would need to be similar to the 2014/15 year, which is shown in the chart ('2015'). In reality, the 2014/15 figure is £897m less than the 2019-20 actuals.** It is inconceivable that a gap of this magnitude could be accounted for by investment brought forward from AMP7 – as per the analysis in paragraph (18) brought forward investment only accounts for c.£110m. Therefore, failing to reflect the 2019/20 data in allowed costs will result in significant downward bias.

(26) Based on this simple analysis it is perfectly clear that there are other factors driving a material increase in company expenditure in AMP 6 and, indeed, in 2019/20. There are a number of reasons why this may be occurring. We observe, for example, that Non-Infrastructure Maintenance (**NIM**) grows throughout AMP 6 year on year suggesting that it may have been back-loaded or delivered late. AMP 6 PC levels were also challenging compared to the pre PR14 period and business rates grew throughout the period.

(27) At the same time there is a ratcheting effect of the year on year tightening of performance commitments which may have affected investment in AMP 6. As shown in Figure 2 we can see that the largest tightening was from 2018-19 to 2019-20, a 5% tighter target. It is not surprising therefore that companies spent more in 2019/20 to meet the tougher PC targets. These targets read across to AMP7, so are indicative of the challenge facing the industry.

Figure 2: Annual year on year % stretch of Water PCs for AMP6 (related to common PCs at PR19)



Source: NWL analysis

(28) The Ofwat Service and Delivery 2020 report confirms this, stating: "*Performance commitments have become more stretching as the 2015-20 price control proceeded. Consequently, companies have had to improve their performance and deliver more to ensure they meet their commitments."*[16]

(29) By excluding the 2019-20 data the CMA is introducing a clear 'downward' bias in company cost allowances. For the CMA to be convinced that this is not the case it would need to consider that the 2019-20 cost allowances were inflated by c.£800-£900m of expenditure to meet AMP 7 PCs/ODIs and that the true 'efficient' industry expenditure for 2019/20 is closer to £3.146bn. This is simply not a credible position where a reasonable analysis of the underlying cost submissions from companies in their APRs suggests that the brought forward PC/ODI investment is c.£100-200m – far less than the c.£800-900m figure. In doing so the CMA would also exclude the clear step up in costs from AMP5 driven by a range of factors.

(30) Moreover, the same simple analysis suggests that **the risk of downward bias is likely to be much higher than any risk of upward bias from excluding the 2019-20 data** (c.£100-200m of 'upward bias' versus c.£900m of 'downward bias').

1.6 THE 2018/19 - 2019/20 COMPARISON IS INCONCLUSIVE: A COMPARISON TO 2014/15 IS FAR MORE IMPORTANT

(31) The CMA's conclusions seem to be partly driven by analysis which shows that companies overspent more against their business plan cost forecasts in 2019/20 than they did in 2018/19;[17]

"the water industry spent substantially more than it expected to"

*"[*o]verspend occurred also in 2018/19, but to a much lower degree*".*[18]

(32) We do not consider that anything can reasonably be deduced from this analysis about the level of potential bias in the 2019/20 cost data. We certainly do not consider that any

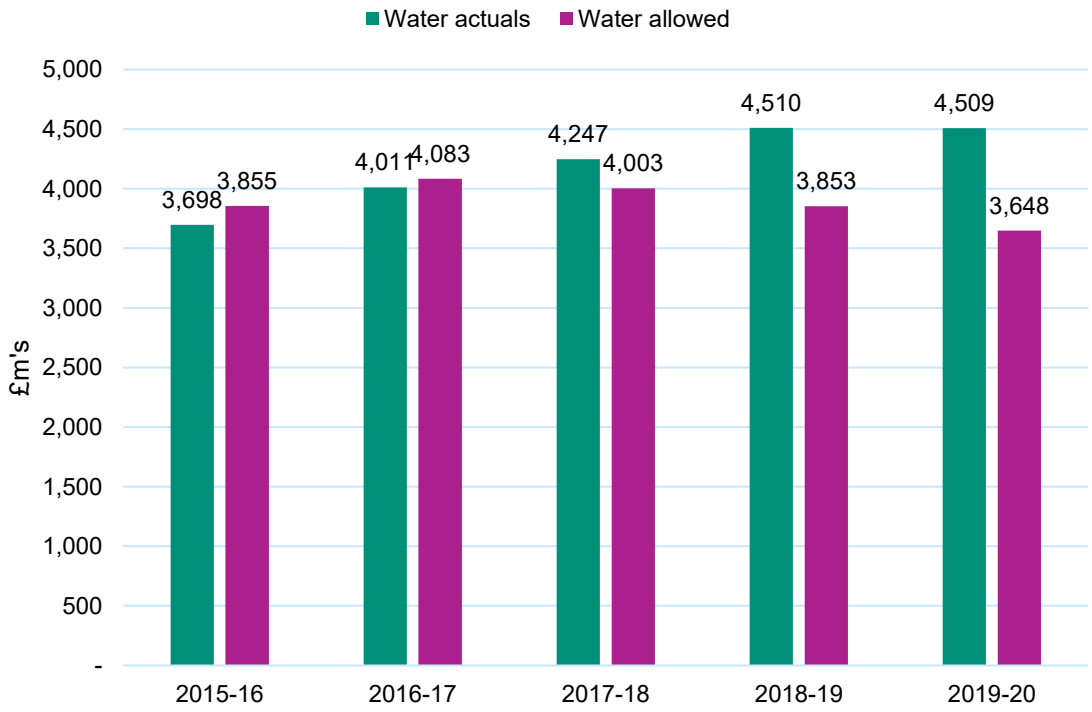
16 Ofwat Service and Delivery 2020 report, p.11
17 CMA 19/20 Working Paper, Section: 'Comparison outturn versus business plans' section, Figures 3 and 4, pp16-18.
18 CMA 19/20 Working Paper, para. 44.

difference between FD forecasts and actual expenditure implies that the 2019/20 totex includes more significant atypical overspending on AMP 7 PCs.

(33) Business plan cost estimates are simply a forecast and profile of expected costs. In reality our experience is that the actual expenditure is always different for a wide variety of reasons. These might include delays to investment or maintenance programmes, additional unforeseen cost pressures, identifying more efficient ways of working or indeed external factors such as bad weather. Forecasting is also difficult and longer forecasts are likely to vary further from actual experience.

(34) We have updated the CMA's analysis (as per Figure 3 and 4 of its 19/20 Working Paper) to include all five years of the control period for the sector at an aggregate level. This is shown in Figure 3 below.

Figure 3: AMP 6 water expenditure versus allowances from the PR14 FD (all totex) (£m's 17/18 prices)



Source: NWL analysis of Ofwat RFI011 reply

(35) We would make the following observations from this analysis:

- actual versus forecast spend does not 'match' in any year. Companies underspent in the first two years of the control period and overspent in the last three. Some of the overspending in the latter three years is likely to be related to companies experiencing delays in their capital programmes and maintenance activities from the first two years;
- whilst the additional spend in 2019-20 relative to allowances is visible (as per the CMA's own analysis), Figure 3 clearly shows that actual water expenditure was close to forecasts from the FD for the first two years and then it increasingly diverges. At the same time, the divergence gets bigger in the later years further away from when the forecast was set, demonstrating the perils of forecasting; and
- the sector as a whole overspends significantly on water totex compared to the FD (with actual expenditure for the period at £20,976m versus allowances of £19,442). That overspend does not begin in 2019/20 but begins to emerge in the middle of the control period during 2017/18.

(36) There are likely to be lots of reasons why the divergence between allowances and actual expenditures occurs in 2019/20 and these will be specific to different companies and circumstances. However, none of this analysis would lead us to conclude that the wide disparity in actual expenditure versus allowances in 2019/20 demonstrates an 'atypical' year with 'upward bias'.

(37) This analysis demonstrates the difficulty of inferring much from an aggregate assessment of costs like this. A more appropriate comparison to understand the scale of historical investment in the final year of the AMP to meet service improvement targets in the next AMP and whether this is 'atypical' is to compare 2019/20 with 2014/15, the final year of the previous AMP.

(38) We have also explained to the CMA and it has referenced in its Working Paper[19] that transitional expenditure in 2014/15, the comparable transition year during AMP 5, was £407m compared to £24m in 2019/20.[20] This means that similar transitional expenditure in 2014/15 was £383m higher and much higher than any potential uplift in 2019/20 and yet both Ofwat and the CMA have been comfortable with using the 2014/15 year in their analysis. At the same time, we have also provided a table showing similar extracts from companies 2014/15 annual reports which highlights similar reinvestment by companies.[21] Clearly the 2014/15 data is used in the CMAs analysis and has not been similarly rejected and the brought forward investment in 2019/20 is not atypical in comparison to these statements.

1.7 THE POSITION ON WASTEWATER COSTS IS PARTICULARLY WEAK

(39) The CMA's provisional decision on wastewater is particularly difficult to justify.

(40) The CMA acknowledges that the 2019/20 wastewater data is not controversial and not in dispute but goes on to set out three reasons why it considers that data should not be used:

"Some of the companies…suggest that investment was brought forward in light of commitments in wastewater"

"Some cost items are common (or highly correlated) across water and wastewater"

"there is a risk of inconsistency if we take different approaches between water and wastewater".[22]

(41) We consider that this rationale is weak and does not stand up to scrutiny.

(42) None of the main parties are suggesting that there are distortions arising from the inclusion of this data and the CMA acknowledges this as a 'Non-disputed topic' in its Working Paper.[23] The CMA's core premise for excluding the water costs (with which we disagree as set out above) clearly does not apply to wastewater.

(43) The suggestion that investment was brought forwards in light of commitments in wastewater (in AMP7), is inconsistent with performance observations for the key wastewater common PCs of Internal Flooding, Sewer Collapses and Pollution, as set out in Table 2 below. To 'get ahead' on commitments, companies would not only need to improve on 2018/19 outturns, they would also improve on the 2019/20 forecasts which were available to Ofwat during the PR19 process to factor into its target setting. As can be seen from Table 2 below, neither is the case - the industry average and upper quartile positions deteriorated between 2018/19 and 2019/20, and the 2019/20 forecasts on an average and upper quartile basis were not achieved.

19 CMA 19/20 Working Paper, para. 16, second bullet.
20 NWL Post PFs Hearing Submission, Section 2.1.1 and Appendix 1; NWL Reply to PFs Responses, Section 4.1.
21 NWL Reply to PFs Responses, Table 1.
22 CMA 19/20 Working Paper, para. 65.
23 CMA 19/20 Working Paper, para. 58.

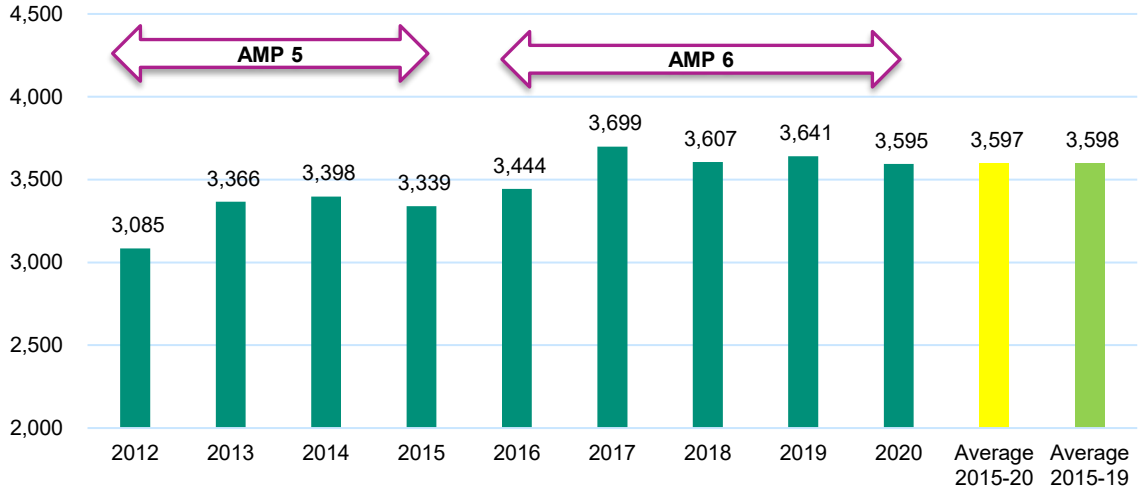
Table 2: Analysis of Waste Water Service from 2018/19 to 2019/20 (Red shading indicates deterioration in service performance, Green indicates improvement)

Measure	Industry performance	2018/19 Actuals	2019/20 Forecast – Post IAP	2019/20 Actual
Internal Flooding per 10,000 props	Average	2.5	2.22	2.75
	UQ	1.51	1.72	1.89
Pollution (Cat 1-3) per 10,000km	Average	31	29.64	37
	UQ	24.25	25.51	26
Sewer Collapses per 1,000km	Average	10.5	9.22	11.38
	UQ	6.53	4.66	6.55

Source: NWL Analysis of 2018/19 and 2019/20 data including APRs, Table 3S, EPA, and April 2019 PR19 submissions.

(44) Whilst it is true that some companies do refer to brought forward wastewater investment the CMA acknowledges that *'Wastewater spending in 2019/20 is more in line with spending in previous years'.*[24] As shown in Figure 4, in fact, 2019-20 wastewater expenditure is the second lowest year of expenditure in AMP 6 and almost exactly at the average for the 2015-20 AMP 6 period (2019/20 base totex was £3,595 and the average for 2015-20 is £3,597). So there is no basis for suggesting that there is upward bias introduced by the estimates. Indeed, our own analysis suggests that the impact on the allowances for the three affected companies of including this data is mixed.

Figure 4: Actual base wastewater totex expenditure (2012-20) with 2019-20 ('2020') adjusted and average for modelled period (2012-19)



Source: NWL analysis of APR data from companies

(45) Finally, the CMA's comments about common or shared costs and inconsistency are difficult to place any weight on where water and wastewater revenue controls and the associated ODIs are entirely separated. Water and wastewater companies have been subject to accounting separation since 2009 and separate costs for water and waste have been reported since privatisation. The Regulatory Accounting Guidance also places clear obligations on companies to maintain complete separation of revenues, costs and activities (see below). Moreover, water and wastewater cost assessment is already undertaken completely separately using separate data, models and comparator companies - the assessment of wastewater costs has no impact on water cost assessment. The inclusion of the additional data is also not complex or burdensome, the models can be re-run in an afternoon.

24 CMA 19/20 Working Paper, para. 28.

*'**No cross subsidy between price controls**. Price reviews have separate binding price controls. Companies cannot transfer costs between the price control units in setting prices and preparing the APR. The revenue allowance for each price control is determined by the costs specific to that particular price control. Rules on transfer pricing are detailed in RAG 5. Moreover, the controls themselves are already set entirely separately. For example, the cost assessment of wastewater is already done with 10 companies (compared to 17 for water) with different efficiency and other benchmarks. There are neither practical difficulties to introducing this for wastewater nor are there significant cost allocation, cross-subsidisation or separation issues.'*[25]

(46) **The CMA should, therefore use the 2019/20 cost data for wastewater regardless of its decision in relation to the use of the 2019/20 data for water.**

1.8 CONSEQUENTIAL CHANGES IF 2019/20 DATA IS INCLUDED

(47) The CMA sets out its views on potential consequential amendments that might be required if it were to move away from the position in the consultation and include the 2019/20 data in its final determination. These sections are helpful and we very much hope that the CMA will rethink its position, recognising that the weight of evidence is very much in favour of including this data in its analysis. Our views on each of the possible amendments highlighted by the CMA are set out below:

- the approach to frontier shift efficiency assumptions if the 2019/20 cost data is included. In this respect the CMA concludes that frontier shift efficiencies would be added to 2020/21 forecast data (i.e. the start of the price control). **We agree with this approach: frontier shift estimates represent a forecast for future productivity improvement and it is therefore nonsensical to apply them to actual incurred costs.** Moreover, as can be seen from Figure 3, companies overspent significantly during 2019-20;
- the approach to setting the catch-up efficiency benchmark based on the 'upper quartile' target given the merger of Severn Trent and Dee Valley and the loss of the two separate datapoints in 2019/20**. The CMA proposes to drop HDD from the water efficiency benchmarking and include both companies as a single entity in the wastewater analysis**. We have set out our views to the approach to this issue previously in our response to RFI 025[26] but **we do not have any significant concerns with the CMA's suggested approach** and we recognise that there are a number of different and credible choices that could be made in the water service to addressing the merger issue; and
- the approach to setting the efficiency challenge, where the CMA does not propose to change its catch-up challenge benchmark based on the 2019/20 data. **We also support this approach and the upper quartile challenge which is already a stretching challenge to be set based on the quality of the econometric models.**

1.9 CONSIDERATION OF ALTERNATIVE APPROACHES

(48) Whilst we can understand the overall scale of the brought forward AMP 7 investment with some certainty, quantifying it precisely and for individual cost lines is very difficult. As we have set out in this submission we don't agree with the CMA that these costs should be excluded. We continue to believe that they are a normal part of price review cycles and the 2014/15 year, for example, will contain a similar level of brought forward investment.

(49) Nevertheless, in order to address the CMA's apparent concerns, we have considered possible alternative approaches as set out in Table 3 below. This included, for example:

- *including adjusted 2019/20 data*: *whether certain lines from the 2019/20 data could be excluded or amended to reflect the known brought forward AMP 7 investment*. We

25 Ofwat, RAG 2.08 – Guideline for classification of costs across the price controls, p.4
26 NWL Response to RFI025 Q.5.

concluded, consistently with the CMA, that this would not be practical as it is not possible to identify the lines with accuracy in order to determine what the adjustments would reasonably be;

- *including adjusted cost data similar to the previous year, 2018-19, or the AMP 6 average.* This retains the structure of the data and, for example, the merger of Severn Trent and Dee Valley but adjusts cost at the industry level back to either the previous year or the sector average for the AMP. The changes are, to a great extent, arbitrary because they simply seek to reduce the overall totex for the 2019/20 year going into the models. Of the two approaches the adjustment back to the 2018/19 year appeared more proportionate to the CMA's concerns around bias because the downward adjustment to 2019/20 totex was more consistent with the scale of potential brought forward investment from AMP 7 (a £141m downward adjustment to 2019/20 costs compared to c.£100-200m of brought forward investment). This resulted in a smaller uplift to allowed totex than simply including the 2019/20 data across the appellant companies. The adjustment of the 2019/20 data back to the AMP 6 average does result in a much smaller increase in the allowed costs of the appellants but it requires a much more material adjustment to 2019/20 assumed totex than can reasonably be justified based on the information available in relation to the AMP 7 brought forward investment; and
- *including the 2019/20 data but making some form of ex-post adjustment to base allowances to reflect this brought forward investment, similar in principle to the ex-post modelling adjustment for growth.* Consistent with the practical challenges associated with adjusting the 2019/20 data any ex-post adjustment would be arbitrary because there is no clear methodology for making that adjustment. We also generally considered that it would be better to adjust the data going into the models than the model results, consistent with our concerns about the ex-post modelling adjustment for growth.[27]

Table 3: Appraisal of alternative options to the inclusion of the 2019/20 data

Option	Change in industry botex included for 2019/20 (£m's)	Change in appellant company allowances versus PFs (£m's)	Comments
A. Exclude 2019/20 data	-897 (-22.2%)	0	• Fails to use the most up to date data or follow regulatory precedent. • Avoids an immaterial risk of upward bias in cost estimates but drives significant material downward bias by failing to take account for the clear step up in AMP 6 water expenditure. • Lowest customer bills.
B. Include 2019/20 data	0	+171	• Uses most up to date data and follows regulatory precedent. • Avoids material downward bias but creates immaterial risk of upward bias based on companies brought forward AMP 7 investment. • Largest uplift to customer bills.
C. Include adjusted 2019/20 data	N/A	N/A	• Uses most up to date data and follows regulatory precedent. • Impractical- there is no basis for identifying and adjusting 2019/20 cost lines.
D. 'Repeat' 2018/19 data (reduce 2019/20 botex for each company so industry botex is	-141 (-3.5%)	+149	• Fails to use the most up to date data or follow regulatory precedent. • The adjustment to the 2018/19 data is arbitrary. • The adjustment to 2019/20 costs is similar to the proportion of costs that might constitute brought forward AMP 7 investment and reflects the step-up in company costs across AMP 6.

27 NWL SoC, Section 5.6.

Option	Change in industry botex included for 2019/20 (£m's)	Change in appellant company allowances versus PFs (£m's)	Comments
the same as in 2018/19)			• Slightly less impact on customer bills than option B.
E. Include AMP 6 average (reduce 2019/20 botex for each company so industry botex is the same as the rest of the AMP6 average)	-472 (-11.7%)	+104	• Fails to use the most up to date data or follow regulatory precedent. • The adjustment to the AMP 6 average is arbitrary. • The adjustment to 2019/20 costs is much greater than the proportion of 2019/20 costs that might constitute brought forward AMP 7 investment but does at least reflect some of the step-up in company costs across AMP 6. • Impact on customer bills is smallest.
F. Ex-post adjustment	N/A	N/A	• Fails to use the most up to date data or follow regulatory precedent. • Impractical- there is no basis for identifying and adjusting 2019/20 cost lines.

Source: NWL analysis and commentary

(50) **Our analysis of viable alternatives compared to the straight inclusion of the 2019/20 data also confirms that this is the most appropriate approach. Alternative approaches are generally arbitrary or simply impractical**. If the data is adjusted to make the 2018/19 and 2019/20 totex years consistent then totex allowances increase by proportionately less than simply including the 2019/20 year. In this case the downward adjustment in 2019/20 totex is comparable to the expected scale of the brought forward investment that is driving the CMA's concerns around 'bias'. This appears to be the most credible alternative we have identified but it is arbitrary. This analysis also confirms the scale of the downward bias in the totex allowances of the appellants if the data for 2019/20 is not used through straight inclusion or in an adjusted way.

(51) These adjustments we have made to the 2019/20 in our alternative approach do not appear to affect the robustness of the estimated models. All of the models continue to have statistically significant coefficients and strong R-squared values similar to Ofwat's models.

APPENDIX 1: PRECEDENT FOR USE OF DATA

1. As noted in this response the CMA's provisional decision not to use the latest available data is unreasonable in the context of this redetermination and inconsistent with regulatory precedent. In this Appendix we outline the relationship between the timing of a typical regulatory and redetermination process and the information that is available. We also explain why the CMA's decision in its PR14 redetermination for Bristol Water not to use 2014/15 data can be distinguished and should not be seen as a reliable basis for reaching a similar decision in this case. Finally, we provide a summary of the regulatory precedent that supports the use of latest available data as well as practical examples of the use of the latest data – from the CMA in this redetermination and others, as well as examples from other regulators including Ofwat and Ofgem.

A1.1. General observations on the use of data and the timing of regulatory processes

2. In a typical price control process the timing of the phases allows the regulator's final determination to take into account data from the most recent complete regulatory year. Using PR19 as an indicative example:
   - company business plans were published in December 2018;
   - Ofwat's draft determination was published in July 2019;
   - publication of 'tidy' data for the most recent regulatory year in the Autumn; and
   - FD19, which takes account of the most recent 2018/19 data, was published in December 2019.

3. As we set out in Section A1.4 below this pattern and timing means that regulatory decisions do, in fact, give consideration to and use that updated data.

4. In a typical water redetermination, the CMA's process will commence around February/March in the year following Ofwat's determination and run for six months to August/September. This means that the redetermination process will usually be concluded before another year of data becomes available or, at the least, before it has been subject to the necessary quality and accuracy checks. For example:
   - Bristol Water's redetermination of its PR09 price control by the CMA (then the Competition Commission) commenced on 8 February 2010 and the CMA's decision was delivered on 4 August 2010. Given that timing, the question as to whether the most recent year's data should be used never arose as a point for consideration; and
   - the CMA's redetermination of Bristol Water's PR14 price control commenced on 4 March 2015 and, following an extension to the original six month timeframe, the CMA's decision was delivered on 6 October 2015. Given that timing active consideration was made of the potential use of 2013/14 data but, for the very specific reasons outlined in Section A1.2 below, including the fact that it had not been through the necessary quality checks, the CMA decided not to include it.

5. In this redetermination the CMA has, for a variety of reasons, extended the process by the full additional six months and intends to issue its final decision in February 2021. The most up to date data for 2019/20 was complete and fully checked before the end of 2020. This means that the timing of the CMA's process is more comparable to the timing for Ofwat's PR19 price control process than the CMA's previous two redeterminations.

6. In those circumstances, it is rational and reasonable that the latest data should be used. We have no doubt that if use of this data significantly reduced cost allowances Ofwat would be strongly supportive of its inclusion. It should not be open to a regulator to make this decision by reference to the impact in this way.

A1.2. Distinguishing the CMA's approach in the Bristol Water 2015 redetermination

7. In its working paper the CMA notes that in its 2015 redetermination for Bristol Water the CMA chose not to use the newly available 2013-14 data in its cost modelling "*due to some explanatory variables not being available and the fact that it had used data to 2012/13 for its provisional findings*". [28] The CMA cites this as justification for excluding the 2019/20 data in this redetermination on the premise that both are examples of unreliable or unrepresentative data that cannot be considered either complete or robust.[29]

8. This description of the CMA's in the 2015 Bristol Water redetermination is, at best, overly summarised and as a result fails to acknowledge the key features that underpinned that particular decision which are relevant to understanding its precedential weight. Whilst it is absolutely correct that the additional year of data was not used by the CMA in its final determination, the rationale for that position is more complex than the CMA's summary would suggest:
   - Ofwat's FD14 econometric models used data up to and including 2012/13 (the most recent year of data available at the time of the FD14 decision – see **Error! Reference source not found.** below);[30]
   - the CMA's revised econometric models contained explanatory variables which required data inputs that were not routinely collected on an annual basis from the water companies, meaning that "*there was not a complete set of available data that would allow us to extend the models that we had used for our provisional findings for 2013/14 data*";[31]
   - whilst updated expenditure data for 2013/14 was available, at the time of the CMA's consideration of that data (August-September 2015) and its final determination (6 October 2015) Ofwat "*had not completed its internal checks of this data*";[32]
   - when the CMA investigated the impact of updating its models for 2013/14 data (including some approximations) it found that: "*on average across our set of seven preferred models … the effect of these updates would be to increase the estimate for Bristol Water's expenditure requirements by **less than 1%**. This provided some comfort that our estimates were not heavily contingent on using data up to 2021/13*" (emphasis added);[33] and
   - the CMA's further sensitivity analysis regarding the use of the updated data also produced estimates that were within a range of +2% to -1% of the CMA's seven preferred models.[34]

9. As such, the CMA concluded that:

   *"Given **the relatively small scale** of these differences, the **variation in the direction of the impact**, the **significant limitations in the available data** for 2013/14, and the fact that **our public consultation for provisional findings had used data to 2012/13**, we considered that it was appropriate to retain the approach from our provisional findings of using the original Ofwat data set that provided data to 2012/13."*

10. When looking at that decision in is full context, we consider it is clear that it does not provide a precedent that would justify the exclusion of the 2019/20 data. Instead, the CMA's rationale would actually support inclusion of the data in this instance:
    - in the 2015 redetermination the CMA needed to update its own bespoke models which required a different scope of data points to the models used by Ofwat in FD14: in this

28 CMA 19/20 Working Paper, para 61, bullet two.
29 CMA 19/20 Working Paper, para 61.
30 Bristol Water 2015 CMA Redetermination, Appendix A4, para. 217.
31 Bristol Water 2015 CMA Redetermination, Appendix A4, para. 219.
32 Bristol Water 2015 CMA Redetermination, Appendix A4, para. 219.
33 Bristol Water 2015 CMA Redetermination, Appendix A4, para. 221. With regard to the limited impact of inclusion of the 2013/14 data. we note that the steady trend in water totex from 2006-2015 is observable in Figure 1 of the CMA's 19/20 Working Paper.
34 Bristol Water 2015 CMA Redetermination, Appendix A4, para. 222.

redetermination the CMA is using Ofwat's FD19 models so there are no equivalent concerns about the scope of the available data for 2019/20;

- in the 2015 redetermination which was delivered on 6 October 2015 the 2013/14 expenditure data had not been subject to the appropriate accuracy checks: the extension of this redetermination process means that the CMA's decision will be delivered in Q.1 2021, after Ofwat completed its checks in 2020. As such there are no equivalent concerns about the accuracy of the data;
- in the 2015 redetermination the scale of the impact of the inclusion of the updated data was +2% to -1%, meaning that the CMA could take comfort in the output of its models and decline to include the updated data as the impact would be immaterial: in this redetermination we have demonstrated that the impact of including the 2019/20 data is clearly material as it increases our allowance by c.5%, with no equivalent variation in the direction of that impact – it is all one way, which reflects the companies' position about FD19 providing an insufficient cost allowance; and
- in the 2015 redetermination the only public consultation was on the provisional findings which only included data to 2013/14: the timing of this redetermination has meant that, unlike previous redeterminations, an updated year of data is available. The CMA's working paper is, therefore, a public consultation on the effects of the inclusion of that data.

11. As such, none of the reasons for which the CMA declined to use the 2013/14 data in its 2015 redetermination for Bristol Water apply in this situation. Instead, when considered in the context of the current factual circumstances, the application of the CMA's rationale clearly supports the use of the 2019/20 data in this redetermination.

A1.3. Commentary and precedent supporting the use of the latest data

12. The CMA has been clear during this process, and past redeterminations, that in the context of carrying out a full redetermination of a price control process it is appropriate to make use of the best data available. This will typically include utilising the most up to date information available, subject to appropriate reassurances regarding the accuracy and robustness of the data.

13. We note that the 2019/20 data has been subject to Ofwat's full assurance process, as well as the companies' own assurance checks. As such, there should not be any underlying concerns about either its accuracy. In particular:
    - companies reported APR data is subject to external audit opinion and all data is provided subject to detailed guidance from Ofwat through its Regulatory Accounting Guidelines (RAGs); and
    - Ofwat has run an extensive query and review process spanning several months to query individual line items with companies and make amendments to those lines where they are agreed with companies.

Table 4: CMA general precedent on the use of new and updated data

Decision/ Document	Relevant extracts
CMA: PR19: Approach to the redeterminations	"*Where there is additional and updated information available, produced since Ofwat's determination, and which is relevant to the redeterminations, we will take account of this to inform our redeterminations. For example, new market evidence may be available to inform the calculation of the cost of capital, or there may be new information on for example tax rates. However, we will also consider whether information is complete and robust so that we can place reliance on it*." (para. 58)
CMA: PFs 2020	"*In reaching our provisional conclusions we have taken into account evidence that was not available to Ofwat at the time of its determination. In general, we have considered updated market data, submissions of the main parties and third parties, reviews of business plans and specific projects, and the advice of engineering consultants, to reach these provisional conclusions*." (para. 22) "*As the CMA is making a fresh determination, we consider that the CMA should examine any further issues that have arisen since Ofwat made the Disputed Determination, as it has done in previous cases. We are also able to take account of current circumstances and information which is now available, which may not have been available at the time of the original determinations. The CMA can also seek further evidence. Where there is relevant additional and updated information available, produced since Ofwat's determination (including information, views and evidence produced and provided to us by the Main Parties in the course of the redeterminations), we have taken appropriate account of this to inform our determinations. In general, we have considered updated market data, submissions and hearings of the Main Parties and Third Parties, reviews of business plans and specific projects, and the advice of engineering consultants, to reach these provisional conclusions*." (para. 3.8) "*The CMA considers that, when taking decisions regarding the determination,* ***we should use the most up to date information available.*** *Therefore, where new information available that was not available at the time of Ofwat's FD is available that has an impact on the water industry and, specifically, the price control, the CMA should take account of these changes in circumstance*." (para. 3.53) "*In carrying out these redeterminations, the CMA will be exercising its own regulatory discretion as to how to appropriately balance these statutory duties. As the CMA is making a fresh determination, the CMA considers that it should, in principle, consider any further issues that have arisen since Ofwat made the disputed determinations*." (para. 2.66)
CMA: NATS 2020	"***So far as possible, we have used the best and most accurate data available to us****. This means that in some cases we used data that had been updated since the CAA reached its RP3 Decision to fulfil our duty to set the appropriate level of the price control for RP3. However, as explained in chapter 5, the COVID-19 pandemic is having a significant impact on the aviation sector, and on the UK economy as a whole, the full scope of which cannot yet be appraised. We consider that it is not yet possible to make traffic forecasts with any degree of certainty, nor to assess the full financial impact of the COVID-19 pandemic on NERL's business. We have therefore decided not to update the data used in our provisional findings to reach our final determination*." (Final Determination, para. 3.23) "*We have also used the best and most accurate data available to us. This means that in some cases we used data that had been updated since the CAA reached its RP3 Decision to fulfil our duty to set the appropriate level of the price control for RP3. The data used in this report (eg market data, traffic volumes) will therefore not necessarily be the same data that will be used for a) the CMA's Final Report and b) the final price control. This is particularly the case given* the current Covid-19 situation and impact on traffic volumes." (Provisional Findings, para. 3.23) In its approach to cost of capital in the provisional findings: "*In some cases, we measured alternative ways to calculate those parameters, and included additional and more up-to-date information in our assessment*." (Provisional Findings, para. 49)
CMA: Bristol Water 2015	"*As the CMA is making a fresh determination, the CMA considers that it should, in principle, consider any further issues that have arisen since Ofwat made the disputed determination*." (Final Determination, para. 2.15)
CC: Bristol Water 2010	"*Since we were obliged to undertake a redetermination (rather than decide an appeal),* ***we used the best data available to us****, focusing on areas where Ofwat and Bristol Water disagreed. This involved using data updated from those used by Ofwat, and further information that Bristol Water supplied and our investigations produced*." (Final Determination, para. 5) "*We also used the best data available to us, which meant that in some cases we used data that had been updated since Ofwat's final determination, as well as information that Bristol Water had not provided to Ofwat or that our own investigation generated. We shared such information and data with the parties*." (Final Determination, para. 2.19)

A1.4. Use of latest data sets in regulatory determinations

14. Table 5 provides examples of the use of most recent data in regulatory determinations – both by the CMA and by the sector regulators. We accept that this is a partial analysis but have tried to focus in the time available on recent CMA, water and energy determinations and on the approach to using data in relation to cost assessment. As can be seen from the table:

- whilst the most up to date data is not used in every instance by the CMA it is overwhelmingly the case that it has been used wherever possible. Furthermore, in setting the cost allowances Ofwat and Ofgem have in all but one instance examined used the latest year of information: indeed in many determinations the use of the latest year is often not explicitly referenced because the practice has become so common and uncontroversial. More broadly the latest data is consistently used by Ofwat. This confirms our stated view that use of the most recent data should be the default position and that there should be a high bar for exclusion of the data;
- there are only two examples where the latest cost information is not used for base cost assessment: both of which relate to PR14 where Ofwat's cost modelling approach was heavily criticised by the CMA and substantively revised. Ofwat did not choose to update its cost assessment models using the 2013/14 data during the price setting process and the CMA did not choose to update its own cost assessment models with that data either during the redetermination process. As explained in Section A1.2 above there were significant practical challenges in making the changes and the impacts of the changes appear to have been immaterial to allowed costs. As we have shown, neither is the case in this instance. The CMA's stated and unquantified concerns about bias in its cost estimates from brought forward AMP 7 investment are neither consistent with these examples nor do they reflect a comparable evidence base upon which to take such a significant decision; and
- whilst there are some examples where the CMA or Ofwat has chosen not to make use of the latest data or indeed to place less weight on certain datasets, these are limited. Typically they reflect either material concerns with the data quality, such a major volatility in the market data or material concerns about inconsistencies across companies, or instances where the item is subject to a reconciliation in any event and so the data issues become less material. We note that there may also be instances where regulators give less weight to certain data where there are a number of competing sources or estimates to consider.

Table 5: Use of most recent data in regulatory decisions

Decision	Dataset	Was latest available data used?	Commentary
CMA: 19/20 Working Paper	2019/20 Cost Drivers	Yes	2019/20 Working Paper, para. 59.
CMA: PFs 2020	Equity Beta data MAR data Risk Free Rate data Cost of new debt data	Yes Yes Yes Yes	"*We have updated our determinations for new information (see paragraph 3.8) that is not directly about the impact of COVID-19, for example market information relevant to the calculation of the WACC.*" (para. 3.56) Regarding its cost of capital assessment: "*We have included additional and more up-to-date market data in our assessment*." (para. 79)
	Efficiency challenge	Yes	Regarding the time period to calculate the efficiency challenge: "*First, **more weight should be placed on more recent data, since this better reflects the recent efficiency levels of the industry**. In particular, if the companies are becoming more efficient over time then setting an efficiency challenge*

			using older data risks setting an insufficient challenge. Second, using a small sample of years could lead to results which are unrepresentative of typical efficiency levels." (para. 4.264)
	Productivity growth	Yes	"Productivity growth should be assessed over full business cycles because growth is typically procyclical. Therefore, we used the most recent full business cycle for which data was available: 1990 to 2007" (para. 4.324)
	Abstraction costs	Yes	NWL's abstraction costs "increased following an Environment Agency consultation which finished after the Ofwat FD was published. We reflect this latest information by provisionally allowing Northumbrian an additional allowance to cover these costs." (para. 42(b)(i)
	Enhancement schemes	Yes	Regarding its assessment of enhancement schemes: "*Our approach often involved an assessment of additional evidence or arguments which were not available to Ofwat at the time that it made its final determination*." (para. 51)
NATS 2020	Cost of capital	No	In its NATS 2020 final determination the CMA made a deliberate decision **not** to use updated market data beyond the assessment in its PFs in light of the impact of Covid-19 and the significant impact on the air traffic control sector in particular (Final Determination, paras. 60-61). As such, this decision should be treated as an exception to the normal CMA practice of reflecting the latest available market data. Indeed, that was the approach the CMA had taken to its provisional findings, in that it had updated its assessment of cost of capital based on new and updated information not available to the CAA in its original decision.
CMA: Bristol Water 2015	Cost of capital	Yes	"*We considered the approach of deriving a notional cost of new debt for Bristol Water. To do so, we examined both the latest available market data on appropriate nominal corporate bond index (iBoxx), and issuance spreads over relevant gilt yields*." (para. 10.116)
	Cost allowance	No	See Section A1.2 above.
CMA: Bristol Water 2010	Enhancement schemes	Yes	Regarding the allowance for preparatory costs for Cheddar Reservoir: "*As noted, we redetermined on the basis of the best data available to us*." (Final Determination, para. 3.85)
	Pension deficit	Yes	Regarding its assessment of the size of the pension deficit: "*With regard to the size of the deficit, we took the deficit as at the most recent update date, ie 31 December 2009. The triennial valuation at 31 March 2008 was the most detailed calculation of the deficit, but both asset returns and economic conditions had underperformed the assumptions since then, an issue recognized by Ofwat when it asked companies with older triennial valuations to provide updates. The updated valuations rely on rolling forward much of the triennial data and only revisiting key assumptions (eg inflation) and adjusting for asset performance. They appeared to be the most recent data available to us, and so we considered it appropriate to rely on them. We did not accept Ofwat's submission that using such updated (if less rigorous) valuation meant that Bristol Water's shareholders enjoyed reduced risk, so that we should make a counter-balancing adjustment elsewhere*." (Final Determination, para. 6.33)
	Cost of capital	Yes	"*As discussed in further detail in Appendix N, our approach to setting the cost of capital for Bristol Water is consistent with that adopted in our 2007 and 2008 reports covering Heathrow, Gatwick and Stansted airports. Differences may arise despite adopting a consistent approach because of the need to use case-specific and up-to-date data*." (Final Determination, para. 9.21)
	Abstraction charges	Yes	Regarding abstraction charges: "*Given that we could take into account the most recent available information in our redetermination, we found that that these charges are reasonably certain and for the reasons set out in paragraph 6.12, made an allowance of £2.4 million in total (an increase of £1.9*

			million over Ofwat's final determination amount), but that given the certainty around these costs, an NI is not appropriate." (Final Determination, para. 6.71)
	Adjustment to base opex	Yes	"*The remaining difference of view of £[ ] related solely to the Banwell Treatment Works/Blagdon DAF plant, where Bristol Water noted that Ofwat made its adjustment based on the difference between the level assumed at FD04 and actual base year costs. Bristol Water's forecast was based on the difference between actual 2009/10 costs and the actual base year costs, which it said was a more accurate assessment as the costs assumed at FD04 had proven to be inaccurate. We agreed that operating costs following completion of the quality schemes allowed for in PR04 should be increased as base year costs were unusually low. We based the allowance on the most recent figures available (as Bristol Water had done) and therefore the up-front allowance made should be for the full £[ ] difference rather than the £[ ] considered appropriate by Ofwat*." (Final Determination, paras. 6.79-6.80)
	Enhancement opex	Yes	"*With regard to operating costs, Ofwat suggested £[ ], Bristol Water £[ ], while Halcrow considered a range between £[ ] and £[ ] would be reasonable. Following consideration of the parties' submissions, and Halcrow's view, we decided that £[ ] was the appropriate operating cost. This amounted to an adjustment to base opex of £[ ] million over this review period (£[ ] million for meters included in FD09 and £[ ] million for the 5,818 extra meters for which we have allowed additional capex, in line with the latest actual figures for 2009/10 in Bristol Water's June Return)*." (Final Determination, para. 6.84)
Ofwat FD19	Modelled base costs	Yes	In order to form its view of modelled base costs Ofwat made a change from DD19: "*We include the newly reported 2018-19 data (from the annual performance reports) to our estimation of econometric models*." (SOC417 PR19 FD Securing Cost Efficiency Technical Appendix, Section 3.1.2, p. 17) In doing so Ofwat noted: "*In relation to the inclusion of the new 2018-19 data, we went through a quality assurance process of the 2018-19 annual performance report data and assessed the impact of the new data on the quality of our base econometric models. We find that the models remain robust and stable. Using the additional year of data makes the sample size larger and ensures we use the most recent historical information available. We therefore incorporate the 2018-19 data in our econometric models, increasing the sample size from seven to eight years of historical data*." (SOC417 PR19 FD Securing Cost Efficiency Technical Appendix, Section 3.1.4, p. 19)
	Catch-up efficiency challenge	Yes	"*Following changes to our data and modelling approach since draft determinations (e.g. the removal of non-section 185 diversions costs and the inclusion of the 2018- 19 data), the stringency of the historical upper quartile as a catch up efficiency challenge has reduced. ... In consideration of the process asymmetry, and given the evidence that the historical upper quartile does not provide a stringent catch up challenge to company forecasts of base costs, we consider that it is appropriate to strengthen the challenge for final determinations*." (SOC417 PR19 FD Securing Cost Efficiency Technical Appendix p.32-34)
	Enhancement opex	No	"*We consider our approach for final determinations in the light of an additional year of actual data reported to us (2018-19). We also consider the impact of using all company data in the calculation in response to some of the representations. Table 9 shows that if we were to use 2018-19 to calculate the proportion of enhancement opex, we would have deducted a larger implicit allowance compared to using 2017-18 data. In response to a representation, we also confirm that the proportion of enhancement opex would be higher if were to use all eleven wastewater companies' data (the*

			proportion is 0.457% in 2017-18 and 0.755% in 2018-19). … Company query responses confirm our concerns regarding data comparability for some companies. For this reason, we conclude that we should be cautious and continue to use the data from the five or six companies with the same clear and comprehensive basis of completing the data tables. Despite the representations that enhancement opex typically lags behind capex we still consider it appropriate to use 2017-18 as it is the mid-year of the five year period, rather than using 2018-19 or indeed any other calculation. … Overall, we consider we have adopted an appropriate approach to calculating the enhancement opex implicit allowance given the data available, and protects consumers from the risk of double funding enhancement opex within the price control" (SOC417 PR19 FD Securing Cost Efficiency Technical Appendix p.40-43)
	Business rates revaluations	No	"*We consider companies representation on our approach to revaluations. We acknowledge that draft rateable values were available in November 2019. However, since they are still draft, and without knowing the overall revaluation landscape and the effect on the multiplier set by central government, we do not have enough information to make an accurate reflection in our final determinations. … Nonetheless, after considering the arguments presented in the representations, we consider it appropriate to allow for a reconciliation mechanism in respect of business rates with greater protection for companies and customers against the uncertain outcomes of the revaluations*." (SOC417 PR19 FD Securing Cost Efficiency Technical Appendix, Section 3.2.7, p. 47)
	PC levels	Yes	"*Ofwat said that in setting PC levels, the baseline level of performance against which companies' proposed PC levels were assessed was based on companies' 2019-20 forecasts. These forecast levels were scrutinised against PR14 levels and actual performance, where applicable, to ensure they represented realistic performance baselines*." (PFs 2020, para. 2.98)
Ofwat FD14	Totex models	No	"*Following the draft determinations we also checked the robustness of our models and modelling results by re-estimating models using data that became available from companies for 2013-14. In general, the models proved to be reasonably robust, producing similar results when using the new data either to extend or update the panel and other data sets that were previously used. However, there were two main issues with unit cost enhancement models , as discussed below.* *Re-estimating the coefficients in the private sewers model revealed an error in the way the model had been implemented for the RBR and draft determinations in our wholesale cost modelling. We have both corrected for this error and extended the data set for 2013-14 as the model previously used only 18 months of data (other models typically use at least five years data). For ease of implementation these changes have been made through wholesale cost feeder model 11 using a new deep dive sheet (and companyspecific versions of this model are published alongside these final determinations).* *There were issues with the performance of the wastewater storage unit cost model revealed with the updated data set, but we were unable to develop a better modelling approach with the updated data. We therefore retained the earlier model using data to 2012-13 as the relevant input to the BCT for these final determinations, but where the model substantially under-estimates companies' own forecasts of spending in this area, we have then separately assessed whether the cost thresholds provide adequate funding for the related enhancement expenditure.* *We set out further details of the results of the work on re-estimating cost models in annex 1.*

			In addition, we have updated the projections of cost drivers (exogenous variables) used in conjunction with the supply/demand balance water unit cost enhancement model to reflect the latest information in final water resources management plans, where changes in final plans caused material changes in our cost thresholds. *Otherwise we have retained our approach to modelling and calculating BCTs used to inform the August draft determinations*." (SOC170 Ofwat FD14: A3 – Wholesale Water and Wastewater Costs and Revenues, p.25-26) "*We have decided not to update our wholesale water and wastewater cost models with the newly available outturn data for 2013-14, but to retain our original cost model specifications and data for these final determinations. The only exception is the private sewers unit cost model in wastewater, which we have decided to update. The impact of updating the private sewers model on our cost baselines is small, with a maximum impact of -£7.4 million for Severn Trent Water (the maximum impact in percentage terms out of the basic cost threshold is for Wessex Water at +0.8%).* *Our decision is based on the following main factors.* *1. The* ***relatively modest impact of the new data on our cost models suggests that our existing modelling suite is reasonably robust****, and we found no significant advantages in introducing wide ranging changes to our cost thresholds on the basis of the model re-runs. In particular our benchmarking assessment was complemented by provision for companies to submit special cost factor claims where they considered that our models did not fully reflect their efficient costs. Companies submitted such claims and made their representations in reference to our draft determination models and cost thresholds. We therefore consider that without compelling evidence that the new data improves our modelling forecasts it would not be appropriate to adopt new models.* *2. Both in water and wastewater the results, in terms of cost thresholds, were sensitive to the way the new data is added to our models. Specifically, when we added the new data to our existing dataset (the extended approach) cost thresholds have not moved much in water and increase in wastewater, but when we used the new data to 'refresh' our dataset (the shifted approach) cost thresholds tended to decrease in both water and wastewater. In the majority of cases our current cost thresholds lie in between the results of the extended and the shifted approach.* *3. We considered that* ***the assurance of the new data and the re-estimation results, given the timescale, were more limited than those we had previously adopted and that these factors militated against changing models in the absence of compelling evidence to do so****. Likewise, while the econometric models remained relatively stable with the addition of the new data, some movements in specific coefficients (see Part B below) warranted a more thorough investigation, without which we considered would not be prudent to adopt models based on the new data*." (SOC170 Ofwat FD14: A3 – Wholesale Water and Wastewater Costs and Revenues, Annex 1 Section AA1.5, p.56-57
Ofwat FD09	Opex allowances	Yes	"*Our final determination assumptions for operating expenditure start with each company's operating expenditure in 2008-09 as reported in their June returns*." Ofwat, 2014, Future water and sewerage charges 2010-15: Final determinations, p.96[35]

35 https://www.ofwat.gov.uk/wp-content/uploads/2015/11/det_pr09_finalfull.pdf

Ofwat FD09	Capex allowances	Yes	In its PR09 price review Ofwat used the 'Capital Incentive Scheme' (CIS) which represented a form of menu regulation. CIS 'baselines' were set following the receipt of Draft Business Plans in December 2008 using the best available information but baselines were updated at the Draft Determination (July 2009) and the Final Determination (November 2009). At each update Ofwat took account of new information including cost information to consider adjustments to the baselines.
RIIO-GD2 FD	Totex efficiency assessment regression	Yes	Ofgem's decision documents do not discuss the inclusion of the most up to date data as we assume it was not a matter of contention and it follows Ofgem's historical approach. At its FD, Ofgem incorporated an additional year of data (2019/20) which had been reported to it earlier in the year. We also note that the forecast data commences from 2021: "*while the forecast time trend t2 takes value 0 between 2014 and 2020,* ***value 1 in 2021*** *and increases by 1 afterwards*" (RIIO-GD2 Final Determinations: Step-by-Step Guide to Cost Assessment, para. 1.23).[36]
RIIO-ED1	Totex efficiency assessment regression	Yes	As above the document does not explicitly discuss the inclusion of the most up to date data but the regression models do use 2012-13 data which would have become available to Ofgem in the July prior to its FD. *"[T]he regression line is estimated using three years of historical data from 2010-11 to 2012-13*".[37]
RIIO-GD1	Totex efficiency assessment regression	Yes	The FD document acknowledges the inclusion of an additional year's data at the FD but there is not further discussion around it: "*using the additional year's data that became available in July 2012 (ie 2011-12) in our historical regression models*".[38]

Source: NWL analysis of CMA and various regulatory determinations

36 https://www.ofgem.gov.uk/system/files/docs/2020/12/final_determinations_technical_annexes_part_one.zip
37 Para 8.16 https://www.ofgem.gov.uk/ofgem-publications/85039/costassessmentmethdologyandresultsmasterv2pdf
38 Para 4.11: https://www.ofgem.gov.uk/ofgem-publications/48157/4-riiogd1fpcostefficiency.pdf