Reply to Ofwat's response to the CMA's provisional findings of 29 September 2020

16 November 2020

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1. Introduction

1.1.1 The CMA's provisional findings (**PFs**), together with the changes that Yorkshire Water Services (**YWS**) has proposed in its response thereto (**YWS's PFs Response**), are indisputably in the best interests of its customers and would deliver significant benefits for the environment and community in Yorkshire.

1.1.2 YWS is, of course, mindful of the increased pressure on its customers as a result of the COVID-19 pandemic, in particular following the recent tightening of lockdown measures. However, it remains the case that the PFs (together with the changes proposed in YWS's PFs Response) will deliver the package of investment and service improvement that its customers want in a way that achieves good value for money. This is achieved whilst also strengthening financial resilience against operational and economic shocks.

1.1.3 This conclusion has been fully endorsed by the Yorkshire Forum for Water Customers (the **Forum**), which has told YWS:

> *"Following extensive discussions with YWS the Forum supported the decision of YWS's to reject the final determination (FD) from Ofwat due to the likely harm it would cause to long term resilience and intergenerational fairness for customers.*
>
> *The Forum agreed that the risk the company was exposed to in Ofwat's FD was too great and would lead to unintended consequences such as a reduction in the planned resilience position of the company by 2025.*
>
> *As we stated in our response to the provisional findings, 'The CMA has made adjustments to Ofwat's allowed rate of return to reflect market evidence and best regulatory practice with a view to ensuring continued investment in the sector; and reduced, to some extent, the companies' exposure to financial risk to achieve what it considers to be the right balance between incentivising out-performance and ensuring that the companies can finance themselves and comply with all relevant statutory duties.'*
>
> *The Forum does not believe that this will cause harm to customers. YWS needs to attract responsible and long-term investment to enable it to continue to invest at a reasonable rate and address the many pressures facing it through climate change and population growth. The average bill presented by*

the CMA is well within the limits of what customers stated they would support for the service levels that the CMA is proposing that YWS should provide."

1.1.4 Ofwat's complaints about the PFs (contained within **Ofwat's PFs Response**),[1] and the alleged harm to customers that would flow from them, are far from persuasive. Indeed, contrary to the CMA's repeated exhortation that the parties should focus on new evidence and arguments rather than repeating old material, in the final analysis there is nothing new in Ofwat's position. In fact, Ofwat's submissions consist mostly of repeating or repackaging arguments it has deployed at great length in its prior submissions in these proceedings. Moreover, many of the things about which Ofwat complains are simply the reasonable exercise of judgment by the CMA on the evidence.

1.1.5 The primary example of this is Ofwat's alarmist suggestion that the PFs will lead to windfall gains to YWS and excessive dividends to its shareholders, with no assurance of benefits to customers, and the weakening of incentives to improve both performance and financial resilience. This is simply untrue. The PFs close only a proportion of the very significant cost gap compared to the YWS September 2018 business plan (the **Business Plan**) and Ofwat disregards YWS's track record on reinvestment for the benefit of its customers, and the Board-approved dividend policy, which is dependent on the delivery of customer commitments and subject to financial resilience testing. More broadly, Ofwat entirely overlooks the importance of the role that the allowed return plays in regulation and in attracting necessary investment.

1.1.6 Ofwat continues to present short-term arguments around a five-year review period, without setting any planning horizon, such as firm long-term goals for the water sector. In sharp contrast, YWS remains committed to achieving the stretching performance improvements

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[1] Ofwat's PFs Response is contained across four documents: Ofwat, 'Reference of the PR19 final determinations: Overview – response to CMA provisional findings', October 2020 (**Ofwat, PF's Response (Overview)**); Ofwat, 'Reference of the PR19 final determinations: Risk and return – response to CMA provisional findings', October 2020 (**Ofwat, PFs Response (Risk and Return)**); Ofwat, 'Reference of the PR19 final determinations: Cost and outcomes – response to CMA provisional findings', October 2020 (**Ofwat, PFs Response (Cost and Outcomes)**); Ofwat, 'Reference of the PR19 final determinations: Fundamental errors of approach – response to CMA provisional findings', October 2020 (**Ofwat, PFs Response (Fundamental errors of approach)**). Together, these are referred to as **Ofwat's PFs Response**.

contained in the PFs package and making the investment necessary to do so, with a view to increasing resilience and sustainability for future generations. This has been the case even prior to the start of the AMP7 period, as evidenced by the forward-looking investment of around £250m of outperformance towards reaching UQ performance on the common Performance Commitments. In short, Ofwat's allegations do not stand up to scrutiny.

1.1.7 If the CMA's PFs remain unchanged, the increased allowed return would create incentives to support further investment in AMP7, such as for the green recovery initiative – these incentives have also been enhanced by the CMA's removal of the gearing outperformance sharing mechanism (**GOSM**), which would have acted as an investment disincentive. The CMA has allowed in its PFs a limited amount of additional enhancement funding to address resilience; however, it is clear YWS faces increasing operational and financial challenges from climate change and growing demand, in addition to the provision of services to over 5 million people in the region. Creating a financeable (including investable) package is critical to tackling these challenges.

1.1.8 Ofwat has sought in the media to portray YWS's global investors as somehow a negative for customers in the Yorkshire region,[2] which YWS categorically denies. This line of unrestrained attack on "foreigners" is beneath the regulator, fundamentally at odds with the values of inclusivity and tolerance that YWS seeks to promote and contrary to the UK public interest. In any case, Ofwat cannot seriously be proposing that wholly UK sourced capital should fund the sector in the future, which suggests that Ofwat is simply using foreign ownership as a convenient and populist line of attack. Given the international nature of debt and equity markets, this will inevitably call into question the confidence that investors can have in the regulatory regime and inevitably lead to investors over time either seeking higher risk-premia or withholding capital, to the direct detriment of customers of all regulated utilities in the UK.

1.1.9 More generally, Ofwat has attempted to portray the CMA's process as somehow undermining its ability to regulate. With all due respect to the regulator, this claim strains the bounds of credibility. The CMA's role is plainly to serve as a check on regulatory overreach and, rather

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[2] The Times, 'CMA water bill ruling favours foreign owners, claims Ofwat', 28 October 2020 Wednesday 1:01 AM GMT, see https://www.thetimes.co.uk/edition/business/cma-water-bill-ruling-favours-foreign-owners-claims-ofwat-b2tw5dpg8.

than increasing uncertainty, as Ofwat claims, the PFs will in fact increase customer and investor confidence in the UK regulatory regime. It is entirely appropriate for the CMA to distinguish prior decisions if the evidence demands it, as it does in this case. Indeed, **the evidence supports the conclusion that the CMA has not gone far enough in the PFs**.

1.1.10 This final point is critical. Far from leading to the results claimed by Ofwat, the PFs represent a significantly challenging package, as demonstrated by the CMA's own financeability analysis and risk analysis conducted for YWS by Economic Insight.[3] These analyses respectively show that: (i) while YWS is financeable on a notional basis under the PFs, it would have limited headroom in a downside scenario; and (ii) the condition of YWS being investable for equity is only marginally satisfied, and there remains a considerable downside skew in YWS's risk position. Indeed, as explained in YWS's PFs Response, the CMA's financeability analysis is likely significantly to underestimate this downside skew.

1.1.11 Ofwat appears to miss the critical importance of robust financeability analysis in the context of the package as a whole. Indeed, it is inescapable that **any weakening of YWS's overall allowed revenues (and therefore cash flows and credit metrics) in the CMA's final determination would likely render YWS unfinanceable on a notional basis. Therefore, any downward adjustments in one area of the price control would require offsetting adjustments in another to maintain a balanced package that is financeable in the round**.

1.1.12 These are the two fundamental points that YWS would ask the CMA to bear in mind when considering its final determination, and Ofwat's lengthy submissions should not be allowed to obscure them. YWS is concerned that this is precisely what Ofwat will attempt to do during the time now created by the delay to the procedural timetable beyond the crucial December deadline, to which all parties had been consensually working throughout the process. As explained in YWS's recent correspondence, in order to protect its customers and wider stakeholders, it is imperative that YWS be able to send out year two bills that reflect the CMA's final determination in time for the new charges to apply from 1 April 2021.[4] **YWS therefore repeats its**

3 YWS, PFs Response, paragraphs 1.1.7-1.1.11.

4 Letter from Nevil Muncaster to Douglas Cooper, 10 November 2020.

request that the CMA concludes its review as soon as reasonably possible and in any case by Friday 22 January 2021, at the latest.

1.1.13 In view of the highly repetitious nature of Ofwat's submissions, and in line with the CMA's directions, YWS has adopted a targeted approach in this response, focussing only on those areas where Ofwat has presented what, at first blush, appear to be new arguments or evidence. However, as noted above, upon inspection, Ofwat's lengthy submissions are in fact simply a repackaging of old arguments and provide no basis for the CMA to move away from the PFs in the way that Ofwat suggests. YWS's silence on any given point in Ofwat's submissions, in the interests of brevity, should not be construed as agreement with that position.

1.1.14 The structure of the submission is as follows:

(a) **Section 2**: Financeability and allowed return.

(b) **Section 3**: Gearing sharing mechanism.

(c) **Section 4**: Costs.

(d) **Section 5**: Overall view on Ofwat's position on costs and outcomes.

(e) **Section 6**: WRFIM.

(f) **Section 7**: Procedural matters.

2. Financeability and allowed return

2.1 Introduction

2.1.1 Contrary to its statutory duties and regulatory precedent, Ofwat entirely overlooks the importance of the allowed return in a regulatory review and its role in attracting necessary investment. Instead, Ofwat appears to assume that increased allowed returns simply translate into higher returns for shareholders.

2.1.2 Consequently, Ofwat's PFs Response continues to demonstrate a failure to make the critical connection between allowed returns, incentives to invest and the financing duty, and the related need to consider the price control 'as a package'. Fundamentally, this error undermines Ofwat's assertions in its PFs Response on risk and return and the reasoning on which that submission is based.

2.1.3 In the section below, YWS sets out why:

(a) allowed return is central to achieving a balanced overall package (see section 2.2);

(b) Ofwat has not presented a fair characterisation of the CMA's approach to selecting a point estimate cost of capital value (see section 2.3);

(c) allowed return is the primary driver of financeability, and why Ofwat's proposals of alternative remedies are inappropriate and/or ineffective (see section 2.4);

(d) Ofwat's cross-checks do not provide any compelling reason to deviate from the PFs' position (see section 2.5);

(e) Ofwat's arguments on cost of debt do not require the CMA to make an adjustment to its cost of debt allowance (see section 2.6);

(f) Ofwat has presented no genuinely new evidence to support its arguments on the risk-free rate, TMR and beta (see section 2.7);

(g) any reasonable RoRE analysis demonstrates that the PFs represent a challenging package, skewed to the downside (see section 2.8); and

(h) Ofwat's comments on the stability and predictability of the regulatory regime are fallacious in the circumstances (see section 2.9).

2.1.4 This section is supported by the following materials:

(a) a detailed table which addresses some of the specific cost of capital points raised in Ofwat's PFs Response (see Annex A, below);[5] and

(b) supporting analysis for YWS's submissions on RoRE in section 2.8 (see Annex B, below).

2.1.5 YWS has reviewed the numerous points raised in Ofwat's PFs Response but has not identified any that would merit the CMA reconsidering its assessment of financeability and the allowed return. YWS remains of the view that the approach taken by the CMA remains robust and provides an appropriate framework for future price reviews.

2.2 Allowed return is central to achieving a balanced overall package

2.2.1 YWS makes the following points in this section:

(a) Ofwat overlooks the fundamental importance of the role of allowed returns in the price control package; and

(b) Ofwat is wrong to suggest that higher returns will have no impact on investment, for the benefit of customers, in the sector.

a. Ofwat overlooks the fundamental importance of the role of allowed returns in the price control package

2.2.2 One of the themes in Ofwat's PFs Response is that the level of return that the CMA has provisionally determined will amount to no more than a lump-sum transfer between bill payers and shareholders.[6]

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5 See Ofwat, PF's Response (Risk and Return).

6 For example, see Ofwat, PFs Response (Risk and Return), paragraph 1.4 on aiming up: "*We estimate that the approach* […] ***is unlikely to have any positive impact*** *on investment during this period or in the long term and* ***indeed may reduce investment***." (emphasis added). See also Ofwat Press Release, 'PN 16/20: Ofwat warns water customers could pay more and investors receive a windfall': "*[t]he CMA are proposing higher bills, but this is not focused on paying for better services or environmental protection.* ***Instead, this extra money could simply flow straight to investors***" (emphasis added); see https://www.ofwat.gov.uk/pn-16-20-ofwat-warns-water-customers-could-pay-more-and-investors-receive-a-windfall/. Ofwat's CEO also stated that the CMA is *"proposing* ***customers pay for investors to get a higher rate of return****. This won't pay for better services or environmental protection. But could simply flow straight into investors' pockets*" - available at 'Transcript: Video of Ofwat Chief Executive, Rachel Fletcher commenting on the CMA's Provisional Findings', see: https://www.ofwat.gov.uk/wp-content/uploads/2020/10/Transcript-Rachel-Fletcher-video-CMA-PFs.pdf.

2.2.3 This suggestion entirely disregards YWS's AMP6 track record on dividend retention, investment for greater future resilience for the benefit of its customers and the Board-approved dividend policy now in place,[7] which sets a base yield dependent on delivering customer commitments, with payments subject to financial resilience testing prior to Board approval.[8] YWS also consulted the Forum on the dividend policy prior to submission of the Business Plan.[9]

2.2.4 Ofwat is well aware of YWS's position on these matters and these continued unevidenced claims are unfounded and unjustified. YWS has worked very hard to develop and improve its financial resilience in AMP6 and intends to continue to do so in AMP7.[10]

2.2.5 More broadly, Ofwat's position disregards the important role that the allowed return plays in achieving a balanced and investable price control package, in the interests of both current and future customers. Ofwat's attempt to disregard the significance of the allowed return in this way is incompatible with:

(a) Ofwat's statutory duty to secure that companies are able to finance their activities (including by securing a reasonable return on capital);[11]

(b) the approach that Ofwat has taken to every price review it has conducted in the past 30 years; and

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7 See Exhibit 001 (YWS's Statement of Case (**SoC**)), YWS's Business Plan, page 110 *et seq*.

8 It is also worth noting that Ofwat has assessed YWS's dividends policy as meeting expectations. See Exhibit 051 to YWS's Response to Ofwat's Reply (dated 27 May 2020) (the **Response**), 'Ofwat, Reference of the PR19 final determinations: Risk and return – response to common issues in companies' statements of case', May 2020, Table 5.2.

9 See Forum, 'Minutes of Meeting', 16 August 2018, paragraphs 2(g) and (h), see https://www.yorkshirewater.com/media/2108/yorkshire-forum-for-water-customers-august-2018-minutes.pdf. Note that while the Forum does not formally approve the policy, any concerns on the policy would have been noted in these minutes and/or in Forum, 'PR19 assurance report', see https://www.yorkshirewater.com/media/2496/yorkshire-forum-for-water-customers-pr19-assurance-report.pdf. No concerns were raised in either.

10 This would include a review of YWS's capital structure and financing strategy for AMP7 and AMP8, as YWS did five years ago for AMP6 and AMP7. For further detail, see comments made by YWS at the Site Visit finance session and CMA Hearing with YWS, Transcript, 28 July 2020, pages 25-26.

11 Water Industry Act 1991, section 2(2A)(c).

(c) a common-sense approach to the way in which investors and potential investors in regulated industries consider and react to regulatory decisions on revenues and returns.

2.2.6 The notion that the allowed return does not matter when assessing a determination overall (because, allegedly, it only benefits shareholders) also contradicts Ofwat's recognition in its final determination (**FD**) that if allowed returns are set too low "*it could jeopardise the ability of efficiently run companies to raise finance on reasonable terms and so provide a high-quality service to customers*".[12]

2.2.7 The CMA has provisionally found that Ofwat's FD gave rise to inadequate returns and a risk package skewed to the downside, which means that an efficient firm would be unable to finance its functions. An inevitable harm that follows therefrom would be a serious constraint on YWS's ability to invest in resilience of the network and its customers not being protected from the risk of under-investment over the long term – a risk which has recently been recognised by the House of Commons Public Accounts Committee.[13]

2.2.8 The CMA, on the other hand, has considered financeability in terms of the 'package as a whole' (and not an exercise in adjusting the timing of cashflows). When viewed through this lens, an increase in the WACC is a wholly appropriate remedy, it being both: (i) central to financeability; and (ii) a material determinant of allowed revenues.

b. Ofwat is wrong to suggest that higher returns will have no impact on investment, for the benefit of customers, in the sector

2.2.9 Ofwat also maintains that an increase in returns will have no impact on investment in the sector, but its justifications are based on a number of flawed assumptions.

2.2.10 Ofwat wrongly assumes that YWS's levels of investment are determined by statutory and regulatory processes and cannot be affected by companies.[14] However, contrary to Ofwat's assertions,[15] YWS exercises a

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[12] Exhibit 016 (Response), Ofwat, 'PR19, final determinations, Overview of companies' final determinations', page 20.

[13] YWS, PFs Response, paragraph 2.2.1.

[14] Ofwat, PFs Response (Risk and Return), paragraphs 1.5, 3.6, 3.11. and 3.17. See also Williamson, 'Aiming up on the WACC and prices – the welfare and incentive impacts for the water industry', October 2020, pages 4 and 7.

[15] Ofwat, PFs Response (Risk and Return), paragraph 3.6.

high degree of autonomy in the decisions that it makes regarding investment. For example, YWS has previously outlined its decision to reinvest AMP6 outperformance payments in a number of areas – this includes:

(a) the extensive 'early start' programme whereby YWS initiated improvements in key areas such as internal sewer flooding and leakage in AMP6, going beyond the targets set in PR14, funded through outperformance, with customer and shareholder support;[16] and

(b) investment in other improvement works such as: on YWS's sludge treatment facilities (resulting in lower unit costs to treat sludge in future AMPs, thereby benefitting customers); at Knostrop and Calder Valley to improve sludge production unit rate cost; and in assets to improve health and safety for employees.

2.2.11 Altogether, these activities cost over £400m. None of these activities were necessary to meet YWS's AMP6 Performance Commitments or any other regulatory commitment. Rather, YWS, in consultation with the Forum, autonomously took decisions to improve its resilience because it was the right thing to do for customers and because YWS believed that the capital that it was willing to invest would be appropriately remunerated over the long term.

2.2.12 Moreover, for the investment which goes towards achieving water companies' regulatory commitments, the way in which this investment is deployed is critical to ensuring the value of the investment is optimised (an outcome which is typically of significant interest to investors). Indeed, Ofwat does not dictate how YWS invests to deliver outcomes; YWS respectfully submits that it has neither the skill nor the experience that exists within water companies to do so.

2.2.13 Ofwat - supported by a PwC report - claims that historically higher returns are not correlated with more investment, or with increased welfare for consumers. Not only is this counterintuitive since one would expect 'more' investment when the WACC is higher[17] because the sector would be more attractive to investors, but also, PwC's historic analysis contains serious methodological limitations (see Annex A).

[16] See YWS, SoC, paragraphs 92-93.

[17] For a given balance of risk.

2.2.14 In addition, Ofwat suggests there is no lack of demand to invest in the sector,[18] but this is not properly substantiated and contradicts YWS's experience. For example, YWS is not aware of any equity transactions in any private UK water company since April 2018 – this conclusion is supported by data presented in Ofwat's PFs Response.[19] As Liz Barber has explained, the risk and return imbalance in PR19 "*has made us less attractive to both fixed income and equity investors*."[20] [CONFIDENTIAL]

2.2.15 The assumption that there is no relationship between investment and returns is therefore fallacious (and directly contradicted by data presented by YWS in Annex A). A higher allowed return will result in greater assurance on financeability, allowing YWS to invest with confidence in the optimal manner for the long-term.

2.2.16 It is not surprising that YWS's sentiments are supported by third parties in this process, who also recognise that higher levels of investor interest are critical to the current and future success of the sector.[21]

2.3 Ofwat has not presented a fair characterisation of the CMA's approach to selecting a point estimate cost of capital value

2.3.1 Although Ofwat devotes a significant amount of its PFs Response to arguments against 'aiming up' in the assessment of the cost of equity, this is not a fair characterisation of the CMA's approach. Indeed, Ofwat's approach betrays a partial and erroneous reading of the way in which the CMA arrived at its point cost of equity estimate.

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[18] Ofwat, PFs Response (Risk and Return), paragraph 1.5. See also PwC, 'Review of the relationship between financing and water company performance', October 2020, page 29.

[19] See Ofwat, PFs Response (Risk and Return), Figure 3.1.

[20] YWS, CMA Main Hearing transcript, 28 July 2020, page 9, lines 21-22.

[21] For example, the **Forum** summarised the importance of attracting investment when it stated to YWS that "*YWS needs to attract responsible and long-term investment to enable it to continue to invest at a reasonable rate and address the many pressures facing it through climate change and population growth.*" See also responses submitted to the CMA's PFs from third parties including, among others, **Water UK** ("*We do though reiterate our support for the recognition in the provisional findings of the importance of ensuring that the sector is seen as an investable proposition*" (page 3)); **GIIA** ("*The risk of regulatory settlements making UK utilities an un-investable proposition runs contrary to the government's wider strategic policy agenda, as echoed by the Chancellor of the Exchequer at Conservative Party Conference 2020 where he said '...returns need to be set at a level that incentivises investment...particularly at a time when we need to do quite a lot of upgrading of our network and infrastructure*" (page 2)); also see **Energy Networks Association** (paragraph 2.7); **National Grid** (paragraph 1.3).

2.3.2 First, YWS notes that 15 basis points of the so-called 'aiming up' was a straight offset against an expected 10-20 basis points loss of equity return that the CMA found that an efficient company would expect to suffer due to the asymmetric design of Ofwat's ODIs. Strictly speaking, in YWS's view, this offset should not have been presented as a factor that influenced the selection of point estimate risk-free rate, TMR and beta values; rather, it would have been more natural to have identified it as a stand-alone line item within the required return outside of the CAPM calculations.

2.3.3 Second, and contrary to Ofwat's approach, the parameter ranges in the PFs were not calculated or presented as probabilistic distributions. Instead, both the low ends and the high ends of the CMA's ranges came from a series of judgments on the part of the CMA about plausible lower bound and higher bound values. Ofwat is wrong therefore to talk, in an overly scientific way about 'standard deviations' and 'percentiles'. Instead, as YWS set out in its PFs Response, YWS considers that there is good reason to place qualitative weight on higher-than-midpoint values.[22]

2.3.4 Third, to the extent that there was any residual 'aiming up' in the CMA's arithmetic, this was explained very clearly in the PFs to be a function of the CMA's analysis for financeability purposes of key credit metrics and the CMA's perfectly correct observation that the allowed rate of return should naturally give companies financial ratios that are consistent with the Baa1/BBB+ credit rating that Ofwat has assumed throughout its WACC calculation.

2.3.5 Finally, any conclusions about 'aiming up' (or otherwise) ought to recognise that the CMA's treatment of inflation makes it impossible for companies to recover their full nominal cost of capital during the AMP7 period. As YWS explained in its PFs Response, the CMA's WACC calculations contain an over-sized allowance for RCV inflation indexation, and therefore mis-state the required in-year real rate of return.[23]

2.3.6 Putting all of these things together, it becomes hard to discern any reason why a company would reasonably expect to earn a return in excess of its cost of capital under the CMA's PFs. As such, YWS

[22] YWS, PFs Response, paragraphs 3.3.13 *et seq* and Table 1.

[23] YWS, PFs Response, paragraphs 3.3.3-3.3.8.

considers that the concerns that Ofwat has expressed about 'aiming up' are fundamentally misplaced.[24]

2.3.7 It may be that the CMA wants to reflect further on the misconceptions that there have been in this area as it formulates its final determination and consider alternative ways of presenting its allowed return calculation that do not create a mistaken impression that the allowed return is purely an "aimed up" value.

2.4 Allowed return is the primary driver of financeability and Ofwat's proposals of alternative remedies are inappropriate and/or ineffective

2.4.1 YWS welcomes the CMA's recognition that the WACC is the primary factor in ensuring that an efficient firm can finance its functions[25] and disagrees with Ofwat's attempts to suggest that there are better ways to address a risk-return imbalance. This is particularly pertinent where, as was the case with the FDs, the overall allowed revenues (and cash flows) were insufficient to meet the financing duty.

2.4.2 Ofwat underplayed the link between return and financeability throughout the PR19 process and appears to be encouraging a similar approach in its PFs Response. YWS urges the CMA not to dilute the clarity of analysis it has showed on this matter in its PFs.

2.4.3 YWS strongly supports the CMA's financeability assessment, which provides an important underpinning for its PFs, including: the CMA's adherence to rating methodologies; its recognition that "*the WACC is the main driver of expected financial ratios*"; and that "*if the WACC is set too low, notionally geared companies would not be able to retain strong investment-grade credit ratings*".[26]

2.4.4 Ofwat's PFs Response identifies a number of interventions that Ofwat claims constitute alternative remedies for the financeability issues that a low WACC would create.[27] However, these remedies are all inferior to the approach that the CMA has taken in the PFs, either because they (i)

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[24] See also the Energy Networks Association's comments in its PFs Response, page 4, that "*the CMA has not, in fact, aimed up in the way that it describes*" given that the cost of equity range is significantly skewed downwards and the CMA's erroneous selection of the bottom of its cost of debt range.

[25] CMA, PFs, paragraph 10.58.

[26] CMA, PFs, paragraph 3.2.3.

[27] Ofwat, PFs Response (Risk and Return), paragraphs 3.15 and 3.73-3.82.

have been explicitly rejected by the ratings agencies (in the case of accelerated revenues), (ii) impose wider costs not acknowledged by Ofwat (in the case of CPIH transition), (iii) create a wholly unrealistic characterisation of the notionally efficient company (in the case of alternative assumptions about gearing and index-linked debt).

2.4.5 The CMA considered and rejected all these ideas before publishing its PFs; in YWS's view, nothing in Ofwat's PFs Response should give the CMA reason to alter its PFs.

2.5 Ofwat's cross-checks do not provide any compelling reason to deviate from the PFs position

2.5.1 There is also nothing new in section 2 of Ofwat's PFs Response, where it expends considerable energy advocating for various supplementary cross-checks, nor anything which should concern the CMA. YWS provides a detailed rebuttal of Ofwat's position in the table at Annex A. As an overarching comment, however, Ofwat's approach of relying heavily on comparators is not appropriate where they cannot bear the weight Ofwat is trying to give them (such as the NATS appeal or evidence from listed energy companies, which are determined by a myriad of factors not limited to issues under consideration in this determination). Nor is it appropriate to cherry pick evidence from the water sector where such evidence is not representative of the sector as a whole (such as using examples from three water companies as "*proof*" that there is no need to aim up to incentivise investment).[28]

2.5.2 Furthermore, Ofwat has failed to prioritise the most important cross-check: the financial metrics analysis. Ofwat has stated in its PFs Response that *"[a] financeability assessment is a test only of cashflows. It should not be confused with a test whether (sic) the allowed return (or the components of it) is reasonable"*.[29] First, Ofwat's insistence in the separation of these two concepts is flawed given the prominent role that allowed returns play in determining the financeability metrics of a company. Second, it is not appropriate to side-line the financeability assessment as a test 'only' of cashflows as if this is unimportant when this is clearly not the case given the critical role that such metrics play in, for example, raising finance on reasonable terms.

2.5.3 YWS reiterates that the financeability analysis demonstrates that the package as a whole remains highly challenging (including leaving YWS

[28] Ofwat, PFs Response (Risk and Return), paragraph 2.19.

[29] Ofwat, PFs Response, (Risk and Return), paragraph 2.4.

with limited headroom in a downside scenario). Despite this, YWS agrees with the CMA's reasoned approach to cross-checking its financeability assessment in this manner and would suggest that Ofwat's proposed cross-checks provide no compelling reason for the CMA to move away from its PFs.

2.6 Ofwat's arguments do not require the CMA to make an adjustment to its cost of debt allowance

2.6.1 Ofwat claims there are errors in the CMA's approach to cost of debt which, if corrected, would result in a lower cost of debt allowance.[30] In this section, YWS comments on:

(a) the cross-check to actual industry interest costs; and

(b) Ofwat's analysis of the 'outperformance wedge'.

a. Carrying out cross-checks against actual industry debt demonstrates no need to reduce the cost of embedded debt

2.6.2 The CMA has chosen within its PFs to adopt a notional approach in determining the cost of embedded debt as opposed to an "actual" approach. YWS agrees with the CMA that there are "*significant difficulties and complications with using actual debt costs to arrive at an estimate of the cost of embedded debt*",[31] and that these difficulties can only be resolved with input and assistance from each reporting company. Therefore, undertaking a cross check on a sector-wide basis is not as simple as Ofwat seeks to portray.

2.6.3 In addition, placing too much reliance on a detailed analysis of actual sector debt would inappropriately shift the emphasis of the analysis towards an actual basis rather than a notional basis. If actual data is to be used more prominently, then – as explained in all of YWS's previous submissions[32] – it would be more appropriate to consider the embedded debt cost on a company specific, rather than sector-wide, basis (which indicated an embedded debt cost for YWS of 4.93% in nominal terms).[33]

[30] Ofwat, PFs Response (Risk and Return), paragraphs 4.6-4.38.

[31] CMA, PFs, paragraph 9.340.

[32] YWS, SoC, paragraph 2.32; YWS, Response, section 7.5 and Annex 1, pages 4-5; YWS, PFs Response, paragraph 3.3.10 and page 30.

[33] YWS, SoC, paragraph 229.

2.6.4 In its PFs Response, Ofwat draws attention to the average interest rates that companies reported in their 2019/20 Annual Performance Reports (**APRs**) for the year ending March 2020. The APRs are prepared in accordance with Ofwat's guidelines for reporting and accounting, which are not necessarily appropriate for assessing the notional cost of embedded debt. From its own experience, YWS considers that these figures must be adjusted for at least the following factors:

(a) the difference between effective yields at issue and coupons (for example, YWS issued a £350m bond in April 2019 with a coupon of 2.75% and the yield at issue was 2.88%); and

(b) the full impact of the difference in inflation assumptions between those used in the APR and the CMA's assumptions.[34]

2.6.5 In addition, in relation to the CMA's proposed WACC line item for 'issuance and liquidity costs', YWS understands that the CMA's intention is that all costs that arise from holding cash and from short-term lending facilities should be covered by this line item (which was set at 10 basis points in the CMA's PFs). It follows that the CMA would need to simultaneously exclude all such items from any calculation that it wishes to make on the cost of embedded debt. This would result in an upward adjustment of YWS's 4.93% figure to 5.13% according to YWS calculations, and similar adjustments to the figures reported by most other companies.

2.6.6 A review by YWS of the 2019/20 APR data presented by Ofwat shows a particular issue with a number of companies holding atypical amounts of cash or short-term deposits as at 31 March 2020 – for example:

(a) YWS was holding £248m of cash at March 2020, whereas historically YWS has maintained a minimal cash balance. This cash was raised in late 2019 to provide additional liquidity into early 2020 and was maintained when COVID-19 emerged and escalated;

(b) Anglian Water drew down £600m of working capital to provide a short-term liquidity buffer in light of the ongoing COVID-19 uncertainty;[35]

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[34] Adjusting for inflation is more complicated than Ofwat's analysis seeks to portray. This is illustrated by the fact that Ofwat has understated YWS's inflation-adjusted cost of debt. Figure 4.1 in Ofwat's PFs Response (Risk and Return) shows YWS's inflation adjusted cost of debt as being below the CMA's estimate of 4.81%; however the correct inflation consistent figure is 4.84%, as calculated by YWS.

(c) Thames Water reported cash and short-term deposits of £1,058m at March 2020 in comparison to £162m at the prior year end;[36] and

(d) United Utilities and Welsh Water were both carrying significantly higher (over £160m) cash balances at March 2020 in comparison to the prior year.[37]

2.6.7 YWS does not have the company specific data needed to calculate the sector-wide impact on the 2019/20 APR cost of debt of the atypically high short-term liquidity and Retained Cash Flow (**RCF**) balances held at that point in time. However, YWS notes that the cash balances held at that time (which is publicly available information) represent a reasonable proxy for the scale of industry liquidity/credit facilities, enabling an estimate of the sector-wide impact to be calculated. If the APR cost of debt data is adjusted to be calculated on a net debt basis rather than a gross debt basis, the reported cost of debt would increase by c.30bp to c.4.8%, which is broadly consistent with the CMA's estimate of 4.81%.

2.6.8 Further evidence of the atypical nature of 2019/20 APR cost of debt data can be seen by looking back at APR data across the two previous years. Once adjusted for inflation, the reported cost of debt for the sector was c.5.0% and c.4.9% in 2018 and 2019 respectively. Based on past trends, it would be reasonable to assume a continuing small decline in 2020 to c.4.8% as existing debt is refinanced; not the significant decline reported by Ofwat, which is clearly due to atypical issues at that point in time.

b. It is inaccurate to suggest that companies are able to issue debt at a discount to iBoxx benchmarks

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35 Anglian Water Group Limited: Annual report and consolidated financial statements for the year ended 31 March 2020, page 61, see https://www.awg.com/siteassets/reports/awgl-2020-annual-report-accounts.pdf.

36 Thames Water Annual Report 2020, page 139, see https://www.thameswater.co.uk/about-us/investors/our-results

37 United Utilities Group PLC: Annual Report and Financial Statements for the year ended 31 March 2020, page 202, see http://unitedutilities.annualreport2020.com/site-essentials/downloads/annual-report-2020, and Glas Cymru: Annual Report and Accounts 2019-2020, page 168, see https://corporate.dwrcymru.com/en/library/group-annual-report-and-accounts/glas-cymru-cyfyngedig.

2.6.9 Ofwat takes issue with the analysis produced by KPMG[38] and claims that companies have been (and are) able to issue debt at a discount to iBoxx benchmarks even after rating and tenor are taken into account.[39]

2.6.10 YWS has reviewed the Excel file that Ofwat submitted to the CMA on 30 October 2020. It is striking that Ofwat makes no attempt in its analysis to control for differences between the tenor of water company bonds and the tenor of bonds in the iBoxx 10+ year maturity indices i.e. Ofwat simply offers a crude comparison of coupon versus the yield on the regular iBoxx 10+ year maturity index, whereas the value of KPMG's work lay in the way in which KPMG was able to benchmark coupons to the yields on an iBoxx index with an equivalent tenor.

2.6.11 YWS does not understand what Ofwat hopes to achieve by pointing out that water company bonds with a tenor shorter than 20 years offer a lower yield than the yield on the iBoxx 10+ year maturity index. This is a fact that the CMA was clearly cognisant of when it prepared its PFs. KPMG found that the differential largely disappears when one benchmarks on a fully like-for-like basis,[40] and Ofwat has provided the CMA with no new information on this point. Accordingly, YWS's position is that Ofwat has given the CMA no reason to reopen its finding that "*we do not see evidence for an outperformance wedge once tenor and credit rating are accounted for*".[41]

2.7 Ofwat has presented no genuinely new evidence to support its arguments on the risk-free rate, TMR and beta

2.7.1 It is notable that Ofwat's PFs Response (including the multiple risk and return annexes) features no genuinely new arguments or evidence on the three main cost of equity parameters.

2.7.2 Ofwat urges the CMA to come to different ranges/values for the risk-free rate, TMR and beta without providing any reasoning not already seen in the comprehensive body of literature that the CMA reviewed before issuing its PFs. Accordingly, YWS considers that Ofwat has given the CMA no reason to adjust the three key findings that ultimately led

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38 KPMG produced analysis for Anglian and Northumbrian – see Ofwat, PFs Response (Risk and Return), paragraph 4.28.

39 Ofwat, PFs Response (Risk and Return), paragraphs 1.17 and 4.27 *et seq.*

40 CMA, PFs, paragraph 9.349.

41 CMA, PFs, paragraph 9.366.

the CMA to provide for a higher risk-free rate, TMR and beta than Ofwat allowed for in its FD, i.e.:

(a) risk-free rate: the finding that a zero beta equity investment will yield a return that sits above currently available returns on index-linked gilts;

(b) TMR: the finding that the Ofwat/UKRN estimates of CPI-stripped historical returns are not strong enough to bear the weight that Ofwat had ascribed to them due to questions over the accuracy of back cast estimates of CPI inflation; and

(c) beta: the finding that spot estimates of beta are not statistically reliable and should be supplanted by beta estimates that use a longer, 5- to 10-year run of share price data.

2.7.3 In all three cases, the PFs are clear as to why it was necessary to position the CAPM parameters above the values favoured by Ofwat. The points now being made by Ofwat are designed to obscure and overwrite the concrete conclusions on methodological principles that the CMA has reached at the end of a carefully considered cost of capital assessment.

2.7.4 For completeness, the table in Annex A sets out a more detailed rebuttal of points included by Ofwat in its latest submissions, including where these submissions have already been addressed.

2.8 Contrary to Ofwat's suggestions, any reasonable RoRE analysis demonstrates that the PFs represent a challenging package, skewed to the downside

2.8.1 YWS refutes Ofwat's position that: (i) there is not an asymmetric downside skew in returns under the PFs, once all incentives are taken into account; (ii) the CMA is mistaken in its view that the ODI package is asymmetrically skewed to the downside; and (iii) that even if there were a downside skew, an increase in the WACC is not the appropriate remedy.[42]

2.8.2 Annex B addresses RoRE risk skew and its implications for the WACC in more detail, but in summary:

(a) It is appropriate to set a higher upfront return in order to compensate investors for any downwards skew in expected out-turn returns. This point of principle is well established in finance

[42] Ofwat, PFs Response (Risk and Return), paragraphs 3.15 and 3.40-3.62.

literature and is consistent with the CMA's position and Ofwat's previous statements during the development of its PR19 methodology.[43]

(b) It is untenable for Ofwat to suggest that expected returns are not asymmetrically skewed to the downside under either its FD or the CMA's PFs:

(i) A proper analysis of the 'broader incentives' (as called for by Ofwat) strongly points to an overall downside risk skew. For example, there is no evidence of historical outperformance,[44] yet the FD (and the CMA's PFs) represent a 'toughening' of the regulatory settlement across the board (which intuitively therefore suggests a downside skew exists). Forward-looking risk modelling confirms this conclusion.

(ii) In relation to ODIs, the CMA's reported downside skew of -0.1% to -0.2% will be understated, due to the omission of performance risk.[45] YWS flatly rejects Ofwat's suggestion that performance risk is upwards skewed, which is further contradicted by the ratings agencies' assessments.[46]

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[43] For example, Ofwat, 'A consultation on the outcomes framework for PR19: Appendix 2 – More powerful outcomes delivery incentives', 2016, in which Ofwat itself made the point that if returns were skewed to the upside, there was an argument for aiming down on the WACC: *"[b]y providing investors with more upside risk from ODI rewards, for stretching levels of outperformance, we can set a lower cost of capital for companies than would otherwise be the case",* page 29. Therefore, Ofwat itself accepts that skewness must be taken into account in the WACC, and naturally it would follow that this approach to skewness should be applicable in both directions. See https://www.ofwat.gov.uk/wp-content/uploads/2016/11/Outcomes-framework-consulation-appendix-2-1.pdf.

[44] Annex 06 (SoC), Economic Insight: 'Follow-on report on top-down financeability of the notionally efficient firm: top-down analysis', March 2020.

[45] YWS, PFs Response, paragraph 2.4.10.

[46] For example, in May 2020, Moody's confirmed a negative outlook for the sector, which included an expectation of material ODI penalties of up to £350m, see Smart Water Magazine, 14 May, 2020, 'UK water sector outlook remains negative as price review leads to unprecedented number of appeals', see https://smartwatermagazine.com/news/moodys/uk-water-sector-outlook-remains-negative-price-review-leads-unprecedented-number-appeals.

2.9 The stability and predictability of the regulatory regime

2.9.1 As a final comment, YWS is concerned about Ofwat's suggestion that the CMA errs in its PFs because it is seen to depart from conclusions reached by regulators in other price reviews.[47]

2.9.2 The nature of the appeals process in the UK's regulated industries affords the CMA the opportunity to opine on prevailing regulatory orthodoxy at irregular intervals. The last clean-sheet review of the cost of capital was completed[48] more than six years ago during the 2014 NIE inquiry. It is unsurprising that new evidence will have emerged since this time that might cause a new panel to take different views from its predecessors and that those views might differ from the positions taken by economic regulators in their recent work.

2.9.3 Investors, consumers and other stakeholders all understand perfectly well that this redetermination is an opportunity to sense-check the significant changes the regulators have made to cost of capital calculations during the last 2-3 years, as part of the checks and balances that exist within the UK regulatory regime. It is inappropriate to decry the CMA's findings on the grounds that they show an evolution in the CMA's thinking or that they contain divergences from Ofwat's approach and conclusions.

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[47] See Ofwat, PFs Response (Fundamental errors of approach), paragraphs 1.18 *et seq*.

[48] Ofwat and others make references in their responses to the CMA's recent NATS inquiry. As stated in YWS's PFs Response (see para 3.4.8), YWS's reading of the CMA's decision document is that the CMA was very clear that it chose not to complete its work in this inquiry due to the COVID-19 pandemic, including by not responding to representations that stakeholders made in response to its March 2020 provisional findings consultation. Accordingly, it is wrong to read anything into any differences that there might be between the PR19 PFs and the views that the CMA expressed six months earlier at an earlier, unfinished stage in its analysis.

3. Gearing sharing mechanism

3.1.1 YWS supports the CMA's decision to omit Ofwat's GOSM in light of well-documented deficiencies with the mechanism and a lack of supporting evidence.[49]

3.1.2 YWS does not consider that its financing arrangements impose any additional risk on customers given the protections in the whole-business securitisation and existing regulatory obligations.[50] For its part, Ofwat has failed to produce any new evidence to justify the GOSM, instead repeating the same arguments it has put forward before.

3.1.3 In its PFs Response, Ofwat claims that, if the CMA disagrees with the design of the GOSM, it would be "*more appropriate*" for the CMA to either substitute a different mechanism or amend the existing mechanism, "*rather than leave the concern unaddressed.*"[51] Ofwat also claims the CMA "*proposes no remedy*" to address potential concerns regarding financial resilience, and that it does not understand how this is consistent with the fact that "*the CMA is obliged to take the regulatory framework as it finds it.*"[52] YWS disagrees with these statements.

3.1.4 First, Ofwat now rebrands the decision not to implement the GOSM as leaving a "*gap in the regulatory framework*".[53] YWS notes that the GOSM was conceived as a way for customers to share in the benefits that Ofwat considered that companies achieved from higher gearing.[54] Given that the CMA has found that the financial benefit that Ofwat was claiming does not exist,[55] it follows that the removal of the GOSM cannot be said to leave any sort of 'gap'.

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[49] CMA, PFs, paragraph 9.628. YWS also notes that several third parties agreed with the CMA's omission of the GOSM in their responses to the PFs with many noting the lack of evidence to justify its implementation – for example, see submissions from **Water UK** (page 3); **Thames Water** (page 5); **South East Water** (page 11-12); **Energy Networks Association** (paragraph 11.2); **National Grid** (paragraph 1.6); and **GIIA** (page 3).

[50] YWS PFs Response, paragraph 4.4.3.

[51] Ofwat, PFs Response (Risk and Return), paragraph 7.7.

[52] Ofwat, PFs Response (Risk and Return), paragraph 7.8.

[53] Ofwat, PFs Response (Risk and Return), paragraph 1.28.

[54] Exhibit 012 (Response), Ofwat, 'Putting the Sector Back in Balance: position statement on PR19 Business Plans', July 2018, page 37.

[55] CMA, PFs, paragraph 9.627.

3.1.5 Second, as the CMA has recognised, there are other, better methods by which Ofwat has been able to and, is still able to, address potential concerns, about company financing arrangements. In particular, "*we note that there are a range of regulatory protections already explicit within the licence conditions*."[56] Ofwat itself also noted that the regulatory ring-fence "*provides an important protection for companies and their customers*",[57] which Ofwat has advanced most recently on 13 July 2020 by introducing new licence conditions to "*further tighten the regulatory ringfence*" to all company licences (with the exception of Wessex Water).[58]

3.1.6 Existing mechanisms which limit the potential for any risk transfer, such as regulatory ring-fencing, were also recognised by the National Audit Office in their review of the water sector and provides further evidence to support the finding that there are sufficient existing protections already in place.[59]

3.1.7 Taking these two points together, Ofwat's position, having failed to persuade the CMA of the merits of a GOSM adjustment to allowed revenues, that it is now incumbent on the CMA to review the whole of the regulatory framework around company financing inappropriately seeks to push the CMA beyond the bounds of the specific questions for redetermination in this reference.

3.1.8 In deciding not to include a GOSM in its PFs,[60] the CMA has discharged its responsibility in this reference to make a determination under Condition B of the licence.[61] There is no additional obligation upon the CMA to consider and potentially redesign the wider regulatory framework under which companies operate. If Ofwat wants to introduce

[56] CMA, PFs, paragraph 9.588.

[57] Ofwat, Conclusions on section 13 of the WIA91 on proposed modification to ringfencing provisions, 14 July 2020, page 1, see https://www.ofwat.gov.uk/wp-content/uploads/2020/05/Conclusions-on-section-13-of-ring-fencing.pdf.

[58] Exhibit 051 (Response), Ofwat, 'Reference of the PR19 final determinations: Risk and return – response to common issues in companies' statements of case', May 2020, paragraph 5.20.

[59] See Annex 002 (Response), Economic Insight, 'An evidence based approach to Ofwat's Gearing Outperformance Sharing Mechanism', particularly paragraph 5.2.1.

[60] CMA, PFs, paragraph 9.629.

[61] See Condition B, Part V (References to the Competition and Markets Authority), paragraph 16.2 of YWS's licence, see https://www.ofwat.gov.uk/wp-content/uploads/2015/10/lic_lic_yky.pdf.

a new mechanism in the future, it must start by explaining why the existing apparatus are not sufficient and carry out a full impact assessment in order to ensure that any such mechanism is necessary, proportionate and targeted, in line with the principles of better regulation.[62]

62 Under s.2(4) of the Water Industry Act 1991, Ofwat shall have regard to the principles of best regulatory practice (see YWS, SoC, paragraph 54). Regulatory best practice concerning the adoption of regulatory decisions is outlined in Department for Business, Energy and Industrial Strategy, 'Better Regulation Framework', see Part 1, particularly 'Impact Assessment' at section 1.2.

4. Costs

4.1 Introduction

4.1.1 This section of YWS's response addresses Ofwat's position on costs in the following areas:

(a) Base costs: frontier shift, growth costs, business rates, and IED.[63]

(b) Enhancement costs: wastewater models, reputational incentive for P-removal spend, and Hull.

(c) Cost sharing rates.

(d) Use of 2019/2020 data in the CMA's cost modelling.

4.2 Base costs

Frontier shift

4.2.1 Ofwat states that there is evidence to support a higher frontier shift target than the 1% currently used by the CMA.[64] In particular, Ofwat notes that:[65] (i) the recent productivity slowdown does not have an impact on the water sector and some weight should be placed on earlier economic cycles, especially the longer 1980-2007 period; (ii) there is potential for additional gains from the totex and outcomes framework; (iii) adjusting for embodied technical change may justify an uplift as high as 140%; and (iv) value added measures imply materially higher productivity growth than gross output measures. Ofwat has not provided new empirical evidence to justify its assertions on (i)[66] and

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[63] It should be noted in particular that, in the interests of brevity, YWS does not address Ofwat's submissions on the CMA's omission of the SWC1 model. However, this is considered in Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, section 2.3.

[64] Ofwat, PFs Response (Cost and Outcomes), Table 2.1, page 17-19.

[65] Ofwat arguments are based on a new report from Europe Economics. See Europe Economics, 'Additional Evidence on Some Points Relating to Frontier Shift', 22 October 2020.

[66] A more recent time period covering 1999–2014 or 1996–2014 would provide a more appropriate reflection of the AMP7 period, with the latter covering a full business cycle. Moreover, Ofwat's assessment does not properly take into account forward-looking uncertainties, especially in relation to the impact of the COVID-19 pandemic and the exit of the UK from the EU. See Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, section 3.1.

(ii),[67] which YWS has already addressed in past submissions.[68] YWS addresses (iii) and (iv) in turn below.

4.2.2 Regarding the embodied technical change adjustment, Europe Economics relies on an article by Sakellaris and Wilson (2004) which is subject to similar fundamental critiques as those raised in YWS's previous submissions,[69] and, as noted by the authors, the magnitude of the estimated impact is sensitive to the industries selected in the analysis. In particular, Europe Economics continues to focus on isolated academic evidence that relies on old datasets of manufacturing companies from a different country; in this case, a journal article that solely considers the US manufacturing sector and relies on data that is 25 years old (1972-1996).[70] As noted in previous submissions, the need for an adjustment for embodied technical change cannot be hypothesised to be positive and significant by combining evidence from isolated academic papers, as done by Europe Economics so far.

4.2.3 In contrast, any adjustment (positive or negative) should be supported by robust quantitative evidence that is directly applicable to the case at hand. This could be achieved, for example, by Europe Economics undertaking primary analysis on the EU KLEMS dataset and focussing on the comparator sectors and time period that are relevant for UK

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[67] The limitations in the Ofwat/KPMG approach to assessing the potential for further efficiency gains from the totex and outcomes framework were outlined in YWS's past submissions and were also recognised by the CMA. The additional arguments presented by Europe Economics in this area are not supported by any new evidence and therefore remain inappropriate to support any uplift. See Annex 11 (Response) Oxera, 'Addressing Ofwat's Response to Yorkshire Water Services' Statement of Case', 26 May 2020, section 4.4.

[68] Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, section 3.1; and Annex 11 (Response), Oxera, 'Addressing Ofwat's Response to Yorkshire Water Services' Statement of Case', 26 May 2020, section 4.4.

[69] For example, see Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, section 3.3; and Annex 11 (Response), Oxera, 'Addressing Ofwat's Response to Yorkshire Water Services' Statement of Case', 26 May 2020, section 4.3.

[70] This period overlooks the last 25 years, which have been characterised by a significant slowdown in productivity. Moreover, the analysis is based on a sample of heterogenous firms from different manufacturing sectors in the US. Such heterogeneity can and indeed does have an impact on the final results. As noted by the authors, for example, omitting firms from the 'computer industry' sector from the assessment, reduces the estimate from 12% to 7%, even before considering the uncertainties underpinning these estimates. See Europe Economics, 'Additional Evidence on Some Points Relating to Frontier Shift', 22 October 2020, section 4.1.

water companies. Recent empirical work undertaken by the consultants to the Netherlands Authority for Consumers and Markets (**ACM**) provides such an example.[71] The study estimates the impact of the different productivity components, including embodied technical change, by considering multiple European countries and EU KLEMS data for similar sectors over the period 1995-2017 and shows that the impact of embodied technical change is *negative* and *insignificant*.

4.2.4 Regarding the use of value added-based productivity measures, Ofwat states that, even after taking into account the impact of intermediate inputs, value added measures would anyway support a higher frontier shift estimate.[72] This conclusion, however, does not address the issue that the application of a value added-based frontier shift (or the size of any adjustments) needs to be supported by robust evidence, especially given that further adjustments are required to make it comparable to gross output estimates and to be applied to companies' totex.[73]

4.2.5 Ofwat also states that a further downward adjustment is required to YWS's costs because its RPE adjustments outweighed its frontier shift adjustments (if any) in its Business Plan. This is not true, and Ofwat has not put forward any new evidence to support its claims.

4.2.6 Ofwat claims that it is unclear from YWS's response to RFI011 Q25 whether YWS has applied a frontier shift adjustment to its enhancement costs. YWS has indeed applied significant efficiency savings to its Business Plan, which have been realistically costed, based on delivered schemes.[74] These efficiencies may include both catch-up and frontier shift components. However, in the case studies provided in YWS's response to RFI011, even if allowing for a catch-up component within the efficiencies (as the basis of YWS's submitted costs are

[71] Economic Insight, 'Frontier Shift for Dutch Gas and Electricity TSOs', report prepared for Netherlands Authority for Consumers and Markets, 1 May 2020, see https://www.acm.nl/sites/default/files/documents/2020-08/rapport-economic-insights-frontier-shift-for-dutch-gas-and-electricity-tsos.pdf.

[72] Ofwat, PFs Response (Costs and Outcomes), Table 2.1, page 18. This is based on new illustrative analysis presented by Europe Economics.

[73] For example, based on a weighted aggregation approach, a value added-based estimate over 1996−2014 would be 0.6% and 0.7% for water and wastewater respectively. Hence, even when considered on an unadjusted basis and in isolation, the value-added estimates do not support a target as high as 1%. See Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, Table A2.1.

[74] YWS, 'RFI 011 – responses to questions 21, 25 and26', 2020, page 4.

historical costs), the efficiencies net of catch-up still exceed the RPEs adjustment. This means that the implied frontier shift assumption would still be greater than the RPEs adjustment.[75]

4.2.7 YWS refers the CMA to evidence presented in Annex 02 of YWS's PFs Response,[76] which set out the reasons why a frontier shift overlay leads to a risk of double counting.

Growth costs

4.2.8 The arguments raised by Ofwat in response to the CMA's approach to the DSRA mechanism appear only to relate to points of regulatory judgment rather than the principles of cost assessment.

4.2.9 YWS has previously raised concerns that the mechanism does not reflect the realities of 'lumpy' capital expenditure required for growth. However, given the current economic circumstances and the impact of COVID-19 on growth and development, it is unlikely that adjustments under the DSRA will be significant. As such, there is no material reason to suggest an alternative approach to that set out by the CMA at this stage, and YWS would prefer Ofwat appropriately to address the issue of how to assess growth costs through open consultation with the industry for PR24.

Business rates

4.2.10 Ofwat's commentary on business rates is presumably intended to explain why they disagree with the CMA's proposal for a 90/10 sharing arrangement. However, in reality, it confirms that companies have been in active dialogue with the Valuation Office Agency in previous years. Ofwat's stated purpose for the change of approach on business rates at PR19 was to incentivise companies to actively manage their rates bills. So Ofwat's own evidence now contradicts the need for any regulatory intervention on rates.

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[75] On base expenditure, YWS is historically efficient on water. On waste, the catch-up challenge is 5.9% based on the CMA's models. The CMA has used the base catch-up challenge to inform the challenge on enhancement via the company specific efficiency factors. The efficiencies imposed by YWS on its enhancement costs (as shown in YWS's response to RFI011 for certain schemes and in Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020) are much larger than the catch-up challenge, even after accounting for RPEs, indicating that YWS has imposed a significant frontier shift assumption.

[76] Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, section 4.4 and A2.3.

4.2.11 Ofwat's PFs Response seeks only to focus on the incentive rates around Business Rates and again fails to engage with the previous evidence regarding the setting of the baseline against which the incentive rates are applied. The CMA's pragmatic decision to adopt a 90/10 sharing arrangement recognises both the limited degree to which companies can influence what is actually a tax, and also mitigates the impact of the mis-specified baseline used by Ofwat that the CMA has maintained in its PFs. As such, YWS considers it to represent a reasonable approach for the redetermination and provides space for Ofwat to adopt a more reasoned approach at PR24.

4.2.12 Ofwat's final observation regarding a supposed increase in the complexity of PR24 reconciliations should be disregarded by the CMA. The impact of the change in the incentive rate on complexity is entirely nugatory. Moreover, Ofwat has been wholly inconsistent in its approach between different sharing elements, complaining of a two-tier aspect here, but then suggesting something entirely similar on IED.

IED

4.2.13 As set out in YWS's PFs Response, YWS supports the CMA's position on sharing rates for IED. Ofwat has provided no new evidence to support its argument that the sharing rates are inappropriate, and indeed appears to have adopted an inconsistent approach to the one advocated for business rates and TMA costs.

4.3 Enhancement costs

Wastewater models

4.3.1 In its PFs Response, YWS welcomed that the CMA has accepted the principle that the UWWTD and the first time imposition of consents have an impact on P-removal costs.[77] YWS also welcomes that Ofwat considers "*the CMA's use of additional models* [...] *to be balanced and reasonable*"[78] and that Ofwat appears to accept the principle that it is important to account for the impact of catchment solutions, which are not viable when a UWWTD driver is present, in modelling P-removal costs.

4.3.2 Ofwat suggests that three United Utilities sites should not have been excluded from the models because they were costed on the basis of

[77] YWS, PFs Response, paragraph 5.2.3.

[78] Ofwat, PFs Response (Costs and Outcomes), Table 2.2, page 31.

conventional on-site treatment, not on the basis of catchment solutions as assumed by the CMA. This observation is of no consequence as Oxera has examined the impact of removing the three sites and finds that YWS's P-removal cost prediction remains at £606m, which is the same as that calculated by the CMA. Furthermore, if the CMA's WINEP benchmark was calculated using the CMA's P-removal models rather than Ofwat's P-removal models at the CMA's final determination,[79] the WINEP benchmark would be unaffected by the re-instatement of the three United Utilities sites. **Therefore, Ofwat's argument does not ultimately affect YWS's WINEP cost prediction.**

4.3.3 Nonetheless, YWS agrees in principle that it is important to accurately identify and to exclude only sites that use catchment solutions. YWS respectfully requests that the CMA applies this approach to not just United Utilities, but also to all other wastewater companies in the industry. This is to reflect that the fact that many other companies can also employ catchment solutions more readily than YWS.[80]

4.3.4 However, as Ofwat demonstrates, it can be difficult to identify, using the available data, which sites use catchment solutions and which do not. Oxera has proposed a pragmatic approach comprehensively to account for the impact of UWWTD across the industry, which is to include UWWTD cost drivers directly in the P-removal model specifications. This is an approach that is consistent with the CMA's modelling principles.[81]

4.3.5 Ofwat has not commented on two other issues identified in YWS's PFs Response[82] and in Annex 02 of YWS's PFs Response,[83] namely triangulation and the consistency between the benchmark and P-removal modelling. While the CMA has recognised that the UWWTD

[79] It is important for the WINEP benchmark to be consistent with the P-removal modelling so that YWS is not benchmarked (via the catch-up challenge) against United Utilities, which enjoys cost advantages due to its access to catchment solutions. For a further discussion, see Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, section 2.2.

[80] Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings' on costs', 26 October 2020, Annex A1.1.

[81] Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings on costs', 26 October 2020, Annex A1.3.

[82] YWS, PFs Response, paragraphs 5.2.1-5.2.15.

[83] Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings', 26 October 2020, section 1.1.2 and 1.2.

and first-time imposition of consents are key cost drivers for YWS, the CMA has not fully reflected these principles within its cost assessment approach.

4.3.6 In its PFs Response, YWS suggested practical remedies the CMA could undertake to address the above issues. YWS's preferred approach is to use a set of P-removal models that accounts for YWS's unique characteristics in the industry. Alternatively, the CMA may prefer to use the models specified in its PFs. In the latter case, to account for YWS's unique characteristics, the triangulation process should place all the weight on the model that excludes the United Utilities sites and accounts for the first-time imposition of consents. In any approach that the CMA chooses to adopt, the CMA should set a WINEP benchmark that is consistent with the P-removal models.[84]

Reputational incentive for P-removal spend

4.3.7 In the PFs, the CMA invited comments on an additional ex-post reporting mechanism for actual versus forecast P-removal costs. Whilst more granular information can only be helpful for understanding why costs may vary between companies or from forecasts or modelled allowances, YWS agrees with Ofwat's PFs Response that this should be considered as part of the PR24 data gathering process.

4.3.8 Enhancement expenditure costs may vary from forecasts for several reasons, for example; changes in scope; (in)efficiency; or the uncertain economic climate. It is not clear whether an incentive to reveal gaps between forecast and actual costs would create desirable behaviours from companies. There are also existing mechanisms in place, such as the WINEP amber scheme cost adjustments, which allow for costs to be removed if schemes are found not to be necessary for WFD purposes once River Basin and Management Plans are finalised.

Hull

<u>Innovative nature of the proposed solution</u>

4.3.9 Ofwat observes that the innovative nature of the proposed Living with Water solutions is overstated. This criticism is as disappointing as it is misplaced and demonstrates the real difficulties YWS faces in bringing

[84] The remedies and their underlying evidence is discussed in further detail in Annex 02 (YWS PFs Response), Oxera, 'Responding to the CMA's provisional findings', 26 October 2020, section 1, especially the end of section 1.2 and the 'Suggested remedy' sections.

innovation and blue/green solutions to fruition in the face of Ofwat intransigence.

4.3.10 In fact it is the combination of solutions that make Living with Water so diverse in nature and innovative in the face of unique circumstances. The Living with Water Partnership is now developing adaptive pathways for water to reach the Humber Estuary, such as the creation of new water ways or channels into which sustainable urban drainage systems and surface water systems can discharge. These pathways are an enabler to build wet woodlands, storage ponds, pop up parks with amenity storage features, all of which are new green/blue infrastructure interventions.

4.3.11 It is true that YWS will work across the partnership to reduce surface water at source through permeable paving, rain gardens and the like. However, this water still needs to be collected and attenuated into blue/green engineering solutions rarely seen at this scale in a densely populated urban area. The cutting-edge nature of the latter has been confirmed by the University of Sheffield securing funding of around £750k to work innovatively with the Living with Water Partnership. This learning will feed into YWS's approach in AMP7 and beyond.

Ofwat's proposal for an additional efficiency challenge

4.3.12 Ofwat argues that it is appropriate to include a further efficiency challenge on YWS's Living with Water allowance. This too is misconceived.

4.3.13 The innovative nature of the solutions proposed by the Living with Water Partners means that cost certainty cannot be achieved upfront. This is entirely logical since such solutions do not have comparators against which the costs can be judged. Moreover, the proposals that are currently in place will inevitably change as they are developed by the partners, such that any cost estimates offered now are unlikely fully to reflect the final cost of the solutions.

4.3.14 Ofwat's suggestion that a further efficiency challenge should be imposed, precisely because the cost of any particular solution is not fully known at this stage, amounts to penalising YWS and its partners for seeking to innovate, and unjustifiably restricts the range of options available to them. Accordingly, YWS considers that no further efficiency challenge would be appropriate.

4.3.15 Further still, the schemes are overseen by the four partnership members to optimise the ultimate solution and maximise the benefit.

Alongside YWS, the Environment Agency, Hull City Council and East Riding of Yorkshire Council are all working together to challenge scheme design and assure themselves that schemes are efficiently conceived and delivered.

Living with Water ODI

4.3.16 The concerns Ofwat have raised in relation to the Hull and Haltemprice ODI are misplaced and fail to appreciate the intention of the ODI. The amendments suggested by Ofwat are unnecessary and would result in significant overlap with other financial and reputational ODIs.

4.3.17 The ODI proposed by YWS, as endorsed by the Living with Water Partnership, ensures that the allowed enhancement expenditure is returned to customers if it is not spent on the Hull and Haltemprice partnership schemes, or if the expected reduction in flooding risk is not delivered. Customers are protected in the event of either under expenditure (where the costs would then be passed back entirely) or lower service performance (where YWS would have to make good the service through further investment).

4.3.18 Further, YWS is already financially incentivised to reduce flooding incidents through the internal and external flooding Performance Commitments and is also subject to the new reputational Performance Commitment for reduction in flooding risk. Therefore, customers are also protected should the reduction in flooding risk fail to translate into an actual reduction in the number of sewer flooding incidents.

4.3.19 Ofwat's suggestion to use the United Utilities 'Hydraulic Internal Flood Risk Resilience' Performance Commitment as a model for the Hull and Haltemprice ODI does not recognise the partnership nature of the investment. The provisional enhancement expenditure for Hull and Haltemprice reflects just over half the amount needed to deliver the full reduction in flooding risk, with the remainder being sourced from third parties. Introducing a financial penalty for the full performance level would expose YWS to significant risk outside of the company's control and would likely serve to deter companies from pursing these types of innovative partnership delivery models in the future.

4.3.20 It is also concerning that Ofwat has suggested an explicit reference to third party assurance, as it will result in an unnecessary regulatory burden and potential duplication of assurance. All of YWS's annual reports, including all Performance Commitments, are subject to stringent third-party audit and assurance by appropriately qualified organisations. The performance reported under this commitment will be no different, and it seems unnecessary to highlight this specific instance.

4.4 Cost Sharing

4.4.1 Ofwat devotes an entire annex (A7) in its PFs Response (Costs and Outcomes) to the subject of cost sharing incentive rates, portraying the CMA's approach as a major intervention. Ofwat states in A7.2 that it regards these incentives as having two important roles: "*incentivising companies to challenge themselves to be more efficient and to reveal accurate information on the level of efficient costs*".

4.4.2 In inviting the CMA to reconsider its decision to change the cost sharing rates, Ofwat focuses on both of these roles, making the following arguments:

(a) The CMA's proposed rates do not appropriately consider the information provided in the Disputing Companies' plans. In particular they do not reflect that: (i) "*The disputing companies have failed to challenge themselves to be efficient or to provide accurate information on their true level of costs*" (A7.3); and (ii) particular Disputing Companies and non-disputing companies: "*did a better job at challenging themselves in the cost forecasts they submitted to us.*" (A7.11).

(b) The CMA's cost sharing rates undermine the incentive for companies to submit efficient plans in future plans and specifically that: *"By intervening and softening the cost sharing rates, the CMA undermine incentives for all companies to submit efficient business plans in future price reviews."* (A7.4)

(c) The CMA needs to consider the appropriate weight given to sector and company level incentives, and specifically that: *"A weakening of incentives to submit efficient plans for the sector has potential to do much greater damage than the incentive set for an individual disputing company."* (A7.10)

4.4.3 In relation to the in-period incentives, Ofwat considers that the cost sharing rates set at its FD:

(a) are consistent with decisions made by both Ofwat and Ofgem in previous price controls (A7.15); and

(b) provide stronger incentive to avoid cost underperformance than the rates set by the CMA in its PFs (A7.16). Here Ofwat suggests the CMA could limit its intervention to outperformance rates.

4.4.4 However, subsequently in A7.17 Ofwat states "*[w]e have not seen evidence that the level of cost sharing rate has any material, impact on in-period performance.*"

4.4.5 Accordingly, YWS focusses here on the incentives created during the price control review process itself.

4.4.6 Firstly, regarding the incentives for companies to challenge themselves to be more efficient, there are a number of clear flaws in the picture that Ofwat seeks to portray:

(a) Although companies were aware that Ofwat would make use of this sort of mechanism, Ofwat has made multiple interventions to the detail of the mechanism after the business plans were submitted. For example, in Ofwat's PR19 methodology it indicated it would use each company's view of totex as per its September 2018 business plan, and indeed it did so up to and including DD, however at FD Ofwat decided to place equal weight on each company's August 2019 plan with its September 2018 plan. Ofwat also changed the cost sharing rates for ratios in the 110% to 120% bracket at FD.[85] Unless companies had somehow developed perfect foresight, these interventions could have no impact on the approach to the business plan development.

(b) Ofwat also argues the CMA's interventions will impact incentives in future prices controls (i.e. impacting on the submission of the PR24 business plan), but since companies cannot be certain that the mechanism will be applied in the same way as it is now (for example, as noted in paragraph 2.72(g) of the CMA's PFs, the PR14 mechanism was not carried over to PR19), Ofwat's argument here is of questionable relevance.

(c) Ofwat has paid no attention to the other aspects of the price control process that create incentives on companies to challenge themselves to be more efficient. Cost efficiency was an area of focus for YWS's regular dialogue with the Forum.[86] Further, YWS,

[85] For more information please see: (i) Exhibit 013 (Response) Ofwat, 'Delivering Water 2020: Our final methodology for the 2019 price review, Appendix 11: Securing cost efficiency', December 2017, section 2.3; and (ii) Exhibit 008 (SoC), 'PR19 final determinations, securing cost efficiency technical appendix', December 2019, section 10.2.

[86] As recorded in the Forum's PR19 report (at page 16): "*The Forum met with the Board in March 2018 to discuss the Outcomes and Performance Commitments that the company was developing. At this meeting the Board also heard feedback from the Forum in relation*

in common with other companies, devoted considerable attention to cost efficiency as part of the board challenge process during the development of the Business Plan. As detailed in the Business Plan and supported by independent external assurance, the Plan contained a cost-efficiency challenge in excess of £800m, as compared with what the same programme of works would have cost in AMP6. The failure of the PR19 process to recognise these efficiency steps will be of considerable concern during the development of future business plans.

4.4.7 Secondly, turning to the incentives regarding accurate information, the picture that Ofwat seeks to portray is similarly flawed. That is, Ofwat overstates the strength of the incentive created by the cost sharing mechanism by failing to recognise that differences between Ofwat's view of costs and the companies' views of costs are not wholly or mainly caused by inaccuracies in companies' data. For example:

(a) Ofwat fails to acknowledge its own 'accurate' view of the efficient costs and each of the companies' changed during the PR19 process. To illustrate this, the figure below which presents the changes made by both the companies and Ofwat between initial assessment of plans (**IAP**) and draft determination (**DD**). As shown, Ofwat made significant changes between IAP and DD, for example reducing Thames Water's cost allowances by a further £158m; and increasing Northumbrian Water's allowances by £91m.

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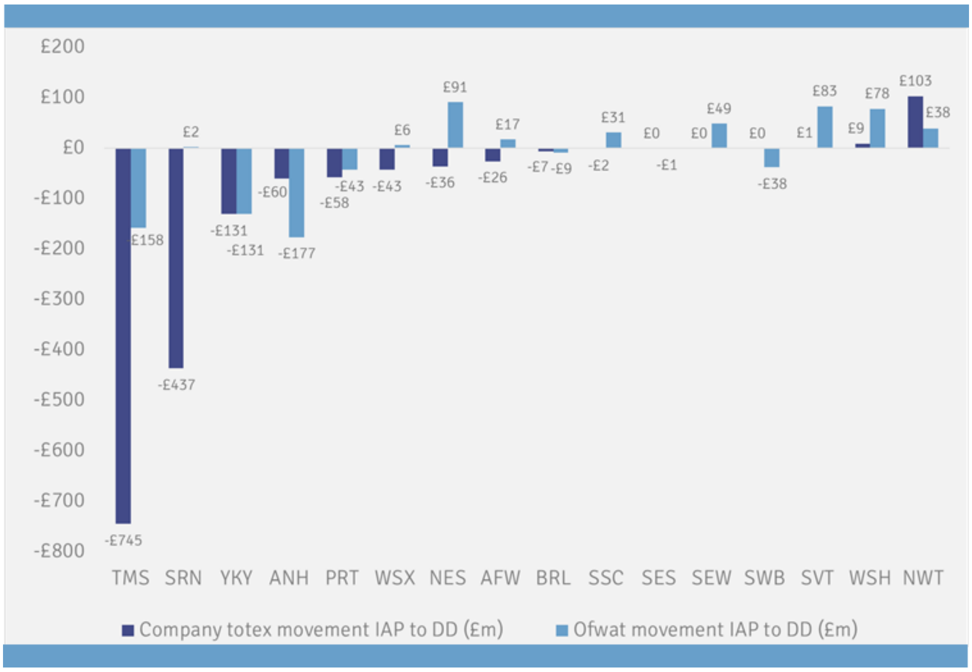
to the levels of support and interaction the Forum had received from the company to date. The meeting was positive, and the Forum Chair indicated satisfaction at the level of engagement and interaction from the personnel the Forum was working with. This led to further refinements to the household retail performance commitments in response to Forum and Board feedback. The Forum Chair attended a Board strategy day in March 2018 to share the Forum's views on the development of the plans and meets regularly with the Chair of Yorkshire Water, most recently in May 2018. The Forum challenged Yorkshire Water to secure Board leadership to achieve the critical goal of monitoring and evaluating issues of affordability and vulnerability (under the broad umbrella of "inclusion") and one of the independent Non-Executives is responsible for this." See https://www.yorkshirewater.com/media/2496/yorkshire-forum-for-water-customers-pr19-assurance-report.pdf.

Figure 1: Totex movements between IAP and DD



Source: Economic Insight analysis of Ofwat's IAP and DD publications.

(b) Ofwat fails to distinguish between efficiency assessments based on comparative econometric modelling, and those reflecting differences in views on the need for a particular type of investment. This is particularly important in the context of investment schemes designed to increase future resilience. YWS accepts that an appropriate degree of regulatory scrutiny on the evidence for the need is necessary. However, penalising a difference of view on need in the same way as comparative evidence on inefficiency is not appropriate and disincentivises the companies from trying to enhance resilience.

(c) Ofwat has made much of the principle of information asymmetry in its evidence to the CMA. But if there is indeed such a phenomenon, that surely also means that Ofwat's test for the accuracy of information on which the cost sharing rates are based is inherently challenged. Whilst comparative econometric models do play an important role in Ofwat's cost assessment, YWS notes that differences in views on forecasts and unmodelled costs will also contribute to the gap between a company's proposed costs and Ofwat's allowances.

4.4.8 Finally, while Ofwat does not consider that the cost sharing rate has a material impact on in-period performance, they do not appear to have considered the impact on the risk profile faced by companies and customers. Penal incentive rates of the sort Ofwat proposed can be portrayed as creating sharper incentives on companies. But they also mean that the risk of unintended consequences arising from regulatory errors is magnified. As such, YWS strongly encourages the CMA not to be swayed by Ofwat's mis-characterisation of their approach and to retain the balanced perspective on cost sharing incentive rates adopted in the PFs.

4.5 Use of 2019/2020 costs data

4.5.1 Ofwat argues that such data should not be used, because:

(a) it has not been subject to quality assurance, and non-section 185 diversion costs have not been excluded;

(b) significant investments were brought forward from AMP7 into 2019/20; and

(c) Ofwat's FD base costs were calibrated against forecast base costs for 2019/20.

4.5.2 YWS addresses each of these arguments in turn below.

4.5.3 First, Oxera examined the 2019/20 APR data for any material issues of inconsistency and identified two potential errors in the wholesale water dataset that were subsequently corrected. On diversion costs, these were not included in the 2019/20 APR data, and hence the figures from 2019/20 Business Plan forecasts for these costs were used to update the dataset. The 2018/19 business plan forecasts are approximately equal to the 2018/19 actuals for each company apart from one observation (United Utilities diversions were approximately £1m higher in the 2018/19 business plan than the outturn value). Therefore, the analysis presented by Oxera[87] represents a useful approximation of the impact of the new data on model quality and Disputing Companies' cost allowances.

4.5.4 It is noteworthy that Ofwat is operating under similar timescales to this time last year, where it was able to quality assure the 2018/19 APR data and incorporate it into the analysis ahead of its FD in December 2019. Therefore, YWS expects that Ofwat will be able to do the same ahead of the CMA's final determination, particularly in light of the recent extension to the timetable.

[87] Annex 03 (YWS PFs Response), Oxera 'On the use of 2019/20 APR data in econometric modelling', 23 October 2020.

4.5.5 Second, YWS finds no clear evidence that companies have brought forward a significant amount of base expenditure from AMP7. If this were the case, one would expect the outturn expenditure in the 2019/20 APRs to systematically and significantly exceed the expenditure forecasted by companies in their business plans ahead of the initial assessment of plans in January 2019. However, in wholesale water, the benchmark companies' real modelled base expenditure in 2019/20 is only 2% higher than that planned in 2018. In wholesale wastewater, the benchmark companies' expenditure in 2019/20 was 5% lower than forecasted.

4.5.6 Third, as the CMA sets out in its PFs, the efficiency challenge should not be dictated by Ofwat's aims to achieve specific outcomes on cost assessment. The fact that companies' cost allowances may increase or not with the incorporation of the new data (in the current case, the impact is not systematically positive) cannot in itself be an argument for not using it.

4.5.7 Finally, YWS notes that Ofwat has not considered the merits of including the additional data in the analysis, some of which are outlined in evidence prepared by Oxera.[88] These include: (i) increasing the size of the dataset can improve the robustness of the predictions used to project efficient cost levels; (ii) incorporating the more recent year of data ensures that the resulting target represents the most up-to-date assessment of the efficiency frontier; and (iii) calculating efficiency scores over a full AMP (AMP6) helps to mitigate the potential for differences in investment profiling across companies.[89]

4.5.8 Therefore, YWS considers that the CMA should maintain the established precedent of incorporating the latest APR data into its analysis ahead of its final determination.

[88] Annex 03 (YWS PFs Response), Oxera 'On the use of 2019/20 APR data in econometric modelling', 23 October 2020.

[89] Annex 03 (YWS PFs Response), Oxera 'On the use of 2019/20 APR data in econometric modelling', 23 October 2020, section 2.

5. Overall view on Ofwat's position on costs and outcomes

5.1 Introduction

5.1.1 This section addresses in turn: (i) Ofwat's overall position on costs and outcomes; (ii) Ofwat's position on the necessity of an enhancement allowance for leakage; and (iii) Ofwat's position on the appropriate size of an enhancement allowance for leakage. YWS's response to Ofwat's leakage efficiency challenges is further supplemented by Annex C, below.

5.2 Ofwat's overall position on costs and outcomes

5.2.1 Ofwat has restated its position that there is no clear link between costs and outcomes performance. In Annex A5, Ofwat sets out analyses it says further supports this position, consisting of scatterplots of under / out performance in: (i) the water industry; (ii) electricity distribution; and (iii) gas distribution. Ofwat says these scatterplots show 'no obvious pattern' between outcomes and cost performance.[90]

5.2.2 In fact, Ofwat's analysis does not address the analytical relationship between costs and service quality measures. Such dynamic achievements might have been due to a large number of factors, including the degree to which cost and quality targets in previous price controls were more or less challenging than those in PR19, and the design of the framework used in the price controls to set these. YWS has outlined the conceptual limitations of this type of analysis in previous submissions to the CMA.[91]

5.2.3 As a result, these correlations are not informative of the relevant issue. The pertinent matter is that (as acknowledged by the CMA) at the efficiency frontier there is (by definition) a trade-off. When the regulator seeks to identify the relative efficiency gap and apply this to the individual company costs, companies are conceptually being 'taken to the frontier'. Therefore, by definition, a trade-off then arises for every individual company (meaning that without additional funding, service quality cannot be improved).

5.2.4 Consistent with the above, in competitive markets (where one might suppose firms are 'at' or 'close to' the efficiency frontier), one can

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[90] Ofwat, PFs Response (Costs and Outcomes), Annex A5, Figures A5.1, A5.2 and A5.3.

[91] Annex 08 (SoC), Oxera, 'Integrating cost and outcomes', 27 March 2020, section 2.

readily observe trade-offs between costs and service.[92] Therefore, YWS would again ask the CMA to reconsider with care its PFs regarding the cost outcomes trade-off.

5.3 Ofwat's position on the necessity of an enhancement allowance for leakage

5.3.1 Ofwat's position is that YWS's enhancement allowance for leakage should be zero.[93] Ofwat's arguments are incorrect and the CMA should not place any weight on them in its final determination.

Ofwat is wrong to argue that YWS has underperformed

5.3.2 In support of its position, Ofwat repeats its argument that YWS has underperformed in AMP6, both relative to the performance of other companies and relative to the performance (it claims) YWS was funded to deliver in AMP6.[94]

5.3.3 This argument does not stand up to (even superficial) scrutiny and has already been considered in detail by the CMA.[95] In short, the facts show that YWS has *outperformed* its AMP6 targets. The table below shows that YWS exceeded its target in four out of five years in AMP6 and that YWS exceeded its target on average over the AMP.

Table 1: Comparison of YWS's target and outturn leakage performance

	15/16	16/17	17/18	18/19	19/20	Average
Target Ml/d	297.1	297.1	297.1	292.1	287.1	294.1
Outturn Ml/d	285.1	295.2	300.3	289.8	270.8	288.2
Target met?	✓	✓	✗[96]	✓	✓	✓

[92] In the real world, cost / outcomes trade-offs are readily observable in competitive markets. For example, the scatterplot between car prices and quality ratings that appears as figure 16 in the Economic Insight paper 'Outcomes framework at PR19, Report for Thames Water', October 2016, illustrates that higher quality cars tend to be more expensive than lower quality cars. See https://www.economic-insight.com/wp-content/uploads/2016/11/Outcomes-Framework-for-PR19-Final-Report.pdf

[93] Ofwat, PFs Response (Costs and Outcomes), paragraph A3.3.

[94] Ofwat, PFs Response (Costs and Outcomes), paragraph A3.18-A3.21.

[95] See, for example, CMA, PFs, paragraph 8.62-8.64; YWS, Response, 4.31.1.

[96] Note that this marginal underperformance was caused by the unusual weather conditions experienced that year; see SoC paragraph 34.

5.3.4 Ofwat's argument overlooks the fact that companies' historic targets and funding levels were based on SELL, not on comparative performance. Moreover, even if YWS had underperformed relative to other companies in any meaningful sense (which it has not), this does not imply that the 15% reduction in leakage is already funded.

5.3.5 Ofwat has engaged in cherry-picking comparisons that cast YWS's performance in a misleading and negative light. For example, Ofwat states that YWS's AMP6 leakage levels are higher than its historic *minimum* leakage levels achieved in 2012-13 as evidence of its alleged underperformance,[97] which clearly is not an appropriate point of comparison for these purposes (and, indeed, is at odds with Ofwat's decision to use three-year averages when setting targets). This is because 'high' or 'low' performance in a single year can be caused by factors outside of company control, notably the weather.[98]

Ofwat is wrong to argue that YWS was funded to outperform its targets

5.3.6 Since Ofwat is unable to show that YWS failed to meet its targets (because it did meet them), Ofwat then appears to argue that YWS was, in fact, funded to *exceed* its AMP6 targets,[99] which is incorrect – YWS was funded to meet its targets, not to exceed them.

5.3.7 Ofwat fails to articulate (i) what these target levels were; (ii) why YWS's actual targets were set below them; and (iii) what additional funding YWS would have sought and received had Ofwat set these 'targets' as real targets at PR14. Without answers to these questions, Ofwat's argument lacks credibility and should be given no weight.

Ofwat is wrong to assert that YWS has historically underinvested

5.3.8 In its response to RFI020 Q11, Ofwat has repeated its assertions that YWS's position on leakage is a result of "*historic underinvestment*" and that enhancement should be funded in base maintenance.[100] Ofwat has not engaged with YWS's evidence, presented throughout the redetermination, that its comparative position on leakage is a result of

[97] Ofwat, PFs Response (Costs and Outcomes), paragraph A3.20.

[98] YWS, Annex 05 (Response), YWS, 'Leakage and mains repairs case study', page 1.

[99] Ofwat, PFs Response (Costs and Outcomes), paragraph A3.22-A3.27.

[100] See Ofwat, 'Response to RFI020 Question 11', pages 3, 5 and 6.

the historic regulatory drivers that have resulted in YWS not being funded to the same level that other companies have been.[101]

5.3.9 Relatedly, Ofwat has contended that YWS has not provided evidence that its AMP6 unit costs are efficient.[102] As discussed in further detail below (see Annex C), Ofwat's calculations concerning YWS's unit costs are misleading. Ofwat does not take account of the additional reduction in leakage that was necessary to offset additional leakage caused by the 'Beast from the East' and the second driest summer for 107 years. This is another example of the challenges associated with interpreting in-year spend and performance without proper context.

5.3.10 [CONFIDENTIAL][103] [CONFIDENTIAL][104]

5.3.11 [CONFIDENTIAL]

5.3.12 [CONFIDENTIAL]

5.3.13 [CONFIDENTIAL]

5.3.14 [CONFIDENTIAL]

5.4 Ofwat's position on the appropriate <u>size</u> of an enhancement allowance for leakage

5.4.1 Ofwat's false assertion that YWS underperformed in AMP6 also seems to have heavily conditioned its approach to challenging the PFs' proposed enhancement allowance of £94m and replacing it with Ofwat's suggested 'maximum enhancement allowance' figure of £28.7m.[105]

5.4.2 The challenge, on both a top-down and bottom-up basis, has not been undertaken in a rational and reasonable manner. Rather, Ofwat has selected assumptions and methods that appear to be designed to deliver an implausibly low enhancement allowance and result in an efficiency challenge of 70%. These include:

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101 See YWS, SoC, paragraphs 32-35; YWS, Annex 05 (Response), page 2; YWS, 'Response to RFI018A', response to Q1(a); YWS, 'Response to RFI020', page 1. See also Annex C, below.

102 Ofwat, 'Response to RFI020 Question 11', page 5, bullet 2.

103 [CONFIDENTIAL]

104 [CONFIDENTIAL]

105 Ofwat, PFs Response (Costs and Outcomes), paragraph A3.51.

(a) the claim that YWS's leakage reduction strategy is inappropriate due to it lacking innovation notwithstanding the fact that YWS successfully deployed the strategy to successfully and materially reduce leakage in 2018-19 and 2019-20;

(b) an untested and incorrect assumption that YWS's base allowances allow it to substantially reduce leakage when, in fact, they do not; and

(c) a flawed application of an efficiency challenge based on a unit cost reported by an individual company, without due regard to the accuracy or comparability of that cost.

5.4.3 To assist the CMA, YWS summarises in Annex C Annex Cthe main challenges that Ofwat has made to its proposed enhancement allowance and YWS's responses to them. In summary, YWS does not consider that there is any basis for the reductions that Ofwat has made to its proposed enhancement allowance.

5.5 Leakage and the use of 2019/20 data

5.5.1 If the CMA decides to include the latest data into its analysis and provides a higher efficient base expenditure allowance for YWS, it would be incorrect to then apply an 'offsetting' reduction to YWS's proposed enhancement allowance. The main reason for this is that YWS's proposed enhancement allowance has been calculated to fund only the additional cost of reducing leakage from the end of AMP6 level to YWS's AMP7 targets. Therefore, it does not include any sum needed to 'recover' the difference between the CMA's base expenditure allowance in the PFs and the higher base expenditure allowances implied by the proper inclusion of 2019-20 data.

5.6 Ofwat's position on the appropriate leakage ODI

5.6.1 Ofwat argues that there are two errors in the CMA's Tier 1 leakage ODI:

(a) the CMA has used annual rather than 3-year average data to set the 2019/2020 baseline;[106] and

(b) an incorrect historical dataset has been used to calculate Tier 1 ODI rates, whereas the CMA should have used companies' shadow reporting data.[107]

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[106] Ofwat, PFs Response (Costs and Outcomes), Table 3.1, page 69.

[107] Ofwat, PFs Response (Costs and Outcomes), Table 3.1, page 69.

5.6.2 YWS has addressed these points in its PFs Response[108] and considers that it *is* appropriate for the CMA to use the 3-year average data to set the 2019/20 baseline and the companies' shadow-reporting data to calculate the ODI.

5.7 Ofwat's position on the use of deadbands

5.7.1 YWS continues to support the CMA's approach to including deadbands for Mains Repairs and Unplanned Outage Performance Commitments. As the CMA has recognised, the deadbands are necessary in these specific instances to reflect the potential for extreme weather events, and the immaturity of these new measures. Extreme weather events are unpredictable and cause material and significant impacts on the costs and performance of water companies. In the most recent incident, the consequential cost impact on YWS of the 'Beast from the East' was in excess of £100m notwithstanding YWS being recognised by Ofwat for its exemplary management of the situation. Deadbands are necessary mitigants for these events and should remain an important mechanism to allow companies to manage risks outside management control. Ofwat has offered no new evidence to demonstrate why the CMA's PFs approach should be reconsidered in its final determination.

[108] See YWS, PFs Response, paragraphs 6.7.9 - 6.7.13.

6. WRFIM

6.1 Introduction

6.1.1 Ofwat has not advanced any new arguments in its PFs Response on WRFIM. YWS therefore refers the CMA to YWS's previous submissions in response to these arguments, as briefly summarised below.

6.2 Revenue adjustment level

6.2.1 Ofwat's position appears to be that the CMA is relying on YWS's evidence that it based its PR14 business plan forecasts on the 2012-13 reported figure for each year of the AMP6 period, i.e. that it did not forecast any change in the 2012-13 figure over time.[109] YWS has addressed this point comprehensively at Section 10.3 of Response.[110]

6.2.2 Ofwat repeats its arguments about the totex menu adjustment[111] and the RCV adjustment, both of which YWS addressed fully in Section 10.5 of the Response.

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[109] Ofwat, PFs Response (Costs and Outcomes), Table 4.1, page 75.

[110] Which refers to YWS's response to Ofwat's query on this point from November 2019 at Exhibit 064 (Response), 'PR19 query YKY-FD-PD-006 – final draft response'.

[111] Ofwat, PFs Response (Costs and Outcomes), Table 4.1, page 76.

7. Procedural matters

7.1 Introduction

7.1.1 In this section YWS addresses Ofwat's position that the CMA "*has made a number of fundamental errors in its approach to the provisional findings*", which are "*both substantive and procedural*".[112] As pointed out in the introduction to this response, Ofwat's submissions in this area are misconceived.

7.1.2 In the interests of brevity YWS has not addressed Ofwat's submissions contesting the harm that could arise to YWS's customers and wider stakeholders as a result of an extension to the procedural timetable. These matters have been addressed in YWS's recent correspondence with the CMA.[113]

7.2 Alleged Inconsistency

7.2.1 Ofwat suggests that the CMA has undertaken a "*radical departure from well-established regulatory best practice, without adequate justification*".[114] Specifically, Ofwat cites differences in the CMA's approach to calculating the cost of capital in the NERL reference earlier this year.[115] Ofwat alleges that the CMA has been inconsistent with previous decisions, has not justified its departure from these precedents, and that its selection of previous decisions to consider is irrational.[116] Ofwat implies that this undermines the predictability of the regulatory regime.[117]

7.2.2 Ofwat expressly accepts that the "*novelty*" of the PFs lie not in the arguments made by the parties but in the CMA's departure from prior decisions. In other words, that the CMA's judgment on a given issue is different now to what it was before.

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[112] Ofwat, PFs Response (Fundamental errors of approach), paragraph 1.1.

[113] Letter from Nevil Muncaster to Douglas Cooper, 10 November 2020.

[114] Ofwat, PFs Response (Fundamental errors of approach), paragraph 1.15.

[115] Ofwat, PFs Response (Fundamental errors of approach), paragraph 1.13. Ofwat notes that this is also the view of the UKRN (paragraph 1.16), and it cites two specific examples of the difference in approach, relating to (i) the use of corporate bonds as a proxy for identifying the upper limit of the risk-free rate, and (ii) adopting a policy of 'aiming up' in relation to the cost of capital (paragraph 1.17).

[116] Ofwat, PFs Response (Fundamental errors of approach), paragraphs 1.19-1.21, and 1.25-1.37.

[117] Ofwat, PFs Response (Fundamental errors of approach), paragraphs 1.22-1.24.

7.2.3 But Ofwat fails to recognise that consistency with past decisions in not an end in itself and cannot be judged in a vacuum.

7.2.4 The key point is that any departure from past decisions must be considered in the context of the given price control, at a given point in time. If, in that context, departures from prior regulatory decisions are necessary to ensure that the price control works in the round, then such departures are wholly justified. Narrow arguments about consistency on any one aspect of any one building block of the price control cannot be allowed to obscure this fundamental point.

7.2.5 In any case, YWS explained in its PFs Response the reasons why abundant caution should be exercised in making any direct comparisons to cost of capital estimates from the NERL reference.[118] In summary, the specific circumstances of NERL as a company meant that financeability did not feature as a material issue in that appeal – which clearly does not and cannot apply to YWS. Further, the NERL appeal was overwhelmingly influenced by the COVID-19 pandemic, such that the CMA explicitly chose not to complete its work on financeability.[119] As such, it is not reasonable to compare the PR19 PFs with any view expressed by the CMA six months previously in an acknowledged unfinished analysis which was not dealing with similar circumstances.

7.3 The CMA's gathering and use of evidence

7.3.1 Ofwat states that in many instances, the CMA has failed appropriately to use evidence, which has led to "*serious and avoidable errors in its substantive conclusions*".[120] Specifically, Ofwat contends that the CMA has not given the appropriate weight to certain evidence, has not fulfilled its duty of sufficient enquiry, and has not correctly interpreted and applied the evidence used.

7.3.2 However, upon examination of the examples cited by Ofwat, it has become clear that many of these alleged failures ultimately amount to differences of opinion between Ofwat and the CMA as to the conclusions the evidence supports. These include:

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[118] YWS, PFs Response, paragraphs 3.4.7-3.4.9.

[119] Indeed, the CMA chose not to respond to representations that stakeholders made in response to its March 2020 provisional findings consultation; the CMA therefore explicitly stated that the final report does not reflect an assessment of the merits of points raised in response to the provisional findings.

[120] Ofwat, PFs Response (Fundamental errors of approach), paragraph 1.71.

(a) the weight given to RPI in calculating the TMR;

(b) the CMA's conclusion that the PFs will lead to an efficient company incurring a negative ODI position; and

(c) the rejection of Ofwat's GOSM.

7.3.3 Moreover, Ofwat also suggests that there are "*policy areas of major importance*" where the CMA is still seeking evidence and considering its approach,[121] which it claims undermines the CMA's ability to conduct fair consultation, and to comply with the same statutory duties as applied to Ofwat in reaching its FD.[122]

7.3.4 It is not, however, unreasonable for the CMA to continue to consider evidence after the PFs have been published – given that the responses to the PFs are not the only ways in which the CMA can and has engaged with the parties over substantive areas of dispute. Moreover, the entire point of the CMA issuing its findings on a provisional basis is so that further discussion can take place and further evidence be adduced before the final determination. There is nothing illegitimate, controversial or novel about this process whatsoever.

7.3.5 In fact, the main area where consultation is ongoing is in relation to leakage, where the CMA has already accepted the principle that YWS (amongst others) should be allowed additional costs to achieve the required performance improvements – whereas the further consultation is primarily aimed at establishing the appropriate amount of this uplift. This is a matter of detail that is eminently suited to further consultation after the PFs have been issued, and which requires little in the way of further input from Ofwat to determine.

7.3.6 More generally, Ofwat's attempt to characterise the CMA's decision as "policy making" is plainly a misguided attempt by Ofwat to imply that its role as regulator should, somehow, mean that its submissions should inherently carry more weight than those of the Disputing Companies. This is another area where Ofwat's position strains the bounds of credibility and would appear to indicate a misapprehension as to its role in deciding the outcome of this redetermination.

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[121] Ofwat, PFs Response (Fundamental errors of approach), paragraph 1.63. It cites as examples the CMA asking for additional information about companies' spend for those that have requested allowances for enhancement totex (paragraphs 1.64-1.65), and the CMA continuing to consult on proposals about the growth reconciliation mechanism (paragraphs 1.67-1.68).

[122] Ofwat, PFs Response (Fundamental errors of approach), paragraph 1.66.

7.4 Ofwat's bilateral correspondence with the CMA

7.4.1 Finally, YWS notes that the Chair of Ofwat wrote to the CMA on 6 October 2020 to suggest a personal meeting to discuss its provisional conclusions in respect of the companies' financeability.[123] YWS appreciates the CMA's insistence on this correspondence being made available as part of its commitment to transparency in this redetermination and its insistence on communications taking place within the formal channels of these proceedings.[124]

7.4.2 More generally, YWS is grateful to the CMA for its continuing efforts in these redetermination proceedings and hopes that this submission is of assistance. YWS remains at the CMA's disposal should it wish to discuss any matters set out herein in further detail.

[123] Letter from Jonson Cox to Kip Meek, 6 October 2020.

[124] Letter from Kip Meek to Jonson Cox, 9 October 2020.

Annex A: Cost of capital table

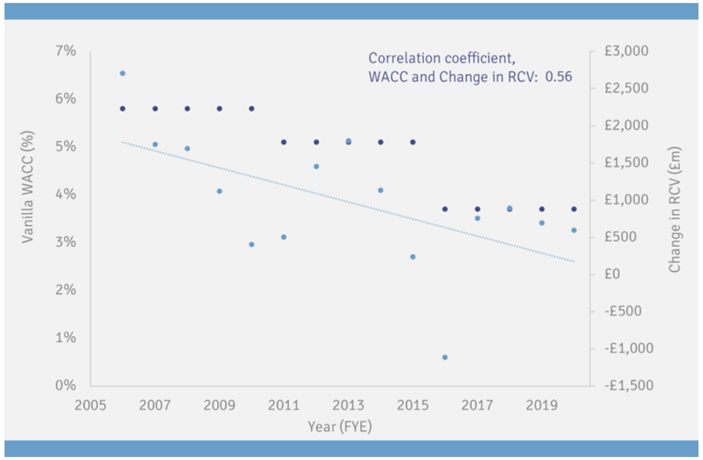
Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
• *Section 2: Cross-checks*	The CMA's allowed return is higher than the return sought by water companies in their business plans [Para 2.3].	YWS explained the reasons for the apparent difference between rates of return in paragraphs 3.4.3 to 3.4.6 of its PFs Response.
	The cost of equity in the PFs is higher than the cost of equity in the CMA's NATS decision [Para 2.3].	This is not a like-for-like comparison. The cost of equity in the CMA's PR19 inquiry is for a company with a 60% gearing ratio. The cost of equity in the CMA's NATS decision was for a company with a 30% gearing ratio. It is unremarkable that a company with 60% gearing in an industry with lower systematic risk should have a higher cost of equity than a company with 30% gearing in an industry with higher systematic risk. More generally, YWS provided additional reasons as to why the PR19 redetermination is not directly comparable to the approach taken in NATS in paragraphs 3.4.7 to 3.4.9 of its PFs Response.
	The CMA has failed adequately to assess market-to-asset ratio (MAR) evidence [Para 2.3, Paras 2.8-2.12]	YWS explained in its July 2020 submission that, once proper allowance was made for expected cost of debt, totex and ODI outperformance, Europe Economics' original MAR analysis showed MARs of 0.95-0.97 for United Utilities and 0.98 to 1.02 for Severn Trent. In their latest attempt to interpret the share price evidence, Ofwat and Europe Economics table significantly higher values of 1.02-1.17 for United Utilities and 1.09-1.18 for Severn Trent. However, this increase is only because Europe Economics has completely revised its assumptions about future totex outperformance – i.e. where previously Europe Economics relied on forward-looking analyst forecasts of outperformance, the new analysis assumes that United Utilities will overspend against its totex allowances because it overspent on average between 2000 and 2020, while expectations about Severn Trent's future totex outperformance have been revised down so that they are in line with its

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
		average 2000-20 underspend. These assumptions are arbitrary, unsubstantiated and betray a sense in which Europe Economics has attempted to backfit to the conclusions that it wants to reach. Had Europe Economics used the assumptions it provided previously to the CMA, it would have reached the same results, given the sideways movement in share prices in the last six months. YWS submits that Europe Economics' approach to this exercise shows the inherent limitations of MAR evidence and highlights why such evidence cannot be given significant weight.
	The average MAR premium during September 2020 was 17% [Para 2.9, Figure 2.2].	The MARs that Ofwat references in section 2 of its PFs Response are raw comparisons of market capitalisation plus net debt to RCV. Ofwat makes no allowance for the value of unregulated business, pension fund surpluses, future cost of debt out-performance, etc. As such, the headline figures are meaningless.
	The National Grid and SSE share price reaction to the publication of the PFs shows that PFs were generous [Para 2.3, Paras 2.13-2.14].	It is not possible to draw conclusions about the required rate of return in the water sector from the share prices of: (i) a UK/US energy network company; and (ii) a vertically integrated UK energy supplier. Moreover, the kind of event analysis that Ofwat is engaging in is not typically regarded as a credible analytical tool due to the inability to understand and disentangle the multiple factors that can cause a company's share price to move up or down within a short window of time. YWS does not consider that it is helpful to speculate further on this matter, particularly when share prices of the three listed water companies – i.e. three companies in the sector that is actually under review in this redetermination – were no higher during the month of October than they were on 26 September 2020 i.e. shortly before the CMA's PFs were published.
	The CMA's proposed return is more generous than the view expressed by First Economics in	The ongoing review of NI Water – a government-owned company – does not constitute a meaningful new data point. The First Economics report that Ofwat references simply calculated for the NI Utility Regulator the return on government-owned equity that NI Water would receive if the regulator

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
	work for the NI Utility Regulator [Para 2.3].	applied the CMA's provisional findings in its NATS inquiry. In addition, the allowed cost of debt was set equal to NI Water's actual public-sector cost of debt (currently gilt yield plus 85 basis points). This means that the allowed return for NI Water will naturally sit a significant way below the cost of capital for the England & Wales companies.
	The CMA's proposed return came out higher than rating agencies expected [Para 2.15].	Speculative predictions that a rating agency (or any other party) may have made about the CMA's possible thinking on returns prior to the publication of the PFs cannot be characterised as a "cross check" and are of no relevance to the CMA's task.
	The CMA's proposed return is too high by international standards [Paras 2.16-2.17].	YWS does not consider that it is possible to learn anything meaningful from the crude cross-country comparisons that Ofwat presents. Costs of capital in different countries will naturally vary due to differences in risk-free rates, differences in the composition of stock market indices and hence TMRs, and differences in sector risk profiles and betas (particularly when the comparison being made is to non-water companies). YWS's reading of Figure 2.4 is that the CMA's provisional PR19 cost of capital is "in the pack" with estimates made elsewhere. It is not possible for anyone to go further than this without first normalising for the differentiating country and sector factors identified above.
	Analyst comment shows that the CMA's proposed rate of return is too high [Para 2.18].	Equity analysts do not have the cost of capital expertise that the CMA possesses. Any estimates analysts have may have published should not be elevated above the 170 pages of detailed analysis that the CMA set out in its PFs.
	Companies' 'green recovery' proposals show that the FD rate of return is adequate [Para 2.19]	On the contrary, companies' recent proposals to accelerate capex show precisely why Ofwat is wrong to characterise all investment as non-discretionary in nature. For example, YWS has also identified a number of projects that could potentially be part of the Government's proposed "green recovery"; however, due to the low returns within Ofwat's FD and the disincentive to investment caused by Ofwat's GOSM, these schemes were not initially considered to be viable. The improved returns and

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
		removal of the GOSM proposed within the CMA's PFs would make these schemes more viable. Furthermore, it is not compelling to cherry-pick three examples of investment projects and seek to use this as evidence as to why there is no need to 'aim up'.
• *Section 3: "Aiming up"*	The CMA's 'aiming up' approach, if applied across the sector, would cost customers about £1.9 billion over five years [Para 3.12].	Ofwat's calculation is not correct. The CMA's proposed return is 50 basis points higher than Ofwat's FD return. However, only two-fifths of this differential is attributable to the CMA's selection of an above-mid-point cost of equity – i.e. the equivalent of approximately £750m over five years, not £1.9 billion. The remainder of the revenue amount that Ofwat quotes comes from the CMA's finding that Ofwat failed to fully remunerate the cost of debt and under-estimated the appropriate ranges for the risk-free rate, TMR and beta. The £750m compares to a total nominal allowed return over five years of around £20 billion and total expenditure of approximately £50 billion. Given the magnitude of these numbers, the CMA's decision only needs to have a very small beneficial relative impact on financing costs in the sector and/or the propensity to invest in order to validate the small additional cost that customers are being asked to pay.
	'Aiming up' will create a capex bias [Para 3.13].	Ofwat has this the wrong way around. The selection of an appropriate cost of capital estimate will avert a bias *against* capex – i.e. due to the under-remuneration of the opportunity cost of capital – and ensure that companies make appropriate whole-life cost choices when evaluating opex and capex options.
	Williamson cites possible impacts on investment arising from a change in the allowed return [Para 3.13].	YWS notes that the analysis that Williamson sets out in section 4 of his report is incompatible with the thesis that capex programmes are fixed and insensitive to the level of allowed returns.
	Transactions in the water sector	The data that Ofwat refers to is more than two and a half years out of date. Such old data tells us

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
	between 2000 and 2018 show no evidence of diminished valuations [Para 3.30].	nothing about the investor reaction to Ofwat's FD, the investor reaction to the CMA's PFs, or the way in which investors are currently valuing water companies.
	PwC's analysis shows that there is no clear relationship between allowed returns and expenditure [Para 3.39].	PwC's analysis suffers from fundamental flaws and simply cannot be relied on to prove the point it is seeking to illustrate. First, it seeks to (i) backwards engineer a historical measure of 'aiming up' by Ofwat, which PwC terms the 'WACC wedge', and (ii) test how said WACC wedge correlates with investment. It is irrelevant and unnecessary to speculatively estimate 'by how much' Ofwat has aimed up in the past to inform the issue the CMA has identified. The relevant issue can be more directly informed by looking at the correlation between the absolute level of WACC over time and investment in the industry. On this correct basis, and as shown in the figure below, the positive correlation one would expect to observe between the WACC and investment (net RCV additions) is immediately apparent. The intuition for this is important: it does not matter 'why' investment levels vary with the WACC, only that they do.

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
		Figure 1: Scatterplot of WACC against net RCV additions  Notes: (i) for the years 2005 to 2010 the RCV was taken from Company June returns, (calculated as Average RCV = ["current cost operating profit" + "current tax"] / "post tax return on capital"), available here: https://www.ofwat.gov.uk/regulated-companies/company-obligations/performance/; (ii) for the years 2011 to 2020 the average RCV was taken from Ofwat's published RCV files, available here: https://www.ofwat.gov.uk/publications/regulatory-capital-value-updates/; (iii) values are shown in 2020 prices and have been inflated using the ONS RPI inflation index, available here: https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/chaw/mm23; (iv) the data has been normalised to account for the population of England and Wales in the year, as per the ONS population timeseries estimate, available here: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatestimeseriesdataset; and (v) the population estimate for 2019 has been used for both 2019 and 2020 in this analysis. Notwithstanding the above misconception in PWC's approach (i.e. even if one takes the 'WACC wedge' metric calculated by PwC as being relevant), there remain two important limitations in the analysis. First, the 'natural experiment' PwC talks about does not comprise periods in which returns were set too low followed by periods in which returns were set too high (or vice versa). Rather, due to falling interest rates, the last four regulatory periods were all periods in which the cost of capital was,

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
		with the benefit of hindsight, over-estimated. As such, there is a complete vacuum of evidence on the question of what happens to investment in the event that the cost of capital is under-estimated i.e. the matter that Ofwat is seeking to dispute in its PFs Response. Second, correlation is not causation. PwC makes no attempt to control for the large number of factors that can cause a company to spend more or less than its regulatory allowances e.g. the quality of the company's business planning, the toughness of the regulator's approach to setting allowances, the crystallisation in-period of weather/climate risks, the crystallisation in-period of macroeconomics risks, the crystallisation of in-period operational risks, etc. There is not, therefore, anything like the direct feed-through that Ofwat seeks to paint between the WACC wedge and over-/under-spend data in Figure 3.2[125] (again, notwithstanding the fact that, as noted above, it is not necessary or informative to estimate historical 'aiming up' in the first place).
	Financing out-performance was the equivalent of +1.78% on RoRE in AMP6 and +1.26% on RoRE in AMP5 [Para 3.47]	The financing outperformance of 1.78% quoted by Ofwat is misleading and does not represent actual outperformance. Further investigation of sector APR data shows that this figure breaks down as follows: financing (0.3%), tax (0.1%) and gearing (1.38%). The "gearing outperformance" element of 1.38% reflects Ofwat's view that companies "outperform" by gearing above the notional level and is calculated on a basis consistent with Ofwat's GOSM mechanism. However, the CMA has already noted that this calculation is inconsistent with standard finance theory and that they have seen no evidence of Ofwat's perceived "outperformance".[126] On this basis, the actual financing outperformance achieved in AMP6 was only 0.3%.

[125] Ofwat, PFs Response (Risk and Return), Figure 3.2.

[126] CMA, PFs, paragraph 9.609.

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
		This residual outperformance, together with the referenced AMP5 outperformance, was primarily due to actual interest rates being lower than the markets originally expected them to be when the WACC was set. Ofwat's has introduced indexation on the cost of new debt as part of PR19 which will protect against this potential for forecasting error, significantly reducing the potential for any future outperformance.
	The extent of the CMA's 'aiming up' is much greater than the PFs indicate [Para 3.83-3.90].	As explained in the main body of the response, YWS considers that Ofwat is looking at the CMA's estimation process in an over-scientific way. There is no basis for attributing to the CMA views that the CMA did not itself express about 'normal distributions', 'standard deviations', statistical 'independence' etc. Accordingly, YWS considers that Ofwat's attempts to relabel the CMA's point estimates as 85th percentile or 95th percentile values is without merit. This is perhaps best seen in the case of the TMR, where the standard errors around measures of historical returns far exceed the so-called 'standard deviation' that Ofwat imposes in its analysis.
• *Section 4: Cost of debt*	The CMA's 20-year trailing average assigns too much weight to the years 2000-05 [Para 4.3, 4.16]	YWS highlighted in its PFs Response that companies in the water sector are currently servicing £9.8 billion of bonds that were issued prior to 31 December 2004 (the equivalent of more than one fifth of the debt on the notional 60% geared balance sheet). It would be inappropriate for the CMA to strand this debt in the way that Ofwat proposes.
	The CMA's proposed 20-year trailing average is longer than the trailing averages that have been used in other sectors [Para 4.17].	This vintage and profile of debt issuance in the water industry is not the same as the vintage and profile of debt issuance in other regulated sectors. There is no reason to think that there is a one-size-fits-all trailing average that fits the circumstances of all regulated sectors.
	A majority of the debt issued between 2000-05 is attributable	There are two computational errors in Ofwat's analysis. First, Ofwat appears to have under-estimated the amount of 2000-05 debt that is still outstanding at

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
	to intercompany lending [Para 4.19].	2020. The correct figure, taken from KPMG's list of public bonds, is £7.1 billion,[127] not £5.3 billion. Second, Ofwat has erroneously indexed the debt that it considers to be intercompany lending by RPI inflation. It has (correctly) not simultaneously indexed the total amount of debt issuance. If the CMA corrects for these errors, it will be able to see that less than £2 billion of the £9.8 billion of pre-2005 debt that companies are still servicing arose from pre-2005 financial restructurings. Finally, it is worth noting that Ofwat has not considered any potential for this non-operational debt to have been refinanced – just because non-operational debt was issued in 2000-05, it does not mean that if the non-operational debt still exists it must still be linked to the original debt.
	The CMA should weight its trailing-average calculation of the cost of embedded debt by historical RCV growth [Para 4.24-4.35].	YWS notes that Ofwat assumes when assigning its proposed weights that there was no refinancing of maturing debt between 2000 and 2010. This is obviously unrealistic. Accordingly, YWS considers that Ofwat's suggestion should be rejected. A simple 1/20th weighting for each year in the trailing average may not give an exact match to the profile of debt issuance in the sector, but it is unlikely to result in a significant costing error.
	The CMA erred by including April-July 2020 iBoxx data in its embedded debt calculation [Para 4.35].	YWS agrees with Ofwat that there is an error (NB: the CMA will recall that YWS made the same point in its PFs Response in Table 1, page 31). The CMA should shift its estimation window to the 20-year period April 2000 to March 2020.

[127] YWS, PFs Response, Figure 3 and para 3.3.12 where YWS identified £9.8 billion of water company bonds that were originally issued by companies prior to 31 December 2004 which were still outstanding as at 31 March 2020. Of the £9.8 billion, YWS estimates that £7.1 billion relates to bond issuance between 2000-2005.

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
	The drop-off in embedded debt costs in AMP7 should be bigger than the CMA allows for with its selection of a point estimate at the bottom of the range [Paras 4.36-4.38].	YWS notes that Ofwat has corrected a sizeable calculation error in the originally submitted version of table 4.6. The revised analysis shows that Ofwat thinks that the CMA has, if anything, over-provided for the natural drop-off in embedded debt costs – i.e. the revised table 4.6 shows a drop-off of 17 basis points vs the 20 basis points 'aim down' in the CMA's PFs. YWS does not, however, agree with the suggestion that the start date for the embedded debt calculation should naturally shift forward by 12 months during each year of AMP7. Only a small proportion of companies' pre-2005 bonds are due to mature during the AMP7. It follows that companies will still be servicing a significant amount of pre-2005 debt throughout the AMP7 period and that the cost of debt allowance needs to recognise the unavoidable costs that companies will continue to incur. The CMA's fixed 20-year trailing average is calibrated in such a way as to achieve the correct correspondence between costs and revenues.
	Bonds issued recently by SVT and NWL show that the actual prevailing cost of new debt is below iBoxx [Para 4.40-4.41].	Ofwat appears to have selected two bonds rated Baa1/BBB+ (one of which was issued back in 2012) to support its view on an outperformance wedge for new debt, without any consideration of other factors that would influence market views on pricing. YWS believes this analysis is extremely limited and should include a 20 year £350m bond issued by Thames Water in April 2020, rated Baa1/BBB+, at a yield similar to the prevailing A/BBB iBoxx indices at the time off issuance.
	The CMA has set the low end of its range for the share of new debt [Para 4.42-4.43].	As YWS set out in its PFs Response, a more serious flaw in the CMA's arithmetic arises from the CMA's use of a faulty T = N / M formula (see Table 1, page 31). If the CMA corrects its formula to T = 0.5 x N / M, as YWS has proposed, the CMA will be able to confirm that there is actually an over-estimation of the share of new debt.
• *Section 5: Cost of equity*	TMR: the CMA's decision to move up from its previous range of 5.0% to 6.0% is not justified	Ofwat itself notes that 10 basis points of the change in the CMA's range is attributable to an adjustment to the CMA's estimate of the RPI-CPI wedge. The remainder of the change follows naturally from the CMA's finding that the backcast measure of historical CPI inflation is not strong enough to bear the weight that the CMA was asking it to carry in the NATS provisional findings.

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
	[Paras 5.7-5.10].	Accordingly, YWS considers that the CMA has given ample justification for the small upward adjustment in its estimated TMR range. YWS has provided further explanation on this issue in previous submissions including YWS Response, Annex 1, page 3, and YWS NATS submission (pages 1-3).
	Risk-free rate: The CMA should not place weight on AAA-rated non-government bonds because the marginal investor is a lender not a borrower [Paras 5.11-5.21].	CAPM is a market equilibrium model. Ofwat, and Wright & Mason, have made a fundamental error in preoccupying themselves with the identity of the marginal investor in water companies when CAPM actually seeks to explain portfolio allocation choices made by a marginal investor that invests across the whole universe of available investment opportunities. Ofwat's speculation on the question of whether water companies are net lenders or net borrowers is therefore irrelevant. The appropriate question to ask is: is the marginal stock market investor a net lender or a net borrower? Since it is impossible to answer this with any certainty, YWS considers that the CMA was right to construct a range for the risk-free rate that gives recognition to both gilt and AAA non-government yields.
	Risk-free rate: there are distortions in the market for AAA non-government bonds [Paras 5.24-5.25]	The prices of all traded assets are affected to some degree by market distortions. YWS considers that the distortions affecting AAA non-government bonds are no greater than the distortions affecting government gilts. Indeed, YWS highlighted in its Response (see Annex 1 (Response), 'Supplementary technical annex for YWS's Response regarding cost of capital, capital structure and financeability', page 4) that regulators, including the CMA, have previously been hesitant to take readings from gilt markets due to the distorting influence of pension funding rules and the resulting inelastic demand for gilts from pension fund investors. YWS remains of the view that there is a specialness to gilts that means that yields sit below the returns that an investor would expect to earn on other zero-beta investments.
	Equity beta: The CMA should consider estimating beta over a 22-year estimation horizon [Para	Ofwat is being opportunistic with this suggestion. Wright & Mason first suggested to Ofwat that it take a very long-term approach to beta estimation in their 2018 UKRN report. Ofwat, along with other regulators, commissioned a follow-up report from Indepen to consider the matter in more detail and

Issue	Ofwat's comments in its PFs Response (Risk and Return)	YWS's observations
	5.29].	ultimately rejected the suggestion (see Exhibit 055 (Response), Indepen: 'Ofgem beta study RIIO-2', 2018). There is no reason for the CMA to go past the structural break that clearly occurs at some point in the AMP5 period.
	Equity beta: The CMA has applied an inconsistent approach to the exclusion of outlying data points to its assessment of unlevered beta and debt beta [Paras 5.27-5.33].	The other points that Ofwat makes in its submission about beta are not material, suggesting that there is no real sense in which the CMA's range for beta has been overstated. The substantive issue for the CMA to reflect on ahead of its final determination, as set out in YWS's PFs Response, is the question of whether the provisional 0.65 to 0.80 equity beta range gives too much emphasis to statistically flawed spot estimates of beta and too little weight to more robust estimates calculated using 5 to 10 years of empirical share price data.

Annex B: RoRE risk skew and implications for the WACC

1. YWS's PFs Response contained a RoRE analysis from both EI and YWS, which highlighted the asymmetric downside skew and 'narrow margin' by which financeability has been achieved under the PFs.[128] It is surprising, therefore, that Ofwat's PFs Response maintains that no concession should be made for this negative skew in returns and, moreover, that there may not even be an asymmetric downside skew.[129]

2. In this annex, YWS addresses the issues raised by Ofwat in its PFs Response, focusing on the following two key points:

   (a) YWS maintains that it is appropriate in principle to set a higher WACC in order to compensate investors for any downwards skew in returns; and

   (b) it is untenable for Ofwat to suggest that expected returns are not asymmetrically skewed to the downside under either its FD, or the CMA's PFs.

a. It is appropriate in principle to set a higher WACC in order to compensate investors for any downwards skew in returns

3. It is well established in finance literature that investors need to be compensated for skewness in returns, and that the standard CAPM model does not take this into account. Indeed, there are extensive published theoretical and empirical studies that demonstrate the need for skewness to be accounted for in the WACC. For example, YWS would refer the CMA to the summary of literature of relevance contained in a report by Economic Insight (published earlier on in the PR19 process).[130] The key established point is that, if expected returns are downward skewed, a higher WACC is required than would otherwise be the case.

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[128] YWS, PFs Response, paragraphs 2.4.9-2.4.15.

[129] Ofwat, PFs Response (Risk and Return), paragraphs 3.41.

[130] For further details see: Economic Insight, 'Impact of Ofwat's ODI Interventions on the WACC at PR19: Report for Wessex Water', August 2019, see: https://www.wessexwater.co.uk/-/media/files/wessexwater/corporate/strategy-and-reports/business-plan/our-detailed-representation/appendix/wsx-representation-appendix-r32-ei-skewness-wacc.pdf

4. Furthermore, in its PR19 methodology, Ofwat itself made the point that if returns were skewed to the upside, there was an argument for setting a lower WACC: *"[b]y providing investors with more upside risk from ODI rewards, for stretching levels of outperformance, we can set a lower cost of capital for companies than would otherwise be the case."*[131] It should follow that the intuition for taking skewness into account applies irrespective of whether returns are upwards, or downwards, skewed.

5. This is consistent also with the CMA's acknowledgement (in line with its prior practice)[132] of the risks of setting the WACC too low due to the asymmetric risk of YWS's package, which arises from penalty-only and asymmetric ODIs.

6. In summary, there seems to be common ground between companies, the CMA, and (notwithstanding its PFs Response) Ofwat, that skewness should be taken into account when setting the WACC.

b. It is untenable for Ofwat to suggest that expected returns are not asymmetrically skewed to the downside, under either its FD or the CMAs PFs

7. Ofwat suggests that the CMA is mistaken in its view that expected returns are asymmetrically skewed to the downside. In fact, Ofwat suggests that (if anything) expected returns are skewed to the upside[133], using the following arguments to support its view: (i) the CMA has not considered broader incentives beyond ODIs (and had it done so, it would not have found a downwards skew); (ii) in relation to ODIs, the CMA is mistaken to assume a downwards skew; and (iii) even if there were a downwards skew, 'aiming up' on the WACC is not the appropriate remedy.[134]

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[131] Ofwat, 2016, 'A consultation on the outcomes framework for PR19: Appendix 2 – More powerful outcomes delivery incentives', page 29. See https://www.ofwat.gov.uk/wp-content/uploads/2016/11/Outcomes-framework-consulation-appendix-2-1.pdf

[132] See CMA, PFs, paragraph 9.672 – this is in line with the approach taken by the CMA in SONI that if the expected return is below the allowed return, then this also provides justification for an adjustment to the allowed WACC: see CMA (2017), SONI Limited v Northern Ireland Authority for Utility Regulation - Final Determination, paragraphs 12.102–12.103 & 12.109-12.111.

[133] Ofwat, PFs Response (Risk and Return), paragraphs 3.41.

[134] Ofwat, PFs Response (Risk and Return), paragraphs 3.44-3.62.

8. YWS strongly disagrees with these lines of argument and, in the following passages, responds to them in turn.

<u>i. Broader incentives beyond ODIs</u>

9. Ofwat states that "*the CMA has failed to consider the impact of the full range of incentives [sic] mechanisms applied in the water sector which provide companies with the scope to outperform the regulatory determination*."[135] Ofwat adds that, once these are considered, "*the distribution of returns for an efficient firm are unlikely to be meaningfully asymmetric and, if anything, are skewed upwards*."[136]

10. Ofwat offers no meaningful new evidence to substantiate these views. Rather, its submission includes an analysis of historical financial and operational outperformance, updated to include 2019/20 to suggest that companies retain opportunities to outperform their determination at PR19.[137]

11. YWS has provided extensive evidence, which shows that companies have not substantially, systematically or persistently outperformed the WACC historically.[138] Set in this context, the fact that Ofwat's FD represented a material toughening across the building blocks of the price control must logically point to a material asymmetric downside risk. The same logic must also imply a downward skew remains under the CMA's PFs as: (i) there remains a 'toughening' relative to prior controls, but without evidence of systematic outperformance; and (ii) ODIs were a key source of the downside skew under Ofwat's FD, and the CMA has made limited interventions in this area.

12. Within Annex A YWS has also highlighted that the information provided by Ofwat on financial outperformance is misleading.

13. In addition to analyses of historical returns, the balance of risk (and scope for outperformance) can be informed through forward-looking risk modelling.[139] Regrettably, Ofwat's approach throughout PR19 has

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[135] Ofwat, PFs Response (Risk and Return), paragraph 3.41.

[136] Ofwat, PFs Response, paragraph 3.41.

[137] Ofwat, PFs Response, paragraphs 3.44-3.47.

[138] Annex 06 (SoC), Economic Insight: 'Follow-on report on top-down financeability of the notionally efficient firm: top-down analysis', March 2020.

[139] Importantly this modelling also captures the 'totality' of incentives, thus addressing Ofwat's point that to determine whether there is an asymmetry that should be offset, one must not

been characterised by an absence of robust risk analysis; and, relatedly, a lack of balance in how it has appraised the evidence (and taken uncertainty regarding that evidence into account). As part of its PFs Response, YWS submitted further forward-looking risk analysis, which demonstrated that a significant downwards risk skew remains under the CMA's PFs. This included an update to Economic Insight's Monte Carlo modelling. Importantly, this analysis 'equally weights' company and Ofwat evidence for each parameter of the price control in order to reflect uncertainty.[140] This equal weighting of evidence is, in YWS's view, conservative; yet a downwards skew remains, even under that approach.

ii. Expected performance in relation to ODIs

14. Ofwat's second argument is that the CMA is mistaken to assume that there is expected financial underperformance in relation to ODIs, equivalent to a range of -0.1% to -0.2% RoRE. Ofwat instead suggests there is likely an upwards skew.[141] In Annex A2 of its PFs Response, Ofwat suggests that this is because: (i) there is scope for operational outperformance, which more than offsets other sources of downward skews; and (ii) empirical evidence suggests there is a positive skew towards outperformance. In the remainder of this section, YWS explains why these two claims by Ofwat are misplaced.

15. First, YWS continues to consider that performance risk is the main source of downside asymmetry on ODIs for an efficient firm (i.e. this is a more material source of risk than penalty-only ODIs; or asymmetric penalty/reward rates). This would mean that the CMA's approach (which excludes performance risk) understates any downside skew relating to ODIs.[142] In contrast, Ofwat states: *"we aim to set PCLs[143] at the median level, the P50…if the distribution is symmetrical this will also lead to the mean average performance being at the P50."*[144] Ofwat

only take into account potential skews relating to ODIs (Ofwat, PFs Response (Risk and Return), paragraph 3.41).

[140] Annex 1 (YWS PFs Response), Economic Insight, 'Financeability of the Notionally Efficient Firm: A Bottom-Up Analysis: Update to Reflect CMA Provisional Findings' 21 October 2020.

[141] Ofwat, PFs Response (Risk and Return), paragraph 3.41.

[142] Thus, the details of how the CMA has calculated its indicative downside skew are not material by comparison, as explained in YWS's PFs Response, paragraph 2.4.10.

[143] 'PCLs' refers to the Performance Commitment Levels.

[144] Ofwat, PFs Response (Risk and Return), paragraph A2.19.

asserts that, due to management action, it considers the mean performance for companies may be above the PCLs (i.e. above the P50). Ofwat's claims are incorrect, because:

(a) the expected performance level for an efficient firm is the economically efficient level;

(b) Ofwat's PCLs have <u>not</u> been determined by the intersection of marginal cost and marginal benefit, and so could only be the economically efficient level by <u>coincidence</u>;

(c) Ofwat undertook no risk analysis to determine P50 levels; and

(d) outcomes targets are generally more demanding at PR19, relative to prior price controls.

Thus, Ofwat's continued repetition that its PR19 PCLs represent a P50 on a forward-looking basis is baseless. Having failed to undertake proper risk analysis, it is concerning that Ofwat continues to rely on the P50s being appropriately calibrated by assertion.

16. Second, in Annex A2, Ofwat presents an analysis of outturn company ODI performance against PCLs from 2015-20 showing: (i) median historical performance relative to PCLs of 0.6%; and (ii) mean historical performance relative to PCLs of 5.2%[145] (i.e. slight outperformance, on average). Even if one takes Ofwat's analysis at face value, it does not provide evidence of expected operational outperformance over PR19. This is because the PCL targets (levels or rate of change) at PR19 are, on the whole, considerably more challenging than those set at PR14. Ofwat's analysis does not take this into account.

<u>iii. Even if there were a downwards skew, aiming up on the WACC is not the appropriate remedy</u>

17. The PwC report concludes that a higher allowed return provides far less incentive than totex and ODI performance incentives for companies to invest in assets or improve performance. Similarly, Ofwat suggests that remedies other than the WACC could address underinvestment concerns: *"[w]hile aiming up might incentivise such expenditure, it is hugely inefficient compared to adjusting ODI rates."*[146]

[145] Ofwat, PFs Response (Risk and Return) Table A2.1.

[146] Ofwat, PFs Response (Risk and Return), paragraph 3.23.

18. The notion that the allowed return plays a less important role in attracting investment than incentives regarding totex and ODI performance is detached from reality. Any investor in UK regulated industries would confirm this interpretation.

19. Moreover, it is unclear how changes in ODI incentives could fundamentally address the 'revenue inadequacy' problem that gave rise to financeability (and therefore underinvestment) concerns under Ofwat's FD in the first place. For example, providing higher reward potential through ODIs does not ensure the 'base level' of expected revenues and returns is appropriately calibrated.

20. Similarly, remedies other than the WACC would seem to be less practical at this time. For example, as the CMA rightly noted in its PFs, it was not possible for it to collect new customer evidence, nor to analyse the entire package of ODIs in detail. YWS notes that Ofwat has raised concerns regarding the CMA's process and timetable for making its redetermination. These concerns are misplaced, however, as the process problems Ofwat describes in fact originate in PR19 itself. They cannot be rectified retrospectively, irrespective of any approach or timetable the CMA follows (for example, the inability to differentiate between 'measurement error' and 'genuine differences' in customer valuations is a problem whose origins lie in the PR19 method and process).

21. In conclusion, it is untenable for Ofwat to suggest that expected returns are not asymmetrically skewed to the downside under either its FD, or the CMA's PFs. Therefore, YWS maintains that it is appropriate to set a higher WACC in order to compensate investors for the downwards skew in returns and that alternative remedies proposed by Ofwat are clearly unsuitable to achieving this objective.

Annex C: YWS's response to Ofwat's leakage efficiency challenges

Table 1: YWS's response to Ofwat's **bottom-up** efficiency challenge

Issue	Ofwat's position	YWS's reply
Ofwat's PFs response		
Deduction of £13.7m of productivity improvements	Ofwat argues that "*customers should not be expected to fund [YWS's] productivity-enhancing initiatives*" because "*[o]ther companies are already providing better leakage performance*". [Ofwat, PFs Response (Costs and Outcomes), paragraph A3.43].	This argument is flawed because it overlooks the fact that companies' historic targets and funding levels were based on SELL, not on comparative performance. In addition, Ofwat fails to recognise that the investment in productivity-enhancing initiatives reduces the costs of meeting its leakage targets. Without the investment in productivity-enhancing initiatives, YWS estimates that it would require an additional 21.2 full-time equivalent employees (***FTEs***). This would increase overall enhancement costs required by £8.6m to £103.3m and the average cost per Ml/d would rise to £2.20m.
Deduction of £45m of additional capex maintenance	Ofwat argues that £45m of additional capex expenditure is already included in the base allowance and so deducts it. [Ofwat, PFs Response (Costs and Outcomes), paragraph A3.50]. This is based on Ofwat's concern that "*maintenance activities…are included in the base allowance. We are further concerned regarding the potential for double counting because the company has considered that £60k of the approximate total cost per FTE per annum of £100k is attributable to repair*	The £45m of additional capital expenditure does not double-count the £60k per FTE figure and is not included in the base allowance. (i) There is no double-counting because the sums relate to different activities. The £60k figure per FTE figure only includes the repair of assets, whereas the £45m figure relates to renewal or replacement of assets (including but not limited to communication pipe renewal, structural mains renewal, DMA meters, stop tap installation and renewal). (ii) The figure is not included in the base allowance because it is based on the increase in renewal and replacement activity necessary to deliver the 15% reduction in leakage, not an AMP6 steady-state.

Issue	Ofwat's position	YWS's reply
	and maintenance costs." [Ofwat, PFs Response (Costs and Outcomes), paragraph A3.42].	
Lower FTE unit cost	Ofwat (implicitly) reduces the FTE unit cost from approximately £130k to £115k on the basis that YWS does not explain why its unit cost is higher for the 64 FTEs that are additional to the 136 FTEs.	YWS considers that a higher unit cost is appropriate because as leakage levels reduce, the leaks become more costly to repair per leak, for example because additional 'dry holes' are required to find smaller leaks. Therefore, it is assumed that the repair costs associated with each FTE rise as leakage falls.
Deduction of 20% optioneering challenge	Ofwat applies an optioneering challenge of 20% because YWS provided "*limited evidence of optioneering and innovation in its plan*". [Ofwat, PFs Response (Costs and Outcomes), paragraph A3.50].	In its response to Question 2 of RFI020, YWS has provided the CMA with additional evidence that its plan is the product of careful optioneering and appropriate innovation. In summary, YWS has given reasons for its reliance on ALC and why some aspects such as pressure management and metering have been deprioritised in the enhancement section of the plan. While YWS has demonstrated that innovative techniques have been incorporated into its leakage reduction plan (particularly in telemetry), YWS has outlined a range of innovative solutions that were considered for PR19, but which have not yet been fully adopted because of a lack of cost-effectiveness or confidence in the solution. Notwithstanding this, YWS notes that its leakage reduction strategy has worked – as demonstrated by its recent, rapid and large reduction in leakage in 2018-19 and 2019-20. Ofwat 'counts' this large reduction when considering what is funded in base expenditure, but does not 'count' it when evaluating the likely effectiveness of its chosen strategy. Ofwat presents no evidence for its view that YWS's leakage reduction strategy is an inappropriate approach to meeting its targets, nor does it specify what it considers the better approaches should be.

Issue	Ofwat's position	YWS's reply
Application of frontier shift efficiency challenge	Ofwat applies a frontier shift challenge.	As set out in YWS's PFs Response[147], this challenge double-counts the £5.7m of forecast efficiency gains that YWS has already included in its proposed enhancement allowance and is not required.
Ofwat's Response to RFI020 Q11		
Active leakage control (**ALC**) ***comparison***	Ofwat includes a table showing comparative normalised ALC expenditure [Ofwat, 'Response to RFI020 Q11', page 4 bullet 2].	It is unclear what Ofwat is trying to demonstrate with this table. It does not include leakage reduction values, rendering any potential comparison incomplete. Furthermore, YWS has demonstrated the genuine differences between companies that fully explain the expenditure levels shown in this table: see YWS's response to questions 2(b), 2(c), 2(e) and 2(f) of RFI020.
ALC techniques	YWS's approach to ALC is 'very basic' [Ofwat, 'Response to RFI020 Q11', page 5 bullet 3].	YWS has demonstrated in its responses to RFI018A and RFI020 that its approach to ALC is driven by the use of innovative technology and techniques. Given YWS's regionally-specific factors and history of being unfunded to drive leakage reduction, its leakage reduction plan, including its use of ALC, is innovative, complex and efficient.
Mains repairs	YWS has not accounted for benefits of proactive mains repairs [Ofwat, 'Response to RFI020 Q11', page 4 bullet 1].	See YWS's response to RFI020, footnote 1. The leakage benefits of proactive mains repairs form part of maintaining the natural rate of rise, i.e. <u>base</u> maintenance. That is why it is not accounted for (a second time) in enhancement.
Pressure management	YWS is the only company that does not include pressure management in its enhancement proposals [Ofwat, 'Response to RFI020 Q11', page 4 bullet	As YWS stated in its response to RFI020, it has historically implemented significant pressure management to improve leakage and has a high level of pressure reducing valve (**PRV**) coverage. Pressure management has been such an important part of YWS's leakage plans for previous AMPs that it has largely been <u>fully</u> optimised. YWS considers that it is close to the limit

[147] See YWS, PFs Response, paragraph 6.7.8.

Issue	Ofwat's position	YWS's reply
	2].	of pressure management for leakage benefit without negatively impacting its other Performance Commitments. Maintaining that level of optimisation (and improving it in the limited circumstances where that is economically efficient) continues to be an important part of YWS's base maintenance plan. Therefore, where there is scope for limited optimisation of pressure management, this forms part of YWS's plan to maintain the natural rate of rise, i.e. it has been taken into account in base funding. See YWS's response to RFI020, paragraphs 2.10-2.12.

Table 2: YWS's response to Ofwat's **top-down** efficiency challenge

Issue	Ofwat's position	YWS's reply
Ofwat's PFs response		
Deduction of leakage improvement already included in base	Ofwat argues that 49% of the leakage improvement is included in its base allowances. [Ofwat, PFs Response (Costs and Outcomes), paragraph A3.50]. This is based on its view that: (a) YWS can achieve a 16.1 Ml/d reduction in leakage (under the AMP6 reporting method) by maintaining its	Ofwat's first deduction is incorrect for two reasons: **(i)** The base cost models used by Ofwat and the CMA do not include 2019-20 expenditure data. Therefore, YWS's base cost allowances cannot take account of the expenditure that YWS has incurred in 2019-20 to deliver its current level of performance. **(ii)** Even if the base cost models included 2019-20 data, the base allowances would reflect YWS's (and other companies') 'average expenditure' on leakage over the time period included in the base cost models, not the higher level of expenditure required to deliver YWS's 2019-20 level of leakage performance in every year. Ofwat's second deduction is unnecessary. This is because YWS's proposed enhancement

Issue	Ofwat's position	YWS's reply
	2019-20 level of leakage – i.e. 5.62% out of 15%. [Ofwat, PFs Response (Costs and Outcomes), paragraph A3.27]. (b) YWS can achieve a further 5 Ml/d reduction in leakage by taking advantage of its investments in acoustic loggers and other investment in AMP6 – i.e. 1.74% out of 15%. [Ofwat, PFs Response (Costs and Outcomes), paragraph A3.31].	allowance already accounts for the productivity improvements associated with AMP6 investments in two ways: **(a)** Use of historic data – as set out in YWS's reply to RFI018A[148], YWS's forecast of activity and costs are based on historic data, which includes a period during which it achieved large and rapid reductions in leakage. **(b)** Modelling assumptions – YWS's leakage model (and hence forecast activity and costs) includes an explicit assumption that its investments in acoustic loggers will increase the efficiency of its leakage detection activity in AMP7.
Reduction of unit cost estimate	Ofwat argues that YWS's unit cost estimate of £2.0 Ml/d is too high and instead that the average of the upper quartile unit cost (£0.3m per Ml/d) and YWS proposed unit cost (£2.0m) per Ml/d should be used instead (i.e. £1.2m per Ml/d). [Ofwat Costs and Outcomes Paper/A3.48].	YWS's considers that its unit costs are highly relevant to the issue at hand – they are based on its *recent* experience of *rapidly* reducing leakage at *scale*. Moreover, there is no reason to believe that they are inefficiently high because, without any prospect of securing additional funding for AMP6, YWS faced a strong incentive to keep its unit costs low to achieve the reduction in leakage in 2018-19 and 2019-20. Ofwat has made no attempt to evaluate whether the upper quartile unit cost reported is accurate or reflective of the costs that YWS will incur to reduce leakage in its supply region. To illustrate the importance of this, YWS notes that the unit costs reported by the four companies (ANH, BRL, SES and SEW) that Ofwat gave an enhancement allowances to in its FD are significantly higher than the £0.3m per Ml/d unit cost it uses in its challenge and higher than YWS's estimate of £2.0m on average (between £0.7m and £3.3m per Ml/d, and £2.8m on

148 See YWS, 'Response to RFI018A', response to Q2(c).

Issue	Ofwat's position	YWS's reply
		average).
Ofwat's Response to RFI020 Q11		
Service enhancement to be funded in base maintenance and under-investment	Ofwat references in several places that service enhancement should be funded in base maintenance and that the YWS has underinvested in previous AMPs [Ofwat, 'Response to RFI020 Q11', page 3, 5 and 6].	See paragraph **Error! Reference source not found.**, above, for the places where YWS has p reviously addressed this argument. YWS has historically made efficient investments to meet its regulatory requirements (the most dominant factor being investing to meet the SELL). YWS has not historically underinvested, rather it has invested efficiently to reach regulatory targets while allowing its customers to benefit from comparatively lower bills. As explained in its previous submissions, YWS refutes the suggestion that service improvements should be funded through base costs.
Unit cost estimate	Ofwat has calculated YWS's annual unit cost for 2018-2020 to be £3.9m per Ml/d, which is significantly larger than the industry median of £2.0m per Ml/d for the 2020/25 period [Ofwat, 'Response to RFI020 Q11', page 5 bullet 2].	Ofwat's calculated unit rate further highlights the problems associated with calculating unit rates in isolation using just in-year spend and performance. YWS calculates that its 'starting point' for leakage in 2018/19 was 25Ml/d higher than the average year due to extreme bad weather. The extreme winter (the 'Beast from the East') caused a large leakage breakout that was further exacerbated by ground conditions caused by the second driest summer in 107 years. If the extra 25Ml/d is taken into consideration, YWS's unit cost rate for 2018-2020 is approximately halved. YWS has previously explained that unit rate comparison is not appropriate because of differences between company-specific factors: see YWS's response to RFI020. Ofwat seems to agree with this assessment in its critique of Anglian Water's response to RFI020. Ofwat suggests that Anglian Water's unit cost would significantly increase (to 3x YWS's unit cost) were all activities to be attributed to ALC [Ofwat response to RFI020 Q11, page 8]. Ofwat also points to "*significant challenges*" that would be faced by "*companies with large proportions of iron*

Issue	Ofwat's position	YWS's reply
		pipework" [Ofwat response to RFI020 Q11, page 9]. Yet while Ofwat uses this as a reason to avoid allowing Anglian Water funding, it has shown it is unwilling to consider it as a factor in allowing YWS funding.